



MARION COUNTY BOARD OF COMMISSIONERS


## Board Session Agenda Review Form

Meeting date: September 16, 2020

Department: Business Services      Agenda Planning Date: Sept 9, 2020      Time required: 10

☐ Audio/Visual aids

Contact: Colleen Coons-Chaffins      Phone: 503-373-4426

Department Head Signature:  


<b>TITLE</b>	Consider approval of the Public Improvement Agreement with K & E Excavating, Inc for the Marion County Jail Parking Lot Improvements
Issue, Description & Background	Marion County Business Services published an invitation to bid (TB) on July 6 2020 for bids on the MC Jail Parking Lot Improvements project. A total of four bids were received. K & E Excavating, inc was determined to have submitted the lowest bid. After thorough review of the Oregon Construction Contractor's, history, and reference checks, K & E Excavating was determined to be a responsible bidder.
Financial Impacts:	The total contract price is \$352,611.00 Funding is provided in CIP#19-015
Impacts to Department & External Agencies	No impacts to other departments outside the Jail. Construction coordination will be managed by Business Services.
Options for Consideration:	1) Approve the Public Improvement Agreement with K & E Excavating, Inc 2) Withhold approval at this time for the Public Improvement Agreement with K & E Excavating, Inc.
Recommendation:	Business Services recommends the approval of the Public Improvement Agreement with K & E Excavating, inc in the amount of \$352,611.00
List of attachments:	K & E Excavating Public Improvement Agreement (PIA) with supporting contract documents
Presenter:	Colleen Coons-Chaffins and Kevin Burton

*Copies of completed paperwork sent to the following: (Include names and e-mail addresses.)*

Copies to: Tina Toney ttoney@co.marion.or.us



**Marion County**  
OREGON  
FINANCE DEPARTMENT

# Contract Review Sheet

Contract #: **BS-3649-20**

Person Sending: **Tina Toney** Department: **Business Services**

Contact Phone #: **x4388** Date Sent: **Tuesday, September 1, 2020**

☒ Contract ☐ Amendment# ☐ Lease ☐ IGA ☐ MOU ☐ Grant (attach approved grant award transmittal form)

Title: **MC JAIL PARKING LOT IMPROVEMENTS**

Contractor's Name: **K & E Excavating, Inc**

Term - Date From: **Upon Execution** Expires: **Jun 30, 2021**

Contract Total: **\$352,611.00** Amendment Amount: New Contract Total:

Source Selection Method: Formal Bid (attach transmittal) # **762**

## Additional Considerations (check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Board Order#   | <input type="checkbox"/> Feasibility Determination (attach approved form)           |
| <input type="checkbox"/> Incoming Funds   | <input type="checkbox"/> Federal Funds (attach sub-recipient / contractor analysis) |
| <input type="checkbox"/> Independent Contractor (LECS) approval date:                               | <input type="checkbox"/> Reinstatement (attach written justification)               |
| <input type="checkbox"/> Insurance Waiver (attach)  | <input type="checkbox"/> Retroactive (attach written justification)                 |
| <input type="checkbox"/> CIP# <b>19-015</b> (required for all goods /software greater than \$5,000) |   |

## Description of Services or Grant Award:

**Contractor was the successful bidder on the ITB BS-762-20 (CMS SOL ID#762).  
Contractor is to complete the Jail Parking Lot Improvements per the plans and specifications. No work to be performed until bonds are secured and notice to proceed issued.**

**CA & CPC: Kevin Burton**

## FOR FINANCE USE

Date Finance Received: BOC Planning Date: Date Legal Received:

Comments:

## REQUIRED APPROVALS:

Finance - Contracts Date Risk Manager Date

Legal Counsel Date Chief Administrative Officer Date

Date ☐ To be filed ☐ Added to Finance Table

☐ Date Returned to department for signature



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

8/14/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER LaPorte & Associates, Inc. 5515 SE Milwaukie Avenue Portland OR 97202	CONTACT NAME: Kelli Orleck PHONE (A/C, No, Ext): 503-239-4116 E-MAIL ADDRESS: korleck@laporte-insurance.com	FAX (A/C, No): 503-231-9021
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A: Zurich American Ins Company		16535
INSURER B: SAIF Corporation		36196
INSURER C: Navigators Insurance Company		42307
INSURER D: Cincinnati Insurance Company		10677
INSURER E: LLOYDS OF LONDON		
INSURER F: National Fire Ins Co of Hartford		20478

## COVERAGES

CERTIFICATE NUMBER: 2106260916

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:	Y	Y	GLO011623304	10/1/2019	10/1/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 WA STOP GAP \$ 1,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	BAP011623204	10/1/2019	10/1/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Included \$
C	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$ <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE	Y	Y	CH19EXC792484IC	10/1/2019	10/1/2020	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y	Y	905271	10/1/2019	10/1/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
E D F	GL Buffer/Excess 1st layer Excess Liability 3rd layer Leased/Rented Equipment	Y Y	Y Y	B1182P053202019 EXS0553200 6022911528	10/1/2019 10/1/2019 10/1/2019	10/1/2020 10/1/2020 10/1/2020	Occurrence/Aggregate Limit/Max per item \$1M/\$2M \$4,000,000 \$1M/\$750,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Workers Compensation Excluded partners: Eric Kuenzi, John Kuenzi and Kerry Kuenzi. Umbrella/Excess Liability follow underlying policy forms, unless otherwise advised in the policy forms. Excess Liability total limit: \$10,000,000/\$11,000,000 Aggregate. Attached endorsement forms subject to written contract RE: Bid#C25102-BS-762-20 for Marion County Jail parking Lot Improvements. Certificate holder is an additional insured, per a written contract. Primary & Non-contributory and Waiver of Subrogation apply.

## CERTIFICATE HOLDER

## CANCELLATION

Marion County, Oregon  
PO Box 14500  
Salem OR 97309-5036

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



## Blanket Notification To Others Of Cancellation

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

Policy No. BAP 0116232-04

Effective Date: 10/01/2019

This endorsement modifies insurance provided under the:

**Auto Dealers Coverage Form**  
**Business Auto Coverage Form**  
**Motor Carrier Coverage Form**

- A.** If we cancel this Coverage Part by written notice to the first Named Insured for any reason other than nonpayment of premium, we will deliver electronic notification that such Coverage Part has been cancelled to each person or organization shown in a Schedule provided to us by the First Named Insured. Such Schedule:
1. Must be initially provided to us within 15 days:
    - a. After the beginning of the policy period shown in the Declarations; or
    - b. After this endorsement has been added to policy;
  2. Must contain the names and e-mail addresses of only the persons or organizations requiring notification that such Coverage Part has been cancelled;
  3. Must be in an electronic format that is acceptable to us; and
  4. Must be accurate.
- Such Schedule may be updated and provided to us by the First Named Insured during the policy period. Such updated Schedule must comply with Paragraphs **2.**, **3.** and **4.** above.
- B.** Our delivery of the electronic notification as described in Paragraph **A.** of this endorsement will be based on the most recent Schedule in our records as of the date the notice of cancellation is mailed or delivered to the first Named Insured. Delivery of the notification as described in Paragraph **A.** of this endorsement will be completed as soon as practicable after the effective date of cancellation to the first Named Insured.
- C.** Proof of e-mailing the electronic notification will be sufficient proof that we have complied with Paragraphs **A.** and **B.** of this endorsement.
- D.** Our delivery of electronic notification described in Paragraphs **A.** and **B.** of this endorsement is intended as a courtesy only. Our failure to provide such delivery of electronic notification will not:
1. Extend the Coverage Part cancellation date;
  2. Negate the cancellation; or
  3. Provide any additional insurance that would not have been provided in the absence of this endorsement.
- E.** We are not responsible for the accuracy, integrity, timeliness and validity of information contained in the Schedule provided to us as described in Paragraphs **A.** and **B.** of this endorsement.

All other terms, conditions, provisions and exclusions of this policy remain the same.



**MARION COUNTY PUBLIC IMPROVEMENT AGREEMENT**  
**for**  
**JAIL PARKING LOT IMPROVEMENTS**  
**BS-3649-20**

This Agreement for the **Jail Parking Lot Improvements** (the "Agreement"), made by and between Marion County, a political subdivision of the state of Oregon, on behalf of **Business Services** hereinafter called Owner, and **K & E Excavating, Inc.** hereinafter called the Contractor (collectively the "Parties"), is effective on the date this Agreement has been signed by all the Parties and all required Marion County governmental approvals have been obtained. Unless otherwise defined in the Invitation to Bid or in this Agreement, the capitalized terms used herein are defined in Section A.1 of the Marion County General Conditions for Public Improvement Contracts

**WITNESSETH:**

**1. Contract Price, Contract Documents and Work.**

The Contractor, in consideration of the sum of **\$352,611.00** (the "Contract Price"), to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Invitation to Bid, this Public Improvement Agreement, Marion County General Conditions for Public Improvement Contracts and other Contract Documents, all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents.

The Contract Price includes the following items:  
Lump sum \$352,611.00

**2. Representatives.**

Unless otherwise specified in the Contract Documents, the Owner designates **Colleen Coons-Chaffins** as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to performance, payment, authorization, and to carry out the responsibilities of the Owner. Contractor has named **Eric Kuenzi** its Authorized Representative to act on its behalf.

**3. Contract Dates.**

PROJECT START DATE: October 1, 2020  
SUBSTANTIAL COMPLETION: June 1, 2021  
FINAL COMPLETION: June 30, 2021

**4. Liquidated Damages. Reserved.**

**5. Integration**

THE CONTRACT DOCUMENTS CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO OTHER UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. CONTRACTOR, BY THE SIGNATURE BELOW OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT IT HAS READ THIS CONTRACT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

This contract consists of these introductory provisions and the signature page(s), and the following exhibits attached hereto and incorporated herein by this reference in descending order of precedence.

Exhibit A – MC General Conditions for Public Improvement Contract, dated February, 2020  
Exhibit B – Paving Spec dated 6-19-20  
Exhibit C – Paving II Set Signed 6-19-20  
Exhibit D – Solicitation #762 bid documents

## 6. Authority to Execute

Contractor covenants, represents and warrants to Owner that the person(s) executing this Contract on behalf of the Contractor have the actual authority to bind the Contractor to the terms of the Agreement.

In witness whereof, Marion County, a political subdivision of the state of Oregon, on behalf of **Board of Commissioners**, executes this Agreement and the Contractor does execute the same as of the day and year of this Agreement first above written.

## 7. CONTRACTOR

CONTRACTOR NAME	<u>K &amp; E Excavating, Inc</u>		
CONTRACTOR ADDRESS	<u>3871 Langley St SE</u>		
CONTRACTOR ADDRESS	<u>Salem OR 97317</u>		
CONTRACTOR'S CCB #	<u>128542</u>	Expiration Date	<u>April 10, 2022</u>
CONTRACTOR'S SIGNATURE	<u></u>		

## 8. MARION COUNTY

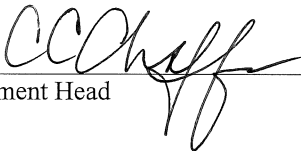
### BOARD OF COMMISSIONERS:

<u>Chair</u>	<u>Date</u>
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<u>Commissioner</u>	<u>Date</u>
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<u>Commissioner</u>	<u>Date</u>
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<u>Department Head</u>	<u>Date</u>
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8.31.2020

<u>Marion County Procurement and Contracts</u>	<u>Date</u>
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<u>Marion County Legal</u>	<u>Date</u>
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<u>Chief Administrative Officer</u>	<u>Date</u>
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# Exhibit A

Marion County

**GENERAL CONDITIONS**

**FOR**

**PUBLIC IMPROVEMENT CONTRACTS**



**SEPTEMBER 1, 2014 Edition Revised February 6, 2020**

Changes to the General Conditions (including any additions, deletions or substitutions) should only be made by Supplemental General Conditions, unless the General Conditions are specifically modified in the Public Improvement Agreement (which has a higher order of precedence under Section A.3 of the General Conditions). The text of these General Conditions should not otherwise be altered.

**MARION COUNTY  
GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS  
SEPTEMBER 1, 2014**

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**MARION COUNTY  
GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS  
("General Conditions")**

**SECTION A  
GENERAL PROVISIONS**

**A.1 DEFINITION OF TERMS**

In the Contract Documents the following terms shall be as defined below:

**ARCHITECT/ENGINEER**, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities of the Owner's Authorized Representative to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

**CHANGE ORDER**, means a written order issued by the Owner's Authorized Representative to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.1 including Owner's written change directives as well as changes reflected in a writing executed by the parties to this Contract and, if applicable, establishing a Contract Price or Contract Time adjustment for the changed Work.

**CLAIM**, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these General Conditions.

**CONTRACT**, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

**CONTRACT DOCUMENTS**, means the Solicitation Document and addenda thereto, the Marion County Public Improvement Agreement Form, General Conditions, Supplemental General Conditions, if any, the accepted Offer, Plans, Specifications, amendments and Change Orders.

**CONTRACT PERIOD**, as set forth in the Contract Documents, means the total period of time beginning with the issuance of the Notice to Proceed and concluding upon Final Completion.

**CONTRACT PRICE**, means the total of the awarded Offer amount, as increased or decreased by the price of approved alternates and Change Orders.

**CONTRACT TIME**, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

**CONTRACTOR**, means the Person awarded the Contract for the Work contemplated.

**DAYS**, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

**DIRECT COSTS**, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater); bond premiums, rental cost of equipment, and machinery required for execution of the work; and the additional costs of field personnel directly attributable to the Work.

**FINAL COMPLETION**, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

**FORCE MAJEURE**, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

**NOTICE TO PROCEED**, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

**OFFER**, means a bid in connection with an invitation to bid and a proposal in connection with a request for proposals.

**OFFEROR**, means a bidder in connection with an invitation to bid and a proposer in connection with a request for proposals.

**OVERHEAD**, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), expenses of Contractor's offices at the job site (e.g. job trailer) including expenses of personnel staffing the job site office, and Commercial General Liability Insurance and Automobile Liability Insurance.

**OWNER**, means Marion County acting by and through the governmental entity identified in the Solicitation Document.

**OWNER'S AUTHORIZED REPRESENTATIVE**, means those individuals identified in writing by the Owner to act on behalf of the Owner for this project. Owner may elect, by written notice to Contractor, to delegate certain duties of the Owner's Authorized Representative to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

**PERSON**, means an entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

**PLANS**, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

**PUNCHLIST**, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

**RECORD DOCUMENT**, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer to Owner, operational and maintenance manuals, shop drawings, Change Orders, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these General Conditions, recording all Services performed.

**SOLICITATION DOCUMENT**, means an invitation to bid or request for proposal or request for quotes.

**SPECIFICATION**, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

**SUBCONTRACTOR**, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

**SUBSTANTIAL COMPLETION**, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.4.2.

**SUBSTITUTIONS**, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner's Authorized Representative. The decision of the Owner's Authorized Representative is final.

**SUPPLEMENTAL GENERAL CONDITIONS**, means those conditions that remove from, add to, or modify these General Conditions. Supplemental General Conditions may be

included in the Solicitation Document or may be a separate attachment to the Contract.

**WORK**, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

## **A.2 SCOPE OF WORK**

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

## **A.3 INTERPRETATION OF CONTRACT DOCUMENTS**

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

1. Contract amendments and Change Orders, with those of later date having precedence over those of an earlier date;
2. The Supplemental General Conditions;
3. The Marion County Public Improvement Agreement Form;
4. The General Conditions
5. The Plans and Specifications
6. The Solicitation Document and any addenda thereto;
7. The accepted Offer.

A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner or Owner's Authorized Representative's interpretation in writing.

A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner or Owner's Authorized Representative. Matters concerning performance under, and interpretation of requirements of, the Contract Documents will be decided by the Owner's Authorized Representative, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner's Authorized Representative (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness.

Interpretations and decisions of the Owner's Authorized Representative (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner's Authorized Representative (or Architect/Engineer).

- A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

#### **A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE**

- A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.
- A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner's Authorized Representative, including without limitation, any nonconformity with applicable laws, statutes, ordinances, building codes, rules and regulations.
- A.4.4 If the Contractor believes that additional cost or Contract Time is involved because of clarifications or instructions issued by the Owner's Authorized Representative (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner's Authorized Representative, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner's Authorized Representative denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from

the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

#### **A.5 INDEPENDENT CONTRACTOR STATUS**

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner.

#### **A.6 RETIREMENT SYSTEM STATUS AND TAXES**

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

#### **A.7 GOVERNMENT EMPLOYMENT STATUS**

- A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.
- A.7.2 Contractor represents and warrants that Contractor is not an employee of the Marion County for purposes of performing Work under this Contract.

### **SECTION B ADMINISTRATION OF THE CONTRACT**

#### **B.1 OWNER'S ADMINISTRATION OF THE CONTRACT**

- B.1.1 The Owner's Authorized Representative will provide administration of the Contract as described in the Contract Documents (1) during construction (2) until final payment is due and (3) during the one-year period for correction of Work. The Owner's Authorized Representative will act on behalf of the Owner to the extent provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner's Authorized Representative may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner's Authorized Representative will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner's Authorized Representative



will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner's Authorized Representative will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.

- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall endeavor to communicate with each other through the Owner's Authorized Representative or designee about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner's Authorized Representative.
- B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner's Authorized Representative, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

## **B.2 CONTRACTOR'S MEANS AND METHODS: MITIGATION OF IMPACTS**

- B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.
- B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.
- B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.
- B.2.4 Contractor agrees that it will commence performance of the Work in a timely manner and will achieve the Contract Times in the Contract Documents.

## **B.3 MATERIALS AND WORKMANSHIP**

- B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or

methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.

- B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.
- B.3.3 Work done and materials furnished shall be subject to inspection and/or observation and testing by the Owner's Authorized Representative to determine if they conform to the Contract Documents. Inspection of the Work by the Owner's Authorized Representative does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.
- B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner's Authorized Representative to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.
- B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner's Authorized Representative and include the cost of the Samples in the Contract Price.

## **B.4 PERMITS**

Contractor shall obtain and pay for all necessary permits and licenses, except for those specifically excluded in the Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities. The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent or other proprietary rights and save harmless and blameless from loss, on account thereof, Marion County, and its departments, divisions, members and employees.

## **B.5 COMPLIANCE WITH GOVERNMENT LAWS AND REGULATIONS**

- B.5.1 Contractor shall comply with all federal, state and local laws, codes, regulations and ordinances applicable to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following as applicable: i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended (vi) all regulations and administrative rules established pursuant to the foregoing laws; and (vii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations. Owner's performance under the Contract is conditioned upon Contractor's compliance with the provisions of ORS 279C.505, 279C.510, 279C.515,

279C.520, and 279C.530, which are incorporated by reference herein.

B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations; and

(a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.

(b) Contractor shall maintain, in current and valid form, all licenses and certificates required by law, regulation, or this Contract when performing the Work.

B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor.

B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to ORS 671.560.

B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503)232-1987.

B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

## **B.6 SUPERINTENDENCE**

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner's Authorized Representative shall be confirmed in writing to the Contractor.

## **B.7 INSPECTION**

B.7.1 Owner's Authorized Representative shall have access to the Work at all times.

B.7.2 Inspection of the Work will be made by the Owner's Authorized Representative at its discretion. The Owner's Authorized Representative will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner's Authorized Representative, shall be removed and replaced at the Contractor's

expense.

B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner's Authorized Representative timely notice of when and where tests and inspections are to be made so that the Owner's Authorized Representative may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner's Authorized Representative.

B.7.4 As required by the Contract Documents, Work done or material used without inspection or testing by the Owner's Authorized Representative may be ordered removed at the Contractor's expense.

B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without sufficient notice to the Owner's Authorized Representative, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner's Authorized Representative, the uncovering and restoration will be paid for as a Change Order.

B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's Authorized Representative's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.

B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations have the right to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner's Authorized Representative.

## **B.8 SEVERABILITY**

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular

provision held to be invalid.

## **B.9 ACCESS TO RECORDS**

B.9.1 Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Change Orders and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner's Authorized Representative access thereto.

B.9.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access to, for a period not less than ten (10) years, all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Contract is involved in litigation, Contractor shall retain all such records until all litigation is resolved. The Owner and/or its agents shall continue to be provided full access to the records during litigation.

## **B.10 WAIVER**

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

## **B.11 SUBCONTRACTS AND ASSIGNMENT**

B.11.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.

B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

B.11.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with

the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

## **B.12 SUCCESSORS IN INTEREST**

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

## **B.13 OWNER'S RIGHT TO DO WORK**

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor will coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner's Authorized Representative will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner's Authorized Representative will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

## **B.14 OTHER CONTRACTS**

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this Contract. The Contractor of this Contract will fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

## **B.15 GOVERNING LAW**

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

## **B.16 LITIGATION**

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Marion County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the Marion County on any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR BY EXECUTION OF THIS CONTRACT HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

## **B.17 ALLOWANCES**

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such

amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (2) changes in Contractor's costs under Section B.17.2(b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

#### **B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner's Authorized Representative if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any sub-subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed

in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

B.18.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.

B.18.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Change Order has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar by the Architect/Engineer's review or approval thereof.

B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section



B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner's Authorized Representative.

#### **B.19 SUBSTITUTIONS**

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner's Authorized Representative and only in accordance with a Change Order. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

#### **B.20 USE OF PLANS AND SPECIFICATIONS**

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

#### **B.21 FUNDS AVAILABLE AND AUTHORIZED**

Owner reasonably believes at the time of entering into this Contract that sufficient funds are available and authorized for expenditure to finance the cost of this Contract within the Owner's appropriation or limitation. Contractor understands and agrees that, to the extent that in the event the Board of Commissioners of the County reduces, changes, eliminates or otherwise modifies the funding the cost of this contract, the CONTRACTOR agrees to abide by any such decision, including termination of this agreement.

#### **B.22 NO THIRD PARTY BENEFICIARIES**

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

### **SECTION C WAGES AND LABOR**

#### **C.1 MINIMUM WAGE RATES ON PUBLIC WORKS**

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts.

#### **C.2 PAYROLL CERTIFICATION; ADDITIONAL RETAINAGE; FEE REQUIREMENTS**

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner's Authorized Representative, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement and that to the Contractor's or Subcontractor's best knowledge and belief the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month.

The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.

C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

C.2.4 In accordance with statutory requirements, and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

### **C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS**

C.3.1 Pursuant to ORS 279C.505 and as a condition to Owner's performance hereunder, the Contractor shall:

C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.

C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.

C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.

C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

C.3.1.5 Demonstrate that an employee drug testing program is in place as follows:

(a) Contractor represents and warrants that Contractor has in place at the time of the execution of this Contract, and shall maintain during the term of this Contract, a Qualifying Employee Drug Testing Program for its employees that includes, at a minimum, the following:

- (1) A written employee drug testing policy,
- (2) Required drug testing for all new Subject Employees or, alternatively, required testing of all Subject Employees every 12 months on a random selection basis, and
- (3) Required testing of a Subject Employee when the Contractor has reasonable cause to believe the Subject Employee is under the influence of drugs.

A drug testing program that meets the above requirements will be deemed a "Qualifying Employee Drug Testing Program." For the purposes of this section, an employee is a "Subject Employee" only if that employee will be working on the project job site.

(b) Contractor shall require each Subcontractor providing labor for the project to:

- (1) Demonstrate to the Contractor that it has a Qualifying Employee Drug Testing Program for the Subcontractor's Subject Employees,

and represent and warrant to the Contractor that the Qualifying Employee Drug Testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract, or

- (2) Require that the Subcontractor's Subject Employees participate in the Contractor's Qualifying Employee Drug Testing Program for the duration of the subcontract.

C.3.2 Pursuant to ORS 279C.515, and as a condition to Owner's performance hereunder, Contractor agrees:

C.3.2.1 If Contractor fails, neglects or refuses to pay promptly a person's claim for labor or services that the person provides to the Contractor or a Subcontractor in connection with the project as such claim becomes due, the proper officer that represents the Owner may pay the amount of the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract. Paying a claim in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to an unpaid claim.

C.3.2.2 If the Contractor or a first-tier Subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the public contract for a public improvement within thirty (30) Days after receiving payment from Owner or a contractor, the contractor or first-tier Subcontractor owes the person the amount due plus interest charges that begin at the end of the 10-Day period within which payment is due under ORS 279C.580(4) and that end upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest on the amount due is nine percent per annum. The amount of interest may not be waived.

C.3.2.3 If the Contractor or a Subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580. Every contract related to this Contract must contain a similar clause.

C.3.3 Pursuant to ORS 279C.580, Contractor shall include in each subcontract for property or services the Contractor enters into with a first-tier Subcontractor, including a material supplier, for the purpose of performing a construction contract:

(a) A payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under the subcontract within ten (10) Days out of amounts the Owner pays to the Contractor under the Contract;

(b) A clause that requires the Contractor to provide the first-tier Subcontractor with a standard form that the first-tier Subcontractor may use as an application for payment or as another method by which the Subcontractor may claim a payment due from the Contractor;

- (c) A clause that requires the Contractor, except as otherwise provided in this paragraph, to use the same form and regular administrative procedures for processing payments during the entire term of the subcontract. The Contractor may change the form or the regular administrative procedures the Contractor uses for processing payments if the Contractor:

- (1) Notifies the Subcontractor in writing at least 45 days before the date on which the Contractor makes the change; and
- (2) Includes with the written notice a copy of the new or changed form or a description of the new or changed procedure.

- (d) An interest penalty clause that obligates the Contractor, if the Contractor does not pay the first-tier Subcontractor within thirty (30) Days after receiving payment from Owner, to pay the first-tier Subcontractor an interest penalty on amounts due in each payment the Contractor does not make in accordance with the payment clause included in the subcontract under paragraph (a) of this subsection. Contractor or first-tier Subcontractor is not obligated to pay an interest penalty if the only reason that the Contractor or first-tier Subcontractor did not make payment when payment was due is that the Contractor or first-tier Subcontractor did not receive payment from Owner or Contractor when payment was due. The interest penalty applies to the period that begins on the day after the required payment date and that ends on the date on which the amount due is paid; and is computed at the rate specified in ORS 279C.515(2).

- (e) A clause which requires each of Contractor's Subcontractors to include, in each of their contracts with lower-tier Subcontractors or suppliers, provisions to the effect that the first-tier Subcontractor shall pay its lower-tier Subcontractors and suppliers in accordance with the provisions of paragraphs (a) through (d) above and requiring each of their Subcontractors and suppliers to include such clauses in their subcontracts and supply contracts.

C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the Marion County shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

#### **C.4 PAYMENT FOR MEDICAL CARE**

Pursuant to ORS 279C.530, and as a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

#### **C.5 HOURS OF LABOR**

As a condition to Owner's performance hereunder, Contractor shall comply with ORS 279C.520, as amended from time to time and incorporated herein by this reference:

Pursuant to ORS 279C.520 and as a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract if Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

### **SECTION D** **CHANGES IN THE WORK**

#### **D.1 CHANGES IN WORK**

D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever without prior written approval of the Owner's Authorized Representative, and then only in a manner consistent with the Change Order provisions of this Section D.1 and after any necessary approvals required by public contracting laws have been obtained. Otherwise, a formal contract amendment is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner's Authorized Representative may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All Change Order Work shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.

- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible, as determined by Owner. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply.

Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that Change Order Work shall be administered and compensated according to the following:

- (a) *Unit pricing* may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for additional Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the additional Work.
- (b) If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, *fixed pricing* may be used for Change Order Work. In fixed pricing the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. The mark-ups set forth in D.1.3(c) shall be utilized by the parties as a guide in establishing fixed pricing, and will not be exceeded by Owner without adequate justification. Cost and price data relating to Change Orders shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) In the event that unit pricing and fixed pricing are not utilized, then Change Order Work shall be performed on a *cost reimbursement* basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. In addition, the following markups shall be added to the Contractor's or Subcontractor's Direct Costs as full compensation for profit, Overhead and other indirect costs for Work directly performed with the Contractor's or Subcontractor's own forces:

On Labor.....	15%
On Equipment.....	10%
On Materials.....	10%

When Change Order Work under D.1.3(c) is invoiced by an authorized Subcontractor at any level, each ascending

tier Subcontractor or Contractor will be allowed a 5% supplemental mark-up on each piece of subcontract Work covered by such Change Order.

Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for Change Order Work. Owner may establish a maximum cost for Change Order Work under this Section D.1.3(c), which shall not be exceeded for reimbursement without additional written authorization from Owner. Contractor shall not be required to complete such Change Order Work without additional authorization.

D.1.4 Any necessary adjustment of Contract Time that may be required as a result of a Change Order must be agreed upon by the parties before the start of the Change Order Work unless Owner's Authorized Representative authorizes Contractor to start the Work before agreement on Contract Time adjustment. Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of the Change Order. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) day time limit, Contractor's requests pertaining to that Change Order are barred. The thirty (30) day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner's Authorized Representative denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

D.1.5 If any Change Order Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of, any other part of the Work under this Contract, the Contractor must submit a written request to the Owner's Authorized Representative, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of the Change Order by Contractor.

The thirty (30) day time limit applies to claims of Subcontractors, suppliers, or manufacturers that may be affected by the Change Order and that request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the compensation and additional Contract Time



requested. The Contractor will analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for additional compensation or Contract Time that Contractor submits to the Owner's Authorized Representative. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner's Authorized Representative within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner's Authorized Representative and the Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any person, not a party to the Contract the right to bring a claim against the Marion County, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner's Authorized Representative denies the Contractor's request for additional compensation or an extension of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

D.1.6 No request or Claim by the Contractor for additional costs or an extension of Contract Time shall be allowed if made after receipt of final payment application under this Contract. Contractor agrees to submit its final payment application within ninety (90) days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made to the Contractor directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

## **D.2 DELAYS**

D.2.1 Delays in construction include "Avoidable Delays", which are defined in Section D.2.1.1, and "Unavoidable Delays", which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that

otherwise would be considered Unavoidable Delays but that:

- (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the whole Work within the Contract Time.
- (c) Do not impact activities on the accepted critical path schedule.
- (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) Caused by any actions of the Owner, Owner's Authorized Representative, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) Caused by any site conditions which differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor shall notify the Owner's Authorized Representative immediately of differing site conditions before the area has been disturbed, but not more than fourteen (14) days after the condition has been encountered. The Owner's Authorized Representative will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner's Authorized Representative agree that a differing site condition exists, any additional compensation or additional Contract Time will be determined based on the process set forth in Section D.1.5 for Change Order Work. If the Owner's Authorized Representative disagrees that a differing site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.
- (c) Caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (d) Caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the project in a manner that could not be avoided by rescheduling the Work or by implementing measures to protect against the weather so that the Work could proceed. A

rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

- (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty-five percent (25 %) or more.
- (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the project site shall be considered the official agency of record for weather information.

D.2.2 Except as otherwise provided in ORS 279C.315, Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor shall submit a written notification of the delay to the Owner's Authorized Representative within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner's Authorized Representative, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner's Authorized Representative denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2., then unless otherwise prohibited by law, Contractor's Claim shall be barred.

### **D.3 CLAIMS REVIEW PROCESS**

D.3.1 All Contractor Claims shall be referred to the Owner's Authorized Representative for review. Contractor's Claims, including Claims for additional compensation or additional Contract Time, shall be submitted in writing by Contractor to the Owner's Authorized Representative within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner's Authorized Representative, a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived.

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time extension requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner's Authorized Representative. The Owner's Authorized Representative and the Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner's Authorized Representative will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment, recommend approval of all or part of the Claim; or (5) propose an alternate resolution.

D.3.4 The Owner's Authorized Representative's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner, through its Chief Administrative Officer (CAO), shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its requests for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision.

D.3.6 The parties are fully committed to working with each other throughout the Project and agree to communicate regularly with each other at all times so as to avoid or minimize disputes or disagreements. If disputes or disagreements do arise, Contractor and Owner each commit to resolving such disputes or disagreements in an amicable, professional and expeditious manner so as to avoid unnecessary losses, delays and disruptions to the Work.

D.3.7 The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) day period in order to preserve a cause of action, the parties agree that notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the parties agree to promptly submit the appropriate motions and orders documenting the settlement to the Court for its signature and filing.

D.3.6 The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to maintain the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality to the extent allowed by law. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

D.3.7 Owner may at any time and at its discretion issue a construction change directive adding to, modifying or reducing the scope of Work. Contractor and Owner shall negotiate the need for any additional compensation or additional Contract Time related to the change, subject to the procedures for submitting requests or Claims for additional compensation or additional Contract Time established in this Section D. Unless otherwise directed by Owner's Authorized Representative, Contractor shall proceed with the Work while any request or Claim is pending, including but not limited to, a request or Claim for additional compensation or additional Contract Time

resulting from Work under a Change Order or construction change directive. Regardless of the review period or the final decision of the Owner's Authorized Representative, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease Work without a written stop work order from the Owner or Owner's Authorized Representative.

## **SECTION E PAYMENTS**

### **E.1 SCHEDULE OF VALUES**

The Contractor shall submit, at least ten (10) Days prior to submission of its first application for progress payment, a schedule of values ("Schedule of Values") for the contracted Work. This schedule will provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown will demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner's Authorized Representative, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner's Authorized Representative, Contractor shall revise the schedule of values and resubmit the same for approval of Owner's Authorized Representative.

### **E.2 APPLICATIONS FOR PAYMENT**

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses. Payments shall be based upon estimates of Work completed and the Schedule of Values. All payments shall be approved by the Owner's Authorized Representative. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest on the progress payment, not including retainage, due the Contractor. The interest shall commence thirty (30) Days after the receipt of invoice ("application for payment") from the Contractor or fifteen (15) Days after the payment is approved by the Owner's Authorized Representative, whichever is the earlier date. The rate of interest shall equal three times the discount rate on 90-day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve district that includes Oregon on the date that is thirty (30) Days after receipt of the application for payment from the Contractor or fifteen (15) Days after the payment is approved by the Owner, whichever is the earlier date, but the rate of interest shall not exceed thirty (30) percent. Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Accrual of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the

defective or improper portion of the application for payment and pay the remainder of the application for payment that is correct and proper. Owner makes this election, the Contractor will be required to arrange to receive EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner's Authorized Representative, an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor, including payments to Subcontractors. Contractor shall include, in its application for payment, a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: \_\_\_\_\_

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner's Authorized Representative shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials only. The submitted amount of the application for payment shall be reduced by the cost of transportation and for the cost of an inspector to check the delivery at out of town storage sites. The cost of said inspection shall be borne solely by the Contractor.
- (f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material stored.
- (g) Payment for stored materials shall in no way indicate acceptance of the materials or waive any rights under this Contract for the rejection of the Work or materials not in conformance with the Contract Documents.

- (h) All required documentation must be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with the Contract Documents,
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Owner and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.1);
- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Owner or another contractor;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in application for payment until the Contract Price has been adjusted by Change Order;
- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and



- (d) Subtract any amounts for which the Owner's Authorized Representative has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner's Authorized Representative with regard to any application for payment, Contractor nevertheless shall continue to prosecute expeditiously the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

### **E.3 PAYROLL CERTIFICATION REQUIREMENT**

Payroll certification is required before payments are made on the Contract. Refer to Section C.2 for this information.

### **E.4 DUAL PAYMENT SOURCES**

Contractor shall not be compensated for Work performed under this Contract from any state agency other than the agency that is a party to this Contract.

### **E.5 RETAINAGE**

E.5.1 Retainage shall be withheld and released in accordance with ORS 279C.550 to 279C.580:

E.5.1.1 Owner reserves the right in its sole discretion to not withhold retainage from progress payments or to begin withholding retainage at any time. If Owner withholds retainage from progress payments the amount to be retained will not exceed five percent of the payment. As Work progresses, Owner may reduce the amount of the retainage and may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's opinion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the

retained amount to 100 percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 If retainage is withheld, unless the Contractor requests and the Owner accepts a form of retainage described in options (a) or (b) below, the Owner will deposit that retainage in an interest bearing account, established through the Owner, in a bank, savings bank, trust company or savings association for the benefit of Owner, with interest from such account accruing to the Contractor as required by ORS 279C.560. In accordance with the provisions of ORS 279C.560 and any applicable administrative rules, unless the Owner finds in writing that accepting bonds, securities or other instruments described in option (a) below or a security bond described in option (b) below poses an extraordinary risk that is not typically associated with the bond, security or instrument, the Owner will approve the Contractor's written request:

(a) to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds, securities or other instruments of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner. Interest or earnings on the bonds, securities or other instruments shall accrue to the Contractor. The Contractor shall execute and provide such documentation and instructions respecting the bonds, securities and other instruments as the Owner may require to protect its interests. To be permissible the bonds, securities and other instruments must be of a character approved by the Chief Administrative Officer, including but not limited to:

- (i) Bills, certificates, notes or bonds of the United States.
- (ii) Other obligations of the United States or agencies of the United States.
- (iii) Obligations of a corporation wholly owned by the federal government.
- (iv) Indebtedness of the Federal National Mortgage Association.
- (v) General obligation bonds of the State of Oregon or a political subdivision of the State of Oregon.
- (vi) Irrevocable letters of credit issued by an insured institution, as defined in ORS 706.008; or

(b) that the Contractor be allowed, with the approval of the Owner, to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims and liens in the manner and priority as set forth for retainage under ORS 279C.550 to 279C.570 and 279C.600 to ORS 279C.625.

Where the Owner has accepted the Contractor's election of option (a) or (b) above, Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request to deposit a surety bond under option (b), Contractor shall accept like bonds from Subcontractors and suppliers on the project from which Contractor has required retainage.

(c) For a contract over \$500,000, if the Contractor requests that the Owner deposit the retainage in an interest-bearing escrow account under ORS 279C.570(2), the Contractor shall execute such documentation and instructions respecting the interest-bearing escrow account as the Owner may require to protect its interests, including but not limited to a provision that no funds may be paid from the account to anyone without the Owner's advance written authorization.

(d) For a contract of \$500,000 or less, the Owner shall deposit the retainage in an interest-bearing account under ORS 279C.560(5). The Owner will use an interest-bearing account in a bank, savings bank, trust company or savings association as provided under ORS 279C.560(5).

E.5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of one and one-half percent per month on the final payment due Contractor, interest to commence thirty (30) Days after the Work under the Contract has been completed and accepted and to run until the date Contractor shall notify Owner in writing when the Contractor considers the Work complete and Owner shall, within fifteen (15) Days after receiving the written notice, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run thirty (30) Days after the end of the 15-Day period.

E.5.1.4 In accordance with the provisions of ORS 279C.560, if the Owner accepts bonds, securities or other instruments deposited as provided in paragraph (a) of subsection E.5.1.2, the Owner shall reduce the moneys held as retainage in an amount equal to the value of the bonds, securities and other instruments and pay the amount of the reduction to the Contractor in accordance with ORS 279C.570.

E.5.1.5 Contractor agrees that if Contractor elects to reserve retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and the Contractor shall comply with all applicable legal requirements.

E.5.1.6 The Contractor shall comply with all applicable legal requirements for withholding and releasing retainage and for prompt payments, including but not limited to those in ORS Chapters 279C and 701, and 49 CFR 26.29.

E.5.2 As provided in subsections C.2.2 and C.2.3, additional withholding in the amount of 25% of amounts earned shall be withheld and released in accordance with ORS 279C.845(7) when the Contractor fails to file certified statements as required by section C.2.1.

## **E.6 FINAL PAYMENT**

E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner's Authorized Representative, in writing, that Contractor has completed Contractor's part of the Contract and shall request final payment. Upon receipt of such notice the Owner's Authorized Representative will inspect the Work, and if acceptable, submit to the Owner a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final estimate by the Owner and compliance by the Contractor with provisions in Section K. 3 AFFIDAVIT/RELEASE OF LIENS AND CLAIMS, and other provisions as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner's Authorized Representative (1) a notarized affidavit/release of liens and claims in a form satisfactory to Owner that states that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out

of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.

## **SECTION F JOB SITE CONDITIONS**

### **F.1 USE OF PREMISES**

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, law, ordinances, permits or directions of the Owner's Authorized Representative. Contractor shall follow the Owner's Authorized Representative's instructions regarding use of premises, if any.

### **F.2 PROTECTION OF WORKERS, PROPERTY, AND THE PUBLIC**

F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage, and shall protect the Owner's Authorized Representative, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner, any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.

- F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the job site, and shall comply with the Contract Documents and all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner's Authorized Representative. The Owner's Authorized Representative has no responsibility for Work site safety. Work site safety is the responsibility of the Contractor.

- F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall immediately and in writing, report to the Owner's Authorized Representative, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.

- F.2.4 Contractor is responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, and materials on the site.

- F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials will be conducted so no release will occur that may pollute or become hazardous.

- F.2.6 In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner's Authorized Representative, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner's Authorized Representative. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with Section D.

### **F.3 CUTTING AND PATCHING**

- F.3.1 Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.

- F.3.2 Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

### **F.4 CLEANING UP**

From time to time as may be ordered by the Owner the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

### **F.5 ENVIRONMENTAL CONTAMINATION**

F.5.1 Contractor will be held responsible for and shall indemnify, defend (with counsel of Owner's choice) and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorney fees), or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of these General Conditions, and Contractor shall take no action that would void or impair such coverages

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and proper regulatory agencies in a manner that complies with applicable federal, state, and local laws and regulations. Cleanup shall be at no cost to the Owner and be performed by properly qualified personnel.

F.5.1.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any applicable federal, state, or local statutes, rules or ordinances. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all applicable federal, state, or local statutes, rules, or ordinances;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all applicable federal, state, or local statutes, rules or ordinances.

F.5.2 Contractor shall report all reportable quantity releases to applicable federal, state, and local regulatory and emergency response agencies. Reportable quantities are found in 40 CFR Part 302, Table 302.4 for hazardous substances and in OAR 340-142-0050 for all products addressed therein. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report.

Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest no., and all other documentation required by law.)
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when it was reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.
- (e) Summary of communications about the release Contractor has had with members of the press or State officials other than Owner.
- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personnel injuries, if any, resulting from, or aggravated by, the release.

#### **F.6 ENVIRONMENTAL CLEAN-UP**

F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated in 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or well being of Contractor's or any Subcontractor's work force.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

#### **F.7 FORCE MAJEURE**

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.



**SECTION G  
INDEMNITY, BONDING, AND  
INSURANCE**

**G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY**

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, personnel, or agents.

G.1.2 Contractor agrees to indemnify, defend (with counsel approved by Owners), reimburse and hold harmless Owners, their partners, owners, board members, officers, employees, agents and volunteers (the "Indemnified Parties") for, from and against any and all threatened, alleged or actual all claims, suits, allegations, damages, liabilities, costs, expenses, losses and judgments, including, but not limited to, those which relate to personal or real property damage (including to the Project itself or otherwise), personal injury or death, attorney and expert/consultant fees and costs, and both economic and non-economic losses, to the extent caused by the negligence, breach of contract, breach of warranty (express or implied), or other act or omission of Contractor, its employees, Agents and Subcontractors, or anyone for whose acts Contractor is responsible (the Indemnitor). If claims are asserted against any of the Indemnified Parties by an employee of the Indemnitor, the Contractor's indemnification obligation and other obligations under this section shall not be limited by any limitation on the amount or type of damages, compensation, or benefits payable to the employee by or for the Indemnitor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

**G.2 PERFORMANCE AND PAYMENT SECURITY:  
PUBLIC WORKS BOND**

G.2.1 When the Contract Price is \$100,000 or more (or \$50,000 or more in the case of Contracts for highways, bridges and other transportation projects) the Contractor shall furnish and maintain in effect at all times during the Contract Period, a performance bond in a sum equal to the Contract Price, and a separate payment bond also in a sum equal to the Contract Price. The bonds may be required if the Contract Price is less than the above thresholds, if required by the Contract Documents.

G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

G.2.3 Before execution of the Contract Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Laws

2005, Chapter 360, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting the Subcontractor to start Work.

**G.3 INSURANCE**

G.3.1 Primary Coverage: Insurance carried by Contractor under this Contract shall be the primary coverage and non-contributory with any other insurance and self-insurance, and the Owner's insurance is excess and solely for damages or losses for which the Owner is responsible. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than \$100,000 for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk form, including earthquake and flood, for an amount equal to the full amount of the Contract. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible shall not exceed 2 percent of each loss or \$50,000, whichever is more. The policy will include as loss payees the Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For other than new construction the Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. This insurance shall include as loss payees the Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.3 Such insurance shall be maintained until

Owner has occupied the facility.

G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner for the insureds, as their interests may appear. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 Liability Insurance:

G.3.4.1 Commercial General Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverages that are satisfactory to the Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnity provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis. Contractor shall provide proof of insurance of not less than combined single limit, or the equivalent, of not less than: ☐ \$200,000; ☐ \$500,000; ☐ \$1,000,000; ☒ \$2,000,000 each occurrence for Bodily Injury and Property Damage. The policy, or an endorsement or amendment to the policy, must provide that the County and its agents, board members, officers, employees and volunteers are "additional insureds", but only with respect to the Contractor's Services to be provided under this Contract.

G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, non-owned and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than the amounts ☐ Minimum amounts required by the Oregon Financial Responsibility Law (ORS 806.060 and 806.070); ☐ \$200,000; ☒ \$500,000; or ☐ \$1,000,000 per occurrence, for Bodily Injury and Property Damage, including coverage for all owned, hired or non-owned vehicles, as applicable. The policy, or an endorsement or amendment to the policy, must provide that the County and its board members, officers, agents, employees and volunteers are "additional insureds", but only with respect to the Consultant's Services to be provided under this Contract.

G.3.4.3 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 24 months or the maximum time period available in the marketplace if less than 24 months. Contractor will be responsible for furnishing certification of "tail" coverage as described or continuous "claims made" liability coverage for 24 months following Final Completion.

Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. This will be a condition of the final acceptance of Work or services and related warranty (if any).

G.3.5 Excess/Umbrella Insurance: A combination of primary and excess/umbrella insurance is acceptable to meet the minimum coverage requirements for Commercial General Liability and Automobile Liability Insurance. In such case, the insurance certificate must include a list of the policies that fall under the excess/umbrella insurance. Sample wording is "The Excess/Umbrella policy is excess over primary Commercial General Liability and primary Automobile Liability Insurance."

G.3.6 Additional Insured: The liability insurance coverage, except Professional Liability if included, required for performance of this Contract shall include the Marion County, its departments, divisions, officers, and employees, as Additional Insureds but only with respect to the Contractor's activities to be performed under this Contract.

If Contractor cannot obtain an insurer to name the Marion County, its departments, divisions, officers and employees as Additional Insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Marion County, its departments, divisions, officers and employees as Named Insureds with not less than a \$1,500,000.00 limit per occurrence. This policy must be kept in effect for 12 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by this Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are Additional Insureds or Loss Payees. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner that are allowed to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to do an insurance business in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and are approved by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be approved by the Owner in writing prior execution of the Contract and is subject to Owner's approval. The Contractor shall immediately notify the Owner's Authorized Representative in writing of any change in insurance coverage.

## **SECTION H SCHEDULE OF WORK**

### **H.1 CONTRACT PERIOD**

H.1.1 **Time is of the essence on this Contract.** The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed otherwise.

H.1.2 Unless specifically extended by Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the Change Order process of Section D.1.

H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

### **H.2 SCHEDULE**

H.2.1 Contractor shall provide, by or before the pre-construction conference, a detailed schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by significant project components, significant labor trades, long lead items, broken down by building and/or floor where applicable. Each schedule item shall account for no greater than 5 % of the monetary value of the project or 5 % of the available Contract Time. Schedules with activities of less than one day or valued at less than 1% of the Contract will be considered too detailed and will not be accepted. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. Included within the schedule are the following: Notice to Proceed, Substantial Completion, and Final Completion. Schedules will be updated monthly and submitted with the monthly payment application. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner, as to the Contractor's sequencing, means, methods, or allocated Contract Time. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a request for additional compensation for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

### **H.3 PARTIAL OCCUPANCY OR USE**

H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or

not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

## **SECTION I CORRECTION OF WORK**

### **I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT**

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner's Authorized Representative, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (punch list) work, unless otherwise agreed. At the end of that period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the Work not be complete, and all corrections made, the costs for all subsequent re-inspections shall be borne by the Contractor. If Contractor fails to complete the punch list work within the above time period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) days after demand without affecting Contractor's obligations.

### **I.2 WARRANTY WORK**

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent.

The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2.2 This provision does not negate guarantees or warranties for periods longer than one year including without limitation such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.

I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until affected Work has been accepted in writing by the Owner's Authorized Representative.

I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

## **SECTION J**

### **SUSPENSION AND/OR TERMINATION OF THE WORK**

#### **J.1 OWNER'S RIGHT TO SUSPEND THE WORK**

J.1.1 The Owner and/or the Owner's Authorized Representative has the authority to suspend portions or all of the Work due to the following causes:

- (a) Failure of the Contractor to correct unsafe conditions;
- (b) Failure of the Contractor to carry out any provision of the Contract;
- (c) Failure of the Contractor to carry out orders;
- (d) Conditions, in the opinion of the Owner's Authorized Representative, which are unsuitable for performing the Work;
- (e) Time required to investigate differing site conditions;
- (f) Any reason considered to be in the public interest.

J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

#### **J.2 CONTRACTOR'S RESPONSIBILITIES**

J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the project in every respect as though its prosecution had been continuous and without suspension.

#### **J.3 COMPENSATION FOR SUSPENSION**

J.3.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor shall be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party owes the other for the impact.

#### **J.4 OWNER'S RIGHT TO TERMINATE CONTRACT**



J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

- (a) If Contractor should voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in- possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
- (c) If a receiver should be appointed on account of Contractor's insolvency;
- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner or its Authorized Representative; or
- (f) If Contractor is otherwise in material breach of any part of the Contract.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

#### **J.5 TERMINATION FOR CONVENIENCE**

J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of the public.

J.5.2 The Owner will provide the Contractor with seven (7) Days' prior written notice of a termination for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

#### **J.6 ACTION UPON TERMINATION**

J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

J.6.2 As directed by the Owner, Contractor shall upon termination transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

### **SECTION K CONTRACT CLOSE OUT**

#### **K.1 RECORD DOCUMENTS**

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide to Owner's Authorized Representative, three sets of Record Documents of the entire project. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed.

#### **K.2 OPERATION AND MAINTENANCE MANUALS**

As part of the Work, Contractor shall submit three completed operation and maintenance manuals ("O & M Manuals") and one (1) digital copy for review by the Owner's Authorized Representative prior to submission of any pay request for more than 75% of the Work. No payments beyond 75% will be made by the Owner until the O & M Manuals have been received. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, phone list of consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner's Authorized Representative shall review and return one O & M Manual for any modifications or additions required. Prior to submission of its final pay request, Contractor shall deliver three (3) complete and approved sets and one (1) digital copy of O & M Manuals to the Owner's Authorized Representative.

#### **K.3 AFFIDAVIT/RELEASE OF LIENS AND CLAIMS**

As a condition of final payment, the Contractor shall submit to the Owner's Authorized Representative a notarized affidavit/release of liens and claims form, in a form satisfactory to Owner, which states that all Subcontractors and suppliers have been paid in full, all disputes with property owners have been resolved, all obligations on the project have been satisfied, all monetary claims and indebtedness have

been paid, and that, to the best of the Contractor's knowledge, there are no claims of any kind outstanding against the project. The Contractor shall indemnify, defend (with counsel of Owner's choice) and hold harmless the Owner from all claims for labor and materials finished under this Contract. The Contractor shall furnish complete and valid releases or waivers, satisfactory to the Owner, of all liens arising out of or filed in connection with the Work.

#### **K.4 COMPLETION NOTICES**

K.4.1 Contractor shall provide Owner notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the punchlist accompanying the Certificate. Both completion notices must be signed by the Contractor and the Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.

K.4.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner's Authorized Representative. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a punch list be prepared by the Owner's Authorized Representative with submission of the request for the Substantial Completion notice.

#### **K.5 TRAINING**

As part of the Work, and prior to submission of the request for final payment, the Contractor shall schedule with the Owner's Authorized Representative, training sessions for all equipment and systems, as required in the individual specifications sections. Contractor shall schedule training sessions at least four weeks in advance of the date of training to allow Owner personnel adequate notice. The O & M Manual shall be used as a basis for training. Training shall be a formal session, held after the equipment and/or system is completely installed and operational in its normal operating environment.

#### **K.6 EXTRA MATERIALS**

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the specifications, prior to final payment. Delivery point for extra materials shall be designated by the Owner's Authorized Representative.

#### **K.7 ENVIRONMENTAL CLEAN-UP**

As part of the Final Completion notice, or as a

separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental pollution clean-up performed as a part of this Contract has been disposed of in accordance with all applicable rules, regulations, laws, and statutes of all agencies having jurisdiction over such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above.

#### **K.8 CERTIFICATE OF OCCUPANCY**

The Contractor shall not be granted Final Completion or receive final payment if the Owner has not received an unconditioned certificate of occupancy from the appropriate state and/or local building officials, unless failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

#### **K.9 OTHER CONTRACTOR RESPONSIBILITIES**

The Contractor shall be responsible for returning to the Owner all items issued during construction such as keys, security passes, site admittance badges, and all other pertinent items. The Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

#### **K.10 SURVIVAL**

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract

### **SECTION L LEGAL RELATIONS & RESPONSIBILITIES**

#### **L.1 LAWS TO BE OBSERVED**

In compliance with ORS 279C.525, Sections L.2 through L.4 contain lists of federal, state and local agencies of which the Owner has knowledge that have enacted ordinances or regulations relating to environmental pollution and the preservation of natural resources that may affect the performance of the Contract:

#### **L.2 FEDERAL AGENCIES**

Agriculture, Department of Forest Service  
Soil Conservation Service  
Coast Guard  
Defense,  
Department of Army  
Corps of Engineers  
Energy, Department  
of  
Federal Energy Regulatory Commission  
Environmental Protection Agency  
Health and Human Services, Department of  
Housing and Urban Development,  
Department of Solar Energy and Energy  
Conservation Bank Interior, Department of  
Bureau of Land  
Management Bureau of  
Indian Affairs Bureau of

Mines  
Bureau of Reclamation  
Geological Survey  
Minerals Management  
Service U.S. Fish and  
Wildlife Service Labor,  
Department of  
Mine Safety and Health Administration  
Occupation Safety and Health  
Administration Transportation,  
Department of  
Federal Highway Administration  
Water Resources Council

### **L.3 STATE AGENCIES**

Administrative Services, Department of  
Agriculture, Department of  
Soil and Water Conservation Commission  
Columbia River Gorge Commission  
Energy, Department of  
Environmental Quality, Department of  
Fish and Wildlife, Department of  
Forestry, Department of  
Geology and Mineral Industries, Department of  
Human Resources, Department of  
Consumer and Business Services, Department of  
Land Conservation and Development Commission  
Parks and Recreation, Department of  
State Lands, Division of  
Water Resources Department of

### **L.4 LOCAL AGENCIES**

City Councils  
County Courts  
County Commissioner, Board of  
Design Commissions  
Historical Preservation Commission  
Planning Commissions

EXHIBIT B

# MARION COUNTY

**Project Manual:**

**SPECIFICATIONS FOR**

## **MARION COUNTY CORRECTIONAL FACILITY PARKING LOT IMPROVEMENTS PHASE II**



RENEWS: 12/31/2021

2868.0300.0

June 2020

**WESTECH ENGINEERING, INC.**  
**3841 Fairview Industrial Dr. SE. ~ Suite 100**  
**Salem, OR 97302-1192**  
**(503) 585-2474**



# MARION COUNTY CORRECTIONAL FACILITY PARKING LOT IMPROVEMENTS PHASE II

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**SECTION 01043**  
**COORDINATION AND CONTROL OF THE WORK**

**PART 1: GENERAL**

1.1 SCOPE

- a. This section includes coordination and control of the work.

**PART 2: PRODUCTS**

None.

**PART 3: EXECUTION**

3.1 GENERAL

- a. Unless otherwise specified or noted on the drawings, all grading, rocking, paving, utility and related work shall conform to Oregon Standard Specifications for Construction - OSSC (ODOT/APWA), 2018 edition, or local jurisdiction standards, whichever is more stringent.
- b. Specification Language. Portions of the Specifications may be written in imperative and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words “shall be” or “shall conform with” shall be included by inference where a colon (:) is used within sentences or phrases. Example – Aggregate: ASTM C33.
- c. The Contract Documents are complementary and what is called out by any portion of the Contract Documents (drawings, specifications, or contract forms) shall be as binding as if called for by all.

3.2 EXISTING SURVEY MONUMENTS DISTURBED DURING CONSTRUCTION

- a. The Contractor shall be responsible for locating and marking all existing survey monuments of record (including but not limited to property and street monuments) prior to construction.
- b. If any survey monuments are removed, disturbed or destroyed during construction of the project, the Contractor shall retain and pay for the services of a Registered Professional Surveyor licensed in the State of Oregon to reference and replace all such monuments in accordance with ORS 209.150.
- c. Each monument shall be replaced within a maximum of 90 days of its being removed, disturbed or destroyed. The surveyor shall notify the County Surveyor in writing of all such monuments replaced, and provide all documentation required by the County Surveyor. All monument replacement work shall be completed prior to final payment by the Owner.

### 3.3 FIELD RECORD DRAWINGS AND AS-BUILTS

- a. The Contractor shall maintain a neatly marked set of full size record drawings showing the locations and depths of all new and existing waterlines, storm and sanitary sewer laterals, buried conduits and other utilities encountered or installed during construction. Drawings shall be kept current with the work as it progresses and shall be subject to inspection by the Owner's Representative at any time. Failure to keep field record drawings current may result in the issuance of a stop work order or delay in the processing of pay requests until the record drawings are made current.
- b. Prior to final payment, the Contractor shall submit a clean set of full size record drawings to the Owner's Representative. All information shown on the Contractor's field record drawings shall be subject to verification by the Owner's Representative.
- c. The record drawings shall accurately show all as-built conditions, locations and alignments, and shall include all information required by individual sections herein, as well as the following. If significant errors or deviations are noted by the Owner's Representative, an as-built survey prepared and stamped by a registered professional Land Surveyor shall be completed at the Contractor's expense.
  - 1) Storm Sewer - Manhole and catch basin stationing and invert elevations.
  - 2) Existing Utilities - Station locations and depth at location where new utilities cross-existing utilities.
- d. As-built information shall be based on the benchmark used for the design survey unless that benchmark was destroyed during construction. If the design survey benchmark was destroyed during construction, an alternate approved benchmark shall be used as the basis for as-built information. The benchmark used as the basis of the as-built information shall be clearly noted on the drawings.

### 3.4 CONFORMITY WITH DRAWINGS AND ALLOWABLE DEVIATIONS

- a. Finished surfaces in all cases shall conform to lines, grades, cross sections and dimensions shown on the approved drawings. Deviations from the approved drawings and working drawings will in all cases be determined by the Owner's Representative and authorized in writing.

### 3.5 CONTRACTOR RESPONSIBILITY TO OBTAIN ALL REQUIRED INSPECTIONS

- a. The Contractor shall be responsible to ensure that all inspections required by the drawings, contract documents or agencies having jurisdiction are completed by authorized inspectors prior to proceeding with subsequent work which covers or which is dependent on the work to be inspected.
- b. Work completed or covered without obtaining required inspections will be considered as unauthorized work as outlined below, and may be ordered removed at the Contractor's expense. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems and/or corrective measures arising from uninspected work.

### 3.6 CONTRACTOR RESPONSIBLE TO PROVIDE ACCESS FOR INSPECTIONS

- a. Contractor shall be responsible to provide the Owner, Engineer and their subconsultants and representatives with safe and proper access to all portions of the work as necessary for inspection and/or testing purposes (*see also applicable General Condition provisions*).
- b. The Contractor shall be responsible for coordinating and scheduling to provide such inspection access at reasonable times, so as not to interfere with or delay the progress of the work by the Contractor or subcontractors.

### 3.7 COOPERATION OF CONTRACTOR

- a. The Contractor shall conduct his operations so as to interfere as little as possible with those of the Owner, other Contractors, utilities, or any public authority on or near the work. The Owner reserves the right to perform other work (by contract or otherwise) on or near the project during progress of the work. The Owner reserves the right to permit other public bodies, public utility companies and others to do work on or near the project during progress of the work. If a conflict arises, the Owner shall determine when and how the work shall proceed.
- b. Claims for delay or inconvenience due to operations by such other parties for work which is specified or referenced in the Contract Documents, or which is shown, noted or referenced on the drawings, will not be allowed.

### 3.8 ORAL AGREEMENTS

- a. No oral agreement or conversation with any officer, agent or employee of the Owner, either before or after execution of the Agreement, shall affect or modify any of the terms or obligations contained in any of the documents comprising the Agreement. Any such oral agreement or conversation shall be considered as unofficial information and in no way binding upon the Owner.

### 3.9 EMERGENCY MAINTENANCE PERSONNEL

- a. The Contractor shall submit to the Owner/Owner's Representative the names, addresses and telephone numbers of two employees responsible for performing emergency maintenance and repairs when the Contractor is not working. These employees shall be designated, in writing by the Contractor, to act as his representatives and shall have full authority to act on his behalf.
- b. At least one of the designated employees shall be available for a telephone call any time an emergency arises.

### 3.10 CONDUCT

- a. The Contractor and his personnel shall at all times be civil and courteous around private citizens and property owners. If ever directed to leave private property by the property owner or his representative, the Contractor and his personnel shall do so immediately. If any property owner or his representative makes demands, the Contractor is to remain courteous and report the matter to the Owner's Representative. Foul language, obscene gestures, or rudeness directed to private citizens will not be tolerated.
- b. Use of radios and personal stereos with headphones (including walkmans, iPods, MP3 players, etc.) will not be permitted.
- c. If, in the Owner's Representative's opinion, the Contractor or any of his men fail to conduct themselves as stipulated above or follow the direction of the Owner's Representative, the Owner's Representative shall bar the offending individual from the project. His order shall be final.

### 3.11 DEFECTIVE OR DAMAGED EQUIPMENT OR MATERIALS

- a. All equipment and materials shall be carefully inspected by the Contractor upon arrival at the jobsite for defects or damage (including freight or shipment damage). Unless delivery of defective or damaged equipment or material is rejected by the Contractor and is not unloaded, the Contractor shall immediately notify the Owner's Representative about any damaged or defective material or equipment delivered to the jobsite.
- b. No material or equipment shall be installed which is known to be defective or damaged, without the prior written approval from the Owner's Representative. Any defective or damaged material or equipment discovered after installation shall be removed and replaced with new material or equipment at the Contractor's expense (in a manner satisfactory to the Owner's Representative), unless otherwise specifically approved in writing by the Owner's Representative. Such written approval (pre-installation or post-installation), if granted, shall be based on a written application from the Contractor, as well as documentation from the material/equipment manufacturer and the bonding company, as summarized below.
- c. The request for acceptance of any defective or damaged material or equipment shall be submitted in writing by the Contractor to the Owner's Representative. Such request shall include the following as a minimum (Contractor shall be responsible for obtaining these items prior to submitting the official request for the Owner's review). Additional requirements may be imposed by the Owner as applicable (at its sole discretion).
  - 1) Written certification from the material or equipment manufacturer that the damage can be repaired to restore the material or equipment to its full, original capacity and function, and that after such repair it will fully comply with all specification requirements and all manufacturer's recommendations, with no restriction or limitation on any required warranty. The manufacturer's certification shall include a detailed summary of all proposed repair procedures (as well as the qualifications or certifications required of the party who will complete the repair), as well as a summary of post-repair inspections and tests to be completed by the manufacturer's representative.



- 2) Written consent from the Contractor's surety acknowledging that the surety concurs with the request, and that the provisions of all bonds will remain in full effect and force, without limitation or restriction.
- d. Notwithstanding the Owner's right (at its sole discretion) to accept defective or damaged equipment or materials (subject to completion of acceptable repairs/inspection/testing), this shall impose no obligation on the Owner to grant such acceptance.
- e. If the Owner or the Owner's Representative decide to reject any defective or damaged material or equipment (before or after submittal of a request by the Contractor), the Contractor shall be responsible to immediately and permanently mark or label the material or equipment as defective, and remove it from the job site within five (5) business days of verbal or written notice by the Owner's Representative of such rejection.

### 3.12 REMOVAL OF DEFECTIVE OR UNAUTHORIZED WORK

- a. All work that does not conform to the requirements of these Contract Documents shall be considered as unacceptable.
- b. Contractor shall immediately remove unacceptable and defective work found to exist prior to acceptance of, or final payment for, the work. Replace with work and materials, which conform to the Contract Documents, or remedy otherwise in an approved manner. This provision shall have full effect regardless of the fact that the unacceptable work may have been done or the defective materials used with the full knowledge of the Inspector.
- c. Work done beyond the lines shown on the drawings or ordered, work done without required inspection, or any extra work done without authority will be considered as unauthorized and will not be paid for under the provisions of these Contract Documents. Work so done may be ordered removed at the Contractor's expense. Work done without lines and grades being given may also be considered as unauthorized and will be subject to rejection.

### 3.13 UTILITY CONFLICTS

- a. The Contractor shall not deviate from the design line and grade stated in these Contract Documents without the approval of the Owner's Representative.
- b. The Contractor shall be responsible for exposing potential utility conflicts far enough ahead of pipeline construction to make necessary adjustments in grade and alignment of the new work within the recommended limits of pipe and fitting deflection and/or the lines and grades stated in the Contract Documents. The Contractor shall field verify location and depth of all existing utilities where new facilities cross. All utility crossings marked or shown on the drawings shall be potholed as necessary prior to excavating or boring to allow the Contractor to prevent grade or alignment conflicts. Contractor shall employ hand tools or other non-invasive methods to determine the exact location and depth of the underground utilities at the designated locations, including both utilities marked in the field and those shown on the drawings.

- c. The Contractor shall be responsible for informing the Owner's Representative of the need for a grade and/or alignment adjustment. Contractor shall be responsible for exposing potential utility conflicts far enough ahead of construction to make necessary grade or alignment modifications without delaying the work. If grade or alignment modification is necessary, Contractor shall notify the Design Engineer, and the Design Engineer or the Owner's Representative shall obtain approval from the regulating authority prior to construction. Where failure to expose potential utility conflicts in advance results in the necessity of removing and/or relocating newly laid pipe; this additional work shall be performed by the Contractor at no additional expense to the Owner.

### 3.14 PROTECTION OF EXISTING FACILITIES

- a. The Contractor shall protect from damage due to his operations, all existing facilities including but not limited to survey monuments, fence lines, trees, underground utilities, drainage facilities, landscaping, roadway surfaces etc., which are not specifically designated for removal or alteration. The locations of these facilities as shown on the plans were derived from the best information available. However, the completeness and accuracy of these locations as shown is not guaranteed. It shall be the responsibility of the Contractor to verify the existence, size and locations of underground facilities in advance of construction. Any existing facilities not designated for removal or alteration, which are damaged by the Contractor's operations shall be restored or replaced to an "in kind" or better condition at the expense of the Contractor. The Contractor shall notify all public and private utility companies serving in the area in advance of construction, so underground utility locations can be confirmed and existing facilities relocated if necessary to facilitate construction. Contractor shall make excavations and borings ahead of work, as necessary, to determine the exact location, size and depth of existing underground utilities.
- b. At least a week in advance of beginning work, the Contractor shall notify the registered underground protection service, all public bodies and other owners of such facilities of the proposed location of his operations, advising them that their property may be affected and that such measures as they may deem necessary should be promptly taken to protect, adjust, remove and/or build them. Contractor shall comply with rules set forth in OAR 952-001-0010 through OAR 952-001-0090.
- c. Three conditions which may be encountered will be dealt with as follows:
  - 1) Structures, which are adjacent to but not included within the limits of an excavation required for performance of the work, shall be acceptably protected, supported and maintained in service by the Contractor at his expense.
  - 2) Structures within the limits of the work which can be satisfactorily supported and maintained in service and which do not require removal and rebuilding in the judgment of the Owner's Representative, shall be thus supported by the Contractor at his expense, including cost of repair of damage incidental to his operations.

- a) Supports for water and gas mains, sewers, conduits and similar structures shall be constructed of timber or other acceptable materials, shall be supported on undisturbed foundations and shall be sufficiently substantial to ensure against settlement when pipe trenches or other excavations are backfilled. In all cases where permits or inspections fees are required by utilities in connection with changes to or temporary support of their conduits, the Contractor shall secure such permits and pay all inspection fees.
  - b) The Contractor shall assume full responsibility for maintaining all public utility structures in service and shall support and protect, or remove and rebuild them at his own expense. Such services shall not be interrupted without permission of the owner of the Public utility structure.
- 3) In cases where the Contractor's failure to pothole and verify the location, depth and size of existing utilities in advance of the work results in direct interference with the installation of the work, the contractor shall either remove and/or relocate newly laid pipe as required to resolve the conflict, or relocate the existing pipeline or other utility structure at no additional cost to the Owner. Any such relocations shall be approved by the Engineer and the regulating authority. The Contractor will not be paid for time lost or delay due to such direct interference. Where it is the policy of any utility owner to perform such work with his own forces, the Contractor shall cooperate to the fullest extent with such utility owners. All work shall be done in a manner to protect the public and the work.

### 3.15 PROTECTION OF PROPERTY

- a. Protect all public and private property, insofar as it may be endangered by operations and take every reasonable precaution to avoid damage to such property.
- b. Restore and bear the cost of any public or private improvement, facility, or structure within the right-of-way or easement which is damaged or injured directly or indirectly by or on account of any act, omission, or neglect in the execution of the work and which is not designated for removal but visibly evident or correctly shown on the plans. Restore to a condition substantially equivalent to that existing before such damage or injury occurred, by repairing, rebuilding, or otherwise affecting restoration thereof, or if this is not feasible, make a suitable settlement with the owner of the damaged property, all at no expense to the Owner.
- c. Give reasonable notice to owner's and occupants of buildings or property within or adjacent to the work to permit the occupants to remove vehicles, trailers, and other possessions as well as salvage or relocate plants, trees, fences, sprinkler systems, or other improvements in the right-of-way which are designated for removal or which might be destroyed or damaged by work operations.
- d. Protect all designated trees and planted areas within the right-of-way or easements. Exercise care and conduct operations so as to minimize damages to other planted areas.

- e. Review with Owner's Representative the location, limits and methods to be used prior to clearing work. Clearing and grubbing shall be performed in strict compliance with all local, State and Federal laws.
- f. The Contractor shall be responsible for the protection of public and private property adjacent to the work and shall exercise due caution to avoid damage to such property. Where such damage occurs, restore to a condition substantially equivalent to that existing before such damage or injury occurred, by repairing, rebuilding, or otherwise affecting restoration thereof, or if this is not feasible, make a suitable settlement with the owner of the damaged property, all at no expense to the Owner.
- g. The Contractor shall repair and replace all existing improvements within the right-of-way, easement, and permit of entry areas which are not designated for removal (examples are curbs, sidewalks, storm drains, water mains, sanitary sewers, driveways, fences, walls signs, utility installations, pavements, structures, sprinkler lines) which are damaged or removed as a result of the contractor's operations. Repairs and replacements shall be equal to or better than existing improvements and shall match them in finish and dimension.
- h. Trees, lawns, and shrubbery that are not to be removed shall be protected from damage or injury. If damaged or removed because of the Contractor's operations, they shall be restored or replaced in, as nearly the original condition and location as is reasonably possible. Lawns shall be reseeded after replacement of topsoil and covered with suitable mulch except as noted otherwise.
- i. The costs to the Contractor for protecting, repairing, removing, replacing, or restoring existing improvements not required as a part of this work shall be incidental to other bid items.
- j. Until acceptance of the project, at all times protect from damage and preserve all materials, supplies, equipment of any description, and all work already performed, from the nature of the work, the action of the elements, and damage by any person or persons, or from any other cause whatsoever.

### 3.16 RESTORATION & REPAIR TIME FRAME

- a. Repair and restoration of any public or private improvement, facility, or structures as specified under the contract documents or by standards of jurisdictions with authority, shall be completed by the contractor in a timely manner, subject to any specific timeframes in the individual specification sections, drawings notes, general conditions or directives by jurisdictions with authority.
- b. Where damage caused by the contractor results in a danger to public health or safety of persons or the work or property at the site or adjacent thereto, the Contractor is obligated to act immediately to prevent threatened damage, injury, or loss, and complete any repairs as soon as possible, at no additional cost to the Owner.

### 3.17 RESTORATION AND CLEANUP

- a. Periodically, or as directed by the Owner's Representative, as the work progresses, and immediately after completion of the work, clean up and remove all refuse, debris, equipment, and unused materials of any kind resulting from the work. Upon failure to do so within 72 hours after directed, the work may be done by the Owner or third party and the cost thereof be deducted from any payment due the Contractor.
- b. As a condition precedent to final acceptance of the project, remove all equipment and temporary structures, and all rubbish, waste, lathe, flagging, etc., and generally clean up the right-of-way and premises to conform substantially to conditions as they existed before the commencement of work, as approved.
- c. All disturbed areas shall be graded to form a smooth, free draining surface. Contractor shall seed and mulch all exposed slopes not scheduled to be landscaped.

### 3.18 DISPOSAL OF DEBRIS

- a. All debris resulting from construction operations, i.e., packaging, waste materials, damaged equipment, etc., shall be trucked from the site by the Contractor and disposed of at an approved off site location.
- b. The Contractor shall police the hauling of debris to ensure that all spillage from haul trucks is promptly and completely removed.
- c. All debris shall be disposed of in accordance with Federal, State and City rules and regulations.
- d. Excavated materials not suitable or not required for backfill or embankment shall be deposited on waste sites provided by the Contractor.
- e. All costs for disposing of this excess material shall be incidental to other items of work contained in the bid unless otherwise specified.
- f. All waste sites (whether on-site or offsite) shall be operated in such a manner as to meet all safety and health requirements of State and local agencies. Sites operations, or the result of such operations, which create a nuisance problem, or which result in damage to public or private properties will not be permitted.
- g. Permits for dumping on sites designated in the Contract Documents will be provided by the Owner. Contractor shall obtain permits for other sites at no expense to Owner. Furnish copies of issued permits to Owner's Representative prior to commencing filling operations.
- h. Do not deposit materials on any unimproved dedicated street right-of-way without written permission of the Owner's Representative and the agency with jurisdiction over the right-of-way.



### 3.19 TRESPASS

- a. The Contractor will be solely responsible for any trespass upon private property or injury thereto resulting from or in connection with his operations. He will be liable for any claims made because of his trespass or his deposit of debris of any kind on private property.

### 3.20 FINAL INSPECTION

- a. When all construction work on the project is complete and all extra work bills, forms and documents required under the Contract are submitted, notify the Owner's Representative in writing. Owner's Representative will make an inspection of the project and project records within 15 days of receiving said notice. If, at such inspection, all construction provided for and ordered under the Contract is found completed and satisfactory and all certificates, bills, forms, and documents have been properly submitted such inspection shall constitute final inspection.
- b. If work is found unsatisfactory, or if all certificates, bills, forms and documents have not been properly submitted, the Owner's Representative will so notify the Contractor. After correction are made, or all certificates, bills, forms, or documents are properly submitted, notify the Owner's Representative in writing. Owner's Representative will make another inspection within five (5) days after such notice, and if all work is satisfactory, then this inspection shall constitute the final inspection.

### 3.21 USE OR POSSESSION PRIOR TO FINAL COMPLETION

- a. The Owner or his agents shall have the right to take possession of or use for his own benefit any completed or partially completed part of the work. Such possession or use shall not be deemed an acceptance of the occupied portion of the project. While the Owner is in such possession, the Contractor shall be relieved of the responsibility for injury or damage to the said completed portion of the work other than that resulting from the Contractor's fault or negligence. Continued operation or use of facilities being rehabilitated shall not be construed as use or possession prior to final completion.
- b. Prior to the Owner or his agents taking possession of or using any completed or partially completed part of the work, written notice shall be given by the Owner's Representative to the Contractor at least 24 hours in advance of the Owner actually assuming possession.

### 3.22 SUBSURFACE DATA

- a. All information obtained by Owner's Representative regarding subsurface conditions and groundwater elevations will be available for inspection at the office of the Owner's Representative upon request.
- b. Logs of test holes, test pits, soils reports, groundwater levels, and other supplementary subsurface information are offered as the best available information of underlying materials and conditions at the locations actually tested. The Owner will not be liable for any loss sustained by the Contractor as a result of any variance between conditions contained in or interpretations of test reports and the actual conditions encountered during progress of the work.

- c. Contractor shall examine the site and available records. The submission of a Bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the subsurface conditions to be encountered as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the Contract Documents.

### 3.23 BARRICADES

- a. The Contractor must provide and maintain proper barricades, fences, signal lights, flares or watchmen to properly protect the work, equipment, persons, animals and property against injury.
- b. In areas of public travel and/or on all approaches leading to this work, all barricades and obstructions shall be illuminated at night. All lights for this purpose shall be kept burning from sunset to sunrise.
- c. Temporary traffic control devices and facilities shall be furnished, erected and maintained in accordance with all Local and State requirements.

### 3.24 MAINTAINING TRAFFIC & OWNER ACCESS

- a. Where Contract work is within streets or other public thoroughfares, the Contractor shall so plan and schedule his work as to cause as little interference with general public traffic. Street surfaces shall be maintained and kept clean where construction work under this Contract has been performed until inspection and acceptance of all such work.
- b. Access of fire, police and ambulance vehicles to property abutting and adjacent to such thoroughfares shall be maintained whether or not permission has been granted to restrict other traffic. The Contractor shall obtain all permits from Municipal, County, State or other authority having jurisdiction over traffic in thoroughfares, and shall comply with all regulations and directions of such authority concerning erecting barricades and detouring movement of traffic.
- c. The Contractor shall maintain the roads and all weather access-ways for operating personnel, deliveries of operating supplies, normal maintenance vehicles and other equipment incidental to the operation and maintenance of the Owner's facility.

### 3.25 SANITARY REGULATIONS

- a. Necessary housing accommodations shall be provided for the workers for changing clothes and for protection during inclement weather. Toilet accommodations shall also be maintained for the use of the employees on the work site. The accommodations shall be in approved locations, properly screened from public observance and shall be maintained in a strictly sanitary manner. The Contractor shall obey and enforce all other sanitary regulations and orders and shall take precautions against infectious diseases. The Contractor shall maintain at all times, satisfactory sanitary conditions around all shanties, tool and supply houses and on all other parts of the work all in accordance with all Federal, State and Local ordinances, regulations and requirements.

### 3.26 DUST CONTROL

- a. The Contractor shall apply water or dust palliative, or both, for the alleviation or prevention of dust nuisance caused by his operations. Dust control operations shall be performed by the Contractor at the time(s) as required or as ordered by the Owner. Failure of the Owner to issue such order will not relieve the Contractor of this responsibility. Unless otherwise specified, no direct payment will be made for any such work performed or material used to control dust under these Contract Documents. The Contractor shall comply with all Federal, State and Local ordinances, regulations and requirements.

### 3.27 SMOKE PREVENTION

- a. Strict compliance with all ordinances regulating the production and emission of smoke will be required and the Contractor shall accept full responsibility for all damage that may occur to property as a result of negligence in providing required control. The Contractor shall comply with all Federal, State and local regulations.

### 3.28 CONTROL OF NOISE

- a. The Contractor shall eliminate noise to as great an extent as possible at all times. Air compressors shall be equipped with silencers and the exhaust of all gasoline motors and other power equipment shall be provided with mufflers. In the vicinity of hospitals, libraries and schools, precautions shall be taken to avoid noise and other nuisance. The Contractor shall require strict observances of all pertinent ordinances and regulations.

### 3.29 WEATHER CONDITIONS

- a. In case of temporary suspension of the work or during inclement weather, or whenever the Owner's Representative shall direct, the Contractor shall carefully protect (and cause his subcontractors to similarly protect) all work and materials against damage or injury from the weather. If, in the opinion of the Owner's Representative, any work or materials have been damaged by reason of failure on the part of the Contractor or any of his subcontractors to so protect his work, such materials shall be removed and replaced at the expense of the Contractor.

### 3.30 CONSTRUCTION ACCESS

- a. The Contractor shall be responsible for design, construction and maintenance of any and all structures required for access to the site for construction or delivery of materials, including but not limited to construction access roads and staging areas. The Owner's responsibility to provide access easements or right-of-ways to the construction site shall not be interpreted as relieving the Contractor of his responsibilities under this section.
- b. Unless otherwise shown or specified, the access road sections shown are based upon the anticipated loads following construction and not upon the loads during the construction period. Any increase in road size or depth required to accommodate the loads due to the Contractor's choice of construction methods or sequence of operations shall be the responsibility of the Contractor, and shall be supplied at no additional cost to the Owner.

- c. Any advice or recommendations solicited from or given by the Owner's Representative to the Contractor shall not relieve the Contractor of any of his responsibilities under this section.

3.31 USE OF EXPLOSIVES

- a. The use of explosives shall be prohibited.

**PART 4: SPECIAL PROVISIONS**

None.

**SECTION 01300**  
**CONTRACTOR CONSTRUCTION SUBMITTALS**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. Wherever submittals are required in the Contract Documents, the Contractor shall submit them to the Owner's Representative.
- b. Delivery prior to approval of any material or equipment for which submittals are required will be at the Contractor's risk. Material or equipment for which submittals are required shall not be incorporated into the work until after the submittals have been reviewed and approved.
- c. Construction Submittal Format & Number of Copies.
  - 1) Contractor will be allowed to provide electronic/pdf copies of highlighted/marked-up submittals and associated submittal cover sheet, conditional upon submittals being complete and configured in accordance with the requirements of this section.
  - 2) If the Contractor fails to provide submittals in full conformance with this section, the Owner's Representative may require all subsequent submittals to be submitted in hard copy format (three copies minimum).

**1.2 PRECONSTRUCTION CONFERENCE SUBMITTALS**

- a. Within 14 Days after the date of commencement as stated in the Notice to Proceed or at the preconstruction conference, whichever comes first, the Contractor shall submit the following items to the Owner's Representative for review:
  - 1) A preliminary list of Shop Drawings, Samples and proposed Substitutes.
  - 2) A preliminary schedule for submission of priority and major Shop Drawings (particularly long-lead time equipment) and Samples.
  - 3) A list of permits and licenses the Contractor shall obtain, indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.
  - 4) List of all subcontractors, including class of work, contact person & phone numbers.
  - 5) An Erosion Control Plan and schedule in accordance with Section 01568 - Erosion and Pollution Control.

**1.3 GENERAL SUBMITTAL REQUIREMENTS**

- a. Prior to Submitting Information to the Owner's Representative:
  - 1) The Contractor shall carefully review the correctness and thoroughness of the material, verify all field measurements, and coordinate all aspects of each item being submitted.



- 2) The Contractor shall carefully review and ensure that all submittals are tailored to the project by highlighting appropriate information and/or deleting or crossing out non-applicable information, and that all options and equipment furnished are indicated, and ensure that the submittal is otherwise organized and marked as required herein or in the individual specification sections as applicable.
  - 3) **The Contractor shall verify his review by affixing his stamp of approval and signature to the front page of each copy of the submittal.**
- b. Direct Supplier/Subcontractor Submittals Not Accepted. All submittals to the Owner's Representative, with the exception of the laboratory test certificates, shall be made only by the Contractor. Submittals from subcontractor or suppliers will not be accepted.
  - c. Sequential Numbering. All submittal reports shall be numbered sequentially. Resubmittals shall be designated with the same number as the original submittal followed by a designation letter (ie. Submittal "5A" for the first resubmittal of submittal 5, Submittal "5B" for second, etc.).
  - d. Specified Cover Sheet. All submittals shall be accompanied by a completed copy of the submittal report cover sheet included under Part 4 of this section.
    - 1) A separate submittal report cover sheet shall be prepared for each submittal. Generally, items under a single specification section can be included on the same submittal report. Each submittal report shall clearly designate the specification section(s) that apply to the material or equipment being submitted on.
    - 2) Except in the case of operations and maintenance manuals or as otherwise approved by the Owner's Representative, a single submittal report shall not be used for items under different specification sections.
    - 3) All submittal report cover sheets shall reference the item that it covers, the applicable specification section(s), the Contractor's name, the Contract title and location, and the date of submission. Submittal shall also indicate whether the information is for review and approval by the Owner's Representative, for record purposes or for the fulfillment of the operation and maintenance requirements.
  - e. The Contractor shall provide copies of each submittal as follows unless otherwise directed in the individual Sections (*except where electronic/pdf copies of submittals are allowed as noted above*):
    - 1) Preconstruction Conference Submittals – Three (3) copies provided to Owner's Representative.
    - 2) Material and Equipment Construction Submittals – Three (3) copies provided to Owner's Representative if pdf submittal is dis-allowed as noted above.
    - 3) Quality Control Submittals – The Contractor or the laboratory shall submit one copy of all test certificates, and calibration certificates directly to the following; Owner, the Owner's Representative and Owner's Field Representative.

- 4) Informational Submittals – The Contractor shall submit one copy of all licenses and permits directly to the following; Owner, Owner’s Representative and Owner’s Field Representative.
- f. Substitutions. Manufacturers submitting proposals for equipment which will require changes to the design shown on the Drawings or specified herein shall also include detailed information on structural, electrical, mechanical and other miscellaneous changes or modifications required to adapt their equipment to the design shown, as specified below and in the General Conditions. Provision of such information or acceptance for review shall not be construed as approval of such substitute.
- g. Highlighting and/or Marking. All submittals shall be tailored to the project by highlighting appropriate information and/or deleting or crossing out non-applicable information (*as well as being marked, labeled or identified as required in the individual specification sections, as applicable*). All options and equipment furnished shall be so indicated.
- h. Complete Submittals Required. Failure to provide complete submittals, or failure to follow the instructions outlined in this section (*including but not limited to highlighting applicable information and/or crossing out non-applicable information*), will result in the incomplete submittal being returned to the Contractor without review, at the discretion of the Owner’s Representative.
- i. Electrical / Control / Telemetry / SCADA Submittals. Contractor shall provide all of the electrical / control / telemetry / SCADA product data in Division 13 & Division 16 (as well as electrical items shown on the drawings by not included in the specifications) at the same time, unless specifically allowed otherwise in writing by the Owner’s project electrical engineer. Piecemeal submittals will be returned as incomplete.

#### 1.4 MATERIAL AND EQUIPMENT SUBMITTALS:

- a. Variances Shall be Noted.
  - 1) The Contractor shall indicate on the submittals all variances from the requirements in the specifications or on the Drawings. Failure to note variances from the specification requirements may result in the submittal being returned to the Contractor without review.
  - 2) If the proposed equipment includes modifications from standard features or options typically provided by the manufacturer for similar applications, these shall be clearly noted on the submittal.
- b. Material & Equipment Submittals. Submittals for all materials and equipment used by the Contractor in the performance of the work shall include the following as applicable.

- 1) Manufacturers' Literature: Literature indicating the compliance of the product with the Specifications shall be included with all submittals. This shall include catalog sheets and other descriptive bulletins. Manufacturer's literature shall also include, but not be limited to the following:
  - a) Manufacturer's catalog data
  - b) Materials of construction
  - c) Manufacturer's name and model number
  - d) Installation instructions and drawings
- 2) Manufacturers' or Suppliers' Certificates: Certificates shall state that the products have been sampled and tested in accordance with the proper industrial and governmental standards and meet the requirements of the Contract Documents. An authorized agent of the manufacturer shall sign certificates.
- 3) Design Data: Design data shall include the calculations, supporting theories, safety factors and assumptions used in designing the product.
- 4) Samples: Samples shall be provided as required in the individual sections. Samples shall be of the precise material proposed to be furnished. The number of samples and sample size shall be of the industry standard unless otherwise stated in the individual sections.
- 5) Shop Drawings: Shop drawings shall include the following as applicable to the equipment or system along with any special requirements listed in the individual Specification Sections:
  - a) Scaled details
  - b) Scaled dimensional drawings
  - c) Sectional assembly drawings
  - d) Fabrication information

## 1.5 SUBSTITUTIONS

- a. Substitute items of material or equipment are those items which are determined by the Owner's Representative NOT to qualify as an "or equal", or which require any level of redesign work on the part of the Engineer to incorporate into the project (*see requirements under General Conditions*).
- b. Submittals for substitute materials or equipment shall include but not be limited to manufacturer's literature, design criteria, dimensions and installation instruction.
- c. The submittal shall include any certifications or test results required to demonstrate that the proposed materials or equipment meets the requirements of the specifications and is equivalent or better than the specified materials or equipment.
- d. If the substitution requires a change in the design (*including dimensional changes to any structure or other component*), the submittal shall include all pertinent design information and details for the required design change, with supporting documentation.

- e. Reimbursement by Contractor for evaluation or redesign costs due to such substitution shall be dealt with as outlined under General Conditions 6.05.E as applicable.

#### 1.6 QUALITY CONTROL SUBMITTALS

- a. Quality Control submittals are defined as those required by the Specifications to present documentary evidence to the Owner's Representative that the Contractor has satisfied certain requirements of the Contract Documents. Such submittals may include but are not limited to:
  - 1) Laboratory Certificates: Certificates shall include the results of tests by an independent laboratory for comparison to Specification requirements, mix design data and approval, plan inspection reports and certification, and other required information from the laboratory. All information submitted shall be signed by an authorized agent of the laboratory.
  - 2) Installation and Calibration Certificates: Certificates shall be submitted for equipment as indicated in the individual sections. These certificates shall indicate manufacturer's satisfaction with the installation, the accuracy of calibration and alignment, and the operation of the equipment. An authorized agent of the manufacturer must sign such certificates.

#### 1.7 INFORMATIONAL SUBMITTALS & SUBMITTALS FOR RECORD

- a. Informational submittals formalize the flow of information between the Contractor and the Owner's Representative. Such submittals may include but are not limited to:
  - 1) Construction Schedules: Unless otherwise specified, the Contractor shall submit construction schedules as outlined under Section 01305, Construction Schedules contained herein.
  - 2) Licenses and Permits: The Contractor shall obtain all licenses and permits required by Local, State and Federal laws and submit copies of them to the Owner's Representative, including but not limited to the following.
    - a) Copies of all construction permits and licenses required by all approving agencies, including as applicable cities, counties, state agencies, utility service districts, etc.
    - b) Copies of all building, structural, electrical, mechanical, and plumbing permits (as appropriate) required by all approving agencies.
    - c) Copies of County, ODOT and/or railroad right of entry permits (as applicable), including copies of permit conditions.

## 1.8 OWNER'S REPRESENTATIVE'S REVIEW OF SUBMITTALS

- a. Except as may otherwise be indicated, the Owner's Representative will review the submittals with reasonable promptness for their compliance with the design concept and the Contract Documents and return prints of each submittal to the Contractor with comments noted thereon. The Owner's Representative's maximum review period for each submittal or resubmittal will be 21 days.
- b. If the review indicates that the material or equipment is in general conformance with the design concept and complies with the Drawings and Specifications, submittal copies will be marked "REVIEWED". In this event the Contractor may begin to incorporate the material or equipment covered by the submittal.
- c. If the review indicates that limited corrections are required, the submittal will be marked "FURNISH AS CORRECTED". The Contractor may begin incorporating the material and equipment covered by the submittal in accordance with the noted corrections.
  - 1) Unless otherwise approved in writing by the Owner's Representative, the Contractor shall provide a written summary (*letter, memo or email*) confirming how each such "FURNISH AS CORRECTED" review comments will be addressed. A separate letter/memo/email shall be provided for each submittal (*subject line referencing the submittal number and title*), with confirmation of each applicable submittal review comment from the submittal review by the Owner's Representative, with numbering to match the applicable submittal review comment.
  - 2) If the requirement for written confirmation of "FURNISH AS CORRECTED" review comments is waived in writing by the Owner's Representative, no further action is required by the Contractor.
  - 3) Where submittal information is to be incorporated into an O&M Manual, a corrected copy of all applicable submittals shall be prepared for inclusion in the O&M Manual.
- d. If a submittal is returned marked "REVISE AND RESUBMIT", the Contractor shall revise it and shall resubmit the required number of copies to the Owner's Representative for review.
  - 1) Resubmittal of only portions of multi-page or multi-drawing submittals will not be allowed unless specifically requested or allowed by the Owner's Representative (in the submittal review). For example, if a Shop Drawing submittal consisting of 10 drawings contains one drawing noted as "REVISE AND RESUBMIT", the submittal as a whole is deemed "REVISE AND RESUBMIT", and 10 drawings are required to be resubmitted.
  - 2) However, if a submittal includes numerous different items, each of which was reviewed and commented on separately, only those noted as "REVISE AND RESUBMIT" need to be resubmitted.
- e. If a submittal is returned marked "REJECTED", it shall mean either that the proposed material or product does not satisfy the specification or the submittal is so incomplete that it cannot be reviewed. In such cases, copies will be returned to the Contractor for correction. The Contractor shall then resubmit the required number of copies of the corrected submittal.
  - 1) Any material or equipment on-site which is rejected by the Owner's Representative shall be removed from the job site by the Contractor within two (2) working days of notification of rejection of the submittal.



- f. Except at its own risk, the Contractor shall not undertake work covered by submittals marked as “REVISE AND RESUBMIT” or “REJECTED” until a new submittal is made and returned without exceptions.
- g. The Owner’s Representative’s review of submittals is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the submittals or shop drawings during this review (or absence of such corrections or comments) do not relieve the Contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for dimensions to be confirmed and correlated at the job site; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of his or her work with that of all other trades; and for performing all work in a safe and satisfactory manner.
- h. Upon acceptance, the Owner’s Representative will return a copy of the review submittal to the Contractor and the Owner.
- i. In the event that multiple reviews are performed on the same submittal (*or portions of the same submittal*) due to revisions, clarifications, duplicate submittals or other reasons, all submittal review comments are complementary and what is noted by any submittal review iteration shall be as binding as if noted on all.

**PART 2: PRODUCTS**

None.

**PART 3: EXECUTION**

None.

**PART 4: SPECIAL PROVISIONS**

**4.1 SUBMITTAL REPORT FORM**

- a. See following pages:

## WESTECH ENGINEERING INC. SUBMITTAL REPORT

PROJECT: \_\_\_\_\_

FROM: \_\_\_\_\_

TO: Westech Engineering

COPIES: 1 for pdf submittals, or three (3) if hard copies are required by Owner's Representative

SUBMITTAL NUMBER \_\_\_\_\_

Category of Information being Submitted:

- ☐ EQUIPMENT/MATERIAL SUBMITTALS/SHOP DWGS ☐ MANUFACTURER'S DATA  
☐ REPORTS ☐ METHOD STATEMENT ☐ INFORMATION FOR RECORD  
☐ SAMPLES ☐ OTHER ☐ OPERATIONS&MAINTENANCE MANUALS

DESCRIPTION: \_\_\_\_\_  
\_\_\_\_\_

SPECIFICATION SECTION & TITLE: \_\_\_\_\_

I hereby certify that the material submitted has been checked for compliance with the specification and any exceptions have been clearly noted.

\_\_\_\_\_  
Signed (*Contractor's authorized representative*)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\*\*\*\*\*

### RESPONSE TO SUBMITTAL (by Owner's Representative):

- ☐ REVIEWED ☐ FURNISH AS CORRECTED ☐ REJECTED  
☐ REVISE AND RESUBMIT ☐ SUBMIT SPECIFIC ITEM ☐ SEE ATTACHED LETTER, \_\_\_\_/\_\_\_\_

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the submittals or shop drawings during this review (or absence of such corrections or comments) do not relieve the contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for dimensions to be confirmed and correlated at the job site; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of his or her work with that of all other trades; and for performing all work in a safe and satisfactory manner.

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

**SECTION 01410  
LABORATORY SERVICES**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. The Contractor shall retain an independent testing laboratory for conducting field and laboratory tests as outlined herein to verify the Contractor's compliance with the Specifications.
- b. The testing laboratory shall furnish all labor, materials, equipment and services necessary to perform concrete tests, compaction tests of pavement bases and backfill, sieve analyses of aggregate materials, approve material and review the design of bituminous and concrete plant mixes, and conduct other tests as specified below and in other sections as directed.

**1.2 CONTRACTOR'S RESPONSIBILITY**

- a. Testing of materials or equipment for compliance with various national or technical society standards and ordinarily performed by manufacturers, and shop and field tests of equipment are not included under this section but shall be performed by the Contractor or his supplier as specified elsewhere.
- b. Any test required by the Owner shall not relieve the Contractor from the responsibility of supplying certificates from manufacturers or suppliers to demonstrate compliance with the Specifications.

**1.3 QUALIFICATIONS**

- a. The laboratory shall be a recognized and independent commercial laboratory with experience in conducting the required tests.

**1.4 SUBMITTALS**

- a. Submittals shall be in accordance with the requirements of these Contract Documents.
- b. Mix Designs: The laboratory shall review and test mix designs submitted by the Contractor. Approved mix designs shall include sieve analyses and suppliers' certificates for materials incorporated in the mix.
- c. Distribution: One copy of all certified test reports and mix designs shall be distributed as follows:
  - 1) Owner
  - 2) Westech Engineering, Inc.  
3841 Fairview Industrial Drive SE, Suite 100  
Salem, OR 97302-1192
  - 3) Owner's Field Representative
  - 4) Contractor

## 1.5 SUPPLEMENTARY AND OTHER TESTING

- a. Nothing shall restrict the Contractor from conducting additional material or field tests he may require. However, should the Contractor, at any time, desire the Owner to consider the results of such testing, test reports shall be certified by an independent testing laboratory acceptable to the Owner. Any testing of this nature shall be conducted at the Contractor's expense.

## **PART 2: PRODUCTS**

- 2.1 TESTS. Contractor shall coordinate and provide for any and all testing specified herein, listed on the drawings or in the individual specifications sections. Tests shall include but not be limited to the following.

- a. Aggregates, Bedding Material and Granular Backfill: For each type of material, the laboratory shall perform an ASTM C-136 sieve and screen analysis to determine whether the material meets the Specifications noted in the individual sections. Retests shall be performed until the Specifications are met and each time the source of material is changed.
- b. Selected Backfill: At the discretion of the Owner's Representative, but in no case more than one test for each 1,000 c.y. of each material source or portion thereof, the laboratory shall perform an ASTM C-136 sieve and screen analysis to determine whether the material is suitable for backfilling purposes.
- c. Mix Designs: For each type of controlled density fill, concrete and asphalt, the laboratory shall perform and approve the necessary mix design and shall perform and approve redesign if there is a change in source of materials. The asphalt design shall be made in accordance with ASTM D-1559, the Marshall Method of mix design or other Owner's Representative approved method.
- d. Compaction Tests: For each type of backfill material, the laboratory shall determine the moisture density curve according to AASHTO T-180 (Modified Proctor/ ASTM D1557). Using ASTM D-2922 test methods, the laboratory shall determine the density of in-place backfill. Retests shall be performed if the compaction requirements stated in the individual sections are not met.
- e. Asphalt and Concrete Quality Control Testing: The laboratory shall perform tests as indicated in these Contract Documents.
- f. Miscellaneous Tests: The laboratory shall perform all other tests requested in the individual sections of the Specifications.
- g. Retest: Retesting required because of failure to meet specification shall be at Contractor's expense.

## 2.2 PLANT INSPECTIONS

- a. The laboratory may inspect and certify asphalt and concrete plants as indicated in these Contract Documents.

### 2.3 EQUIPMENT

- a. The laboratory shall provide all necessary equipment to extract and store samples and perform the required tests.

## **PART 3: EXECUTION**

### 3.1 MATERIAL TESTS

- a. The laboratory shall conduct tests on materials and in locations as specified or as directed by the Owner's Representative.
- b. All tests shall be performed in accordance with the proper test methods mentioned above and in the individual sections. Results shall be compared to the required values included in the individual sections.

### 3.2 MIXING PLANT CONTROL

- a. The Plant laboratory shall provide mix designs and control mixing plant production for conformance to product specifications as specified or as directed by the Owner's Representative.

## **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 01505**  
**TEMPORARY TRAFFIC CONTROL**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes all work necessary to provide temporary traffic control to minimize obstruction and inconvenience to the public and to protect pedestrian and vehicular traffic.
- b. Temporary traffic control shall include, but not be limited to:
  - 1) Furnishing, installing, maintaining and removing all required traffic control devices.
  - 2) Providing flaggers, barricades, lights, signs as shown on the Drawings or specified herein.
  - 3) Provide pilot cars as required.
- c. Contractor shall provide temporary traffic control measures outside the contract limits when the Contractor's work activities affect traffic outside the contract limits.
- d. All work under this section to conform with all Federal, State and local regulations and requirements.

**1.2 DEFINITIONS**

- a. MUTCD:
  - 1) Manual on Uniform Traffic Control Devices.
  - 2) Oregon supplement to the Manual on Uniform Traffic Control Devices.
  - 3) Oregon Temporary traffic Control Handbook, 2006 (Traffic Control on State Highways for Short Term Work Zones), ODOT.

**1.3 SUBMITTALS**

- a. Traffic Control
  - 1) The Contractor shall submit a copy of traffic control plan(s) for approval by ODOT, County, City or other agencies with jurisdiction (with a copy to the Owner's Representative for reference and review). The traffic control plan shall include:
    - a) Location and types of traffic control measures proposed.
    - b) Proposed order and duration of traffic control measures.
  - 2) After approval by agencies with jurisdiction, the Contractor shall submit to the Owner's Representative a copy of the final traffic control plan approved by ODOT, County, City or other agencies with jurisdiction.



## **PART 2: PRODUCTS**

### **2.1 UNIFORM TRAFFIC CONTROL DEVICES**

- a. Use new or like-new equipment for all temporary items under this Section unless otherwise specified.
- b. All barricades, signs, lights, flags and other traffic control devices shall conform to the current edition of the MUTCD unless otherwise specified.
- c. Signs
  - 1) Use standard size and shape conforming to the current edition of the MUTCD unless otherwise specified or ordered. Double-face signs will not be allowed except for flagger "STOP/SLOW" sign paddles.
  - 2) Type
    - a) Unless otherwise specified or shown on the plans, use signs composed of orange reflectorized sheeting background with nonreflectorized black legend on one of the following materials.
      - (1) Sheet aluminum.
      - (2) 3/4-inch medium or high-density overlay plywood.
    - b) Where there is interference from extraneous light sources which limits the effectiveness of the reflectorized surface, or as required by the Owner's Representative, illuminated signs shall be used.
  - 3) Flaggers
    - a) Flaggers shall be equipped with a minimum of the following:
      - (1) Clothing to cover the complete body except head, neck, and arms below the point of the shoulders.
      - (2) An OSHA approved hard hat.
      - (3) An orange, fluorescent red-orange, or fluorescent yellow-orange vest. For night-time conditions, the vest shall be reflective.
      - (4) Highly visible, reflective "STOP/SLOW" sign paddles conforming to the MUTCD.
      - (5) Portable, self-contained two-way radio with a range suitable for the project.
      - (6) Illuminated stand area of high visibility at night.

## **PART 3: EXECUTION**

### **3.1 GENERAL TRAFFIC CONTROL WITHIN CONTRACT LIMITS**

- a. Contractor shall provide temporary traffic control as required by MUTCD, as well as applicable local and Federal regulations. All traffic control measures shall be approved and in place prior to any construction activity.
- b. Temporary address signs shall be in place and visible from the street prior to the beginning of construction where existing address signs will be removed or obstructed.
- c. When vehicular parking is a hazard to through traffic or to the work, furnish and place NO PARKING signs on any street which is impacted by the work.
- d. Access to driveways and buildings shall be maintained at all times for residential, fire and emergency vehicles, except during owner approved stages of construction, subject to acceptable prior arrangements. Provisions and plans to allow emergency traffic such as police, fire, and disaster units shall be available at all times.
- e. Contractor shall adequately warn the public at all times of existing conditions on all streets affected by work operations. The Contractor shall notify affected residents, businesses and emergency services in writing during business hours 48 hours in advance of parking removal, and/or street, driveway, and alley detour or closures. Failure to provide proper, timely notification will be grounds to deny the commencement of the work.
- f. Flagged Traffic Required unless otherwise approved.
  - 1) Contractor shall maintain one-way intermittent flagged traffic flow during all periods of construction, unless otherwise approved in writing by the Owner's Representative and all agencies with jurisdiction.
  - 2) Flagging stations shall be staffed continuously during those hours requiring flaggers or until the Owner's Representative determines flagging is no longer required.
- g. Provide open trenches and excavations with adequate barricades of an approved type. At night mark all open work and obstructions by lights. Install and maintain all necessary signs, lights, flares, barricades, railings, runways, stairs, bridges, and facilities for the protection of the public.
- h. Contractor shall conform to all applicable local, State and Federal regulations relating to temporary traffic control and protection of the public.
- i. Unless otherwise approved by the in writing by the Owner's Representative and all agencies with jurisdiction, the Contractor shall be responsible for backfilling or plating any excavations as required to open the street to through traffic at the end of each workday.

### 3.2 DETOURS

- a. Contractor shall submit detour plans to the Owner's Representative, local and State authorities a minimum of seven (7) days (or longer where required) prior to commencement of the work necessitating the detour, and obtain approval from all regulating authorities prior to detour construction. Any detour plans or provisions shown on the construction drawings shall be considered to be minimum requirements, and do not preclude the applicable regulatory agency from requiring additional or modified measures.
- b. Where required by ODOT, the Contractor shall complete a Highway Restriction notification form and submit it 28 days prior to when a restriction begins so MCTD has time to notify the trucking industry. This ODOT form is fillable online.
- c. Contractor shall construct and maintain approved temporary detours to provide adequate passage of public traffic.
- d. Contractor shall assume responsibility for detours within the limits of the project such as side street crossings, temporary bridges over freshly placed concrete, or utilization of one or more lanes of the construction area for maintenance of traffic.
- e. Upon failure to immediately provide, maintain, or remove suitable detours or detour bridges when ordered to do so by Owner's Representative, Owner may without notice to Contractor or Surety, provide, maintain, or remove the detour and deduct costs thereof from any payments due or coming due to Contractor.
- f. When detours are not available, confine operations to a width which provides for safe passage of traffic.

### **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 01568**  
**EROSION AND POLLUTION CONTROL**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. It shall be the responsibility of the Contractor to prevent pollution of air, water and soil resulting from his operations.
- b. The Contractor shall perform work required to prevent soil from eroding or otherwise entering onto all paved areas and into natural watercourses, ditches, and public sewer systems and to prevent dust attributable to his operations from entering the atmosphere. This work shall be in accordance with Federal, State and Local codes.
- c. Water containing suspended material from any part of the Contractor's operations shall be clarified before discharging to drains or streams.
- d. Contractor shall procure and conform to all Federal, State and local permit requirements.
- e. Noise pollution shall be minimized through the use of proper mufflers on all construction equipment.
- f. The Contractor shall seed and mulch all disturbed areas or areas damaged by his operations.

**1.2 CONSTRUCTION SUBMITTALS**

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include, but not be limited to, the following:
  - 1) Submittals for Review. Submittals shall include but not limited to the following:
    - a) If the Contractor plans to provide alternate erosion control measures from those shown & noted on the drawings, or if additional information or submittals is required by any erosion control permit associated with the project, complete erosion control plans, details, and maintenance procedures shall be submitted for review and reference by the Owner's Representative and applicable agencies.

## **PART 2: PRODUCTS**

### **2.1 GENERAL**

- a. Dust palliatives (additives) shall conform to OSSC (ODOT/APWA) Section 00340, Watering.
- b. Other erosion control structures and products as shown on the drawings.

### **2.2 MULCHING MATERIAL**

- a. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10 or between September 1 and October 1, unless otherwise specified on the drawings or by erosion control permits. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.
- b. Mulch shall be either hydromulch or finely chopped fescue or rygrass mulch conforming with OSSC (ODOT/APWA) Section 01030.15
  - 1) **CEREAL GRAIN STRAW (*wheat or similar*) IS NOT AN ACCEPTABLE SUBSTITUTE** without specific written approval.
- c. When use is allowed by jurisdiction in lieu of hydroseed/hydromulch, dry, loose, weed free fescue or rygrass used as mulch shall be applied at a rate of 4000 lbs. per acre (*double the hydromulch application requirement*). Anchor by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding, without clumps.

### **2.3 SLOPE PROTECTION MATTING**

- a. Slope protection matting shall conform with OSSC (ODOT/APWA) 00280, Erosion & Sediment Control.
- b. For slopes steeper than 3H:1V but less than 2H:1V (or where slope protection matting is indicated on the drawings), the erosion matting shall be a type that has a extended term functional longevity (ie. minimum 12 months degradability) and specifically designed for use on slopes 3:1 to 2:1 to ensure that the steep slopes are protected until they have adequate vegetation cover established before the matting biodegrades away.
  - Slope protection matting shall be S150 matting by Tensar/North American Green, or approved equal.
- c. For slopes 2H:1V or steeper (or where slope protection matting is indicated on the drawings), the erosion matting shall be a type that has a extended term functional longevity (ie. minimum 24 months degradability) and specifically designed for use of 2:1 or steeper slopes to ensure that the steep slopes are protected until they have adequate vegetation cover established before the matting biodegrades away.
  - Slope protection matting shall be SC150 matting by Tensar/North American Green, or approved equal.

### **PART 3: EXECUTION**

#### **3.1 CLEANUP OF STREETS, SIDEWALKS AND DRIVEWAYS**

- a. Hard surfaced streets, haul roads and (if directed by the Owner's Representative) detours and bypass roads shall be swept by automatic self-contained sweepers as required to keep them free of dirt or debris.
- b. Excessive dirt on pavements shall be removed by means of hand shoveling or appropriate mechanical equipment and the area swept as directed above.
- c. Sidewalks and driveways shall be cleaned by means of shovels and handbrooms or appropriate mechanical equipment.
- d. Dust on unsurfaced streets or parking areas and any remaining dust on surfaced streets shall be controlled with an approved dust palliative as directed by the Owner's Representative.
- e. The Contractor shall comply with the above requirements on a daily basis. If the Contractor fails to perform the above work in a satisfactory manner, the Owner's Representative may stop all work, except cleanup operations, until the Contractor has satisfactorily complied with the above requirement.

#### **3.2 WATER DISCHARGED TO DRAINS OR STREAMS**

- a. The Contractor shall construct and maintain filters, sedimentation traps, or stilling basins with overflows to clarify waters containing suspended materials from fill areas, excavations, deep wells, well points and disposal sites before discharging to drains or streams.

### **PART 4: SPECIAL PROVISIONS**

None.



**SECTION 01800**  
**SURVEY WORK DURING CONSTRUCTION, BY CONTRACTOR**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes furnishing of all labor, materials, equipment and services necessary for the completion of Construction Survey Work in accordance with the Contract Documents and as required to complete the work.

**1.2 RESPONSIBILITY OF CONTRACTOR TO RETAIN SURVEYOR**

- a. The Contractor shall retain and pay for the services of a registered Land Surveyor (licensed in the State of Oregon) to locate and mark existing survey monuments of record (and replace disturbed survey monuments as required), as well as to establish construction control and perform construction surveys as required to establish the locations, lines and grades of curbs, grading, pipelines, structures, appurtenances and other improvements indicated on the drawings or specified.
- b. The Contractor and the Contractor's surveyor shall be responsible for reviewing the drawings and verifying that the grade & invert elevations (including existing invert elevations), stations and slopes listed on the drawings correspond (and match existing or new finish grades as applicable), as well as conforming with all requirements of this and related sections.
- c. The Contractor and the Contractor's surveyor shall be responsible for reporting any discrepancies to the Owner's Representative far enough ahead of construction to allow Owner's Representative to review and make necessary adjustments without delaying the work.
- d. The Contractor shall be responsible for layout of the work and transferring elevations from the construction control provided by the Surveyor as required to properly complete the construction of all improvements included in this project.
- e. The Contractor's surveyor shall be responsible for conducting an as-built survey for preparation of the as-built drawings if required under Section 01043.
- f. Responsibility of Contractor's Surveyor Regarding Existing Survey Monuments.
  - 1) The Contractor's surveyor shall be responsible for determining the location of survey monuments that need to be located and marked for protection or replacement as specified herein. Existing survey monuments which are not at risk of being disturbed by the Contractor's construction activities are not required to be located and marked.
  - 2) Any failure by the Contractor's surveyor in fulfilling these responsibilities to locate, tie and/or mark existing survey monuments shall not entitle the Contractor to additional contract time or additional compensation.

### 1.3 MARKING & PROTECTION/REPLACEMENT OF PERMANENT SURVEY MONUMENTS

- a. Prior to construction, the Contractor's Surveyor shall be responsible for researching, locating and marking all existing survey monuments of record (including but not limited to property and street monuments) and permanent elevation benchmarks which may be at risk of being disturbed by the Contractor's construction activities. This shall include those which may be impacted by construction activities (whether or not the monuments are shown on the construction drawings).
- b. Contractor shall not disturb permanent survey monuments, lot stakes, or permanent elevation bench marks unless arrangements have been made to have his surveyor replace said survey markers after construction as noted herein. The Contractor's Surveyor shall be responsible for providing the County Surveyor with any required notice and/or maps as required under ORS 209.140-155. Contractor and Contractor's Surveyor shall bear the responsibility of replacing any survey monument disturbed by construction activities (whether removed with or without the consent or knowledge of the Owner's Representative).
- c. If any survey monuments of record are removed, disturbed or destroyed during construction of the project, the Contractor shall retain the services of a registered Professional Land Surveyor licensed in the State of Oregon to reference and replace all such monuments in accordance with ORS 209.150. The Contractor shall be responsible paying all costs related to the replacement of disturbed survey monuments of record.
- d. Each monument shall be replaced within a maximum of 90 days of its being removed, disturbed or destroyed as may be required by ORS 209.140-155. The surveyor shall notify the County Surveyor in writing of all such monuments replaced, and provide all documentation required by the County Surveyor, and pay any applicable recording fees. All monument replacement work shall be completed prior to final payment by the Owner. No separate or additional compensation will be provided for monument replacement work.
- e. When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument box is located, Contractor shall adjust the monument cover to the new grade at no expense to the Owner.

### 1.4 SUBMITTALS

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include the following,
- b. Submittals for Record.
  - 1) During Construction. Copies of construction survey cut sheets shall be provided to the Owner's Representative for reference during construction (faxed or emailed copies are acceptable). Receipt and/or review of these survey cut sheets by the Owner's Representative does not relieve the Contractor of his responsibility to review and confirm all elevations, grades, slopes, etc., and to notify the Owner's Representative of any discrepancies or conflicts.
  - 2) Following Construction. Certification letter regarding the location and marking

of existing survey monuments of record (and replacement of any disturbed monuments) as required under Section 01750, as well as documentation regarding any required notice provided to the County Surveyor. A copy of survey documentation and/or maps submitted to the County Surveyor (pertaining to replacement or restoration of survey monuments, if any) shall be submitted with the certification letter.

#### 1.5 RIGHT-OF-WAY, EASEMENT & PROPERTY LINE MARKING

- a. When the Contractor performs construction in a work zone that is within less than 8 feet of a right-of-way or easement boundary (or within less than 8 feet of a property line for work on private property), the Surveyor shall place tall stakes or lathe (properly identified & marked) on either end of such a work zone, as well as at points of change in width or direction of the right-of-way or easement line (or property line), and at points along the line so that at least two stakes can be seen distinctly from any point within the work area limits.
- b. If the work zone is longer than 50 feet, the boundary marker lathe shall be installed at 50 foot maximum intervals, or closer if required to meet the requirements noted above.

### **PART 2: PRODUCTS**

#### 2.1 SURVEY EQUIPMENT

- a. The surveying equipment used for construction staking, layout of the work and transferring elevations from the construction stakes shall be able to operate within the tolerance limits set by the technical specifications. The Contractor and Contractor's Surveyor shall be responsible for verifying that the equipment is in proper working order and adjustment during all phases of the work. The Owner's Representative may at any time during the project require the Contractor's or Contractor's Surveyor's equipment to be checked for accuracy.

#### 2.2 DIGITAL INFORMATION AVAILABLE FOR USE BY CONTRACTOR'S SURVEYOR

- a. If requested by the Contractor's surveyor, the Engineer will make available the following digital survey & design data for use by the Contractor's surveyor.
  - 1) ASCII point file of the topographic survey and control points.
  - 2) XML file of the design to include surfaces, alignments, profiles, & pipe networks.
  - 3) pdf plots of the current construction drawings.
  - 4) AutoCAD drawing files
- b. No further digital data will be provided to the Contractor or Contractor's surveyor.
- c. The use of the electronic (digital) information transmitted herewith is intended for reference for this specific project, and is not to be used for other projects. The electronic media and/or electronic files shall remain the property of the Engineer and is subject to its copyright. Under no circumstances shall delivery of the electronic files for use by the Contractor or the Contractor's surveyor be deemed a sale by Engineer, and Engineer makes no warranties, either express or implied, of merchantability and fitness for any particular purpose.

- d. Any electronic files provided are not construction documents. Differences may exist between these electronic files and corresponding hardcopy construction documents. Construction shall be based on the stamped hard-copy design drawings produced by Westech Engineering, Inc. In the event that a conflict arises between the signed or sealed hard-copy construction documents prepared by Westech Engineering, and the electronic files, the signed or sealed hard-copy construction documents shall govern. Contractor is responsible for determining if any conflicts exist. Use of these electronic files does not relieve Contractor of Contractor's duty to fully comply with the contract documents including, and without limitation, the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions and coordinate work with that of other contractors for the project. No revisions shall be made to the design without the express written consent of the Design Engineer whose stamp is on the hard-copy design drawings.
- e. The electronic files are based on computer aided design (CAD) documents compatible with AutoCAD, based on Engineer's specific software configuration & settings. We make no representations regarding the accuracy or completeness of the electronic files received by Contractor or Contractor's surveyor, or compatibility with any computer or software you may use. By such request of and use of electronic files, Contractor and Contractor's Surveyor explicitly acknowledge that he understands that any translation of CAD data from one computer system, operating system or environment to another (or conversion from one CAD version or Civil 3D/XML data structure to another) can and often does result in the loss of important data. This loss can include but may not be limited to: portions of text and dimensions; the existence, location or scale of symbols or other elements of graphics; the internal structure of the data including layers and data attributes; the style or weight of lines; or the completeness, accuracy and/or functionality of Civil 3D data.
- f. By such request of and use of electronic files, Contractor and Contractor's Surveyor further acknowledge that, while all digital CAD data appears to be extremely accurate, this apparent accuracy is an artifact of the techniques used to generate it and is in no way intended to imply actual accuracy. All users of this data take full responsibility for verifying (against the stamped hard-copy design drawings) the correctness of all measurements, areas, inventories, etc. digitally extracted from this data. For example, where shown on the drawings, offset dimensions shall take precedence over the digitally scaled location of structures and utilities. Revisions to the design may be made subsequent to the transmission of this data. It is the responsibility of the user to identify and make all required revisions or corrections to this data required by subsequent design revisions by Westech Engineering.
- g. Any use or reuse by Contractor or by others will be at Contractor's sole risk and without liability or legal exposure to Westech Engineering, Inc. Contractor and Contractor's Surveyor agree to make no claim and hereby agree, to the fullest extent permitted by law, to indemnify, defend and hold harmless Westech Engineering, Inc. (including Westech's officers, directors, employees, agents, or sub consultants) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs arising out of or resulting from Contractor's use of these electronic files. In no event shall Westech Engineering, Inc. be liable for any loss of profit or any consequential damages as a result of use or reuse of these electronic files by Contractor or any party to whom Contractor provides these files.

## **PART 3: EXECUTION**

### **3.1 GENERAL**

- a. The Contractor shall be responsible for coordinating and providing sufficient advance notice to allow Contractor's Surveyor adequate opportunity to complete field surveying prior to construction.
- b. The Contractor shall be responsible for layout of the Work shown on the drawings or as altered or modified by the Owner's Representative, and for transferring alignments, locations and elevations from the construction stakes set by the Surveyor. The Contractor shall use competent personnel and suitable equipment for the layout of the work required.
- c. The Contractor's Surveyor shall establish baselines and benchmarks that in his judgment will enable the Contractor to proceed with the work. This will include establishing construction control, layout lines, and performing initial construction surveys to establish the lines, locations and grades of pipelines and/or roads, structures and appurtenances at appropriate intervals, on offset lines as determined by the Contractor.
- d. Contractor's Surveyor shall provide survey cut sheets to the Contractor and the Owner's Representative. Marked lathe shall be provided by the Contractor's Surveyor for all construction hubs (offset hubs or elevation hubs) set by the Surveyor.
- e. Pavement and/or Curbs. Construction stakes for line and grade of pavement and/or curbs shall be set at a maximum of 50-foot intervals for curb grades of 0.5% or steeper and 25 feet intervals for curb grades less than 0.5% and at low and high points of vertical curves to assure conformance to plan line and grade.
- f. Pipelines, Utilities or Associated Improvements. Construction stakes for line and grade of pipelines, utilities or associated improvements shall be set at a maximum of 50-foot intervals (or closer if required to assure conformance to plan line and grade), as well as at all horizontal angle points, grade changes, manholes, catch basins, inlets, valves, meters, vaults or other structures.
- g. Buildings, Slabs, Vaults, Etc. Construction stakes for use as horizontal & vertical points shall be set for all buildings, slabs, vaults or other structures, sufficient to allow the contractor to establish stringlines or other means to accurately locate such improvements, as well as allowing the location of conduits, pipes, or other improvements installed prior to form installation to be accurately set.
- h. The Contractor shall preserve and protect the construction stakes or markers set by the Surveyor until their purpose has been served. Any survey construction stakes or markers that are destroyed or disturbed by the Contractor beyond use, and that are essential to the project or prosecution of the work, shall be replaced by the Surveyor at the expense of the Contractor.

## **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02055**  
**SITE DEMOLITION & SALVAGE**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes all demolition, removal and/or abandonment of existing above and below grade structures and appurtenances as designated on the drawings or as necessary to clear space for new construction and/or to rehabilitate existing construction.
- b. The work specified under this section includes but is not limited to the following, including removal of materials from the site:
  - 1) Demolition and removal of pavements, curbs and gutters, drainage structures, signage, sidewalks, landscaping or similar improvements.
- c. This section also specifies the salvage of equipment as indicated on the drawing, as specified herein or as designated by the Owner. Attention is directed to the requirements for maintaining operation of the existing facilities during construction. The Work includes transporting salvaged material and equipment to the designated local drop-off site where applicable.

**1.2 SUBMITTALS**

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include the following:
  - 1) When the material and debris resulting from the Contractor's operations are disposed of at locations off the project, the Contractor shall obtain and submit written permission from the Owner of the property upon which the materials and debris is to be placed. Contractor shall provide executed copy of permit to dispose of waste materials from appropriate jurisdictions.
  - 2) An accurate record of actual locations of all existing utilities and subsurface obstructions which are to remain in place shall be submitted to the Owner's Representative prior to final acceptance of the project.
  - 3) A time schedule for all demolition work. The schedule shall show demolition in relation to new construction, including any temporary facilities. The demolition and procedures schedule shall be submitted in accordance with Section 01300.

**1.3 COORDINATION AND CONTROL**

- a. The Contractor shall:
  - 1) Conform to all Federal, State and local laws and regulations for demolition, safety of adjacent facilities, dust control, runoff control, and disposal.

- 2) Obtain all required permits and licenses and pay all associated fees including disposal charges.
  - 3) Notify affected utility companies before starting work and comply with their requirements.
- b. Contractor shall:
- 1) Not close or obstruct roadways, sidewalks or hydrants without permits.
  - 2) Conform to applicable regulatory procedures when discovering hazardous or contaminated materials.
  - 3) Test soils around buried tanks for contamination.

#### 1.4 JOB CONDITIONS

- a. Structures to be demolished shall be discontinued in use and vacated prior to start of demolition work.
- b. The Owner assumes no responsibility for actual condition of the facilities or structures to be demolished. Prior to the submittal of bid, the Contractor shall visit the site and inspect all facilities to become familiarized with all existing conditions and utilities and to verify the correctness of the drawings.
- c. Conditions existing at time of inspection for bidding purposes will be maintained by Owner in so far as practicable. Variations within structures may occur by Owner's removal and salvage operations prior to start of demolition work.
- d. Items of value to Contractor (which are not designated by the Owner to be salvaged and delivered to the Owner) are to be removed from the site by the Contractor. Storage or sale of removed items will not be permitted on site and shall not interfere with any other work specified in the Contract Documents.

#### **PART 2: PRODUCTS**

None

#### **PART 3: EXECUTION**

##### 3.1 GENERAL

- a. The contract drawings identify the major equipment and facilities to be removed. Auxiliary utilities such as water, air, drainage, lubrication oil, electrical wiring, controls, and instrumentation are not necessarily shown. These auxiliary utilities, as well as all equipment and pipe supports and all associated wiring, conduits, instrumentation devices pertaining to piping or equipment designated to be removed shall also be removed.



- b. Unless otherwise specified, the Contractor shall demolish and remove existing below grade improvements, structures and concrete slabs on grade to a minimum depth of two (2) feet below proposed subgrade, or below existing grade in areas outside of excavation or fill limits.
- c. Unless otherwise shown or specified, excavation resulting from demolition and removal operations shall be backfilled with clean earth or crushed gravel and compacted to ninety five percent (95%) of maximum dry density per AASHTO T-180 (Modified Proctor/ ASTM D1557). Burial of debris shall be prohibited unless otherwise shown or directed.
- d. Excavated areas shall be graded to adjacent existing levels and left smooth, clean, free draining and free of debris as approved by the Owner's Representative.
- e. Contractor shall conform to all Federal, State and Local laws when abandoning wells, septic tanks and fuel tanks.
- f. Existing structures and equipment which are damaged in appearance and/or function by performance of demolition work shall be replaced or repaired to Owner's Representative approved condition by the Contractor at no additional cost to the Owner.

### 3.2 BURNING

- a. The use of burning at the project site for the disposal of refuse, debris, and waste materials will not be permitted.

### 3.3 PROTECTION OF EXISTING FACILITIES

- a. Contractor shall provide, erect, and maintain temporary barriers and protection as necessary.
- b. Existing landscaping materials, appurtenances and structures that are not to be demolished shall be protected from damage. Damage caused by demolition operations shall be replaced or repaired at no additional cost to Owner.
- c. Contractor shall provide bracing and shoring as required to prevent movement or settlement of adjacent structures, as well as above grade or below grade utilities. Bracing and shoring shall be Contractor's design.
- d. The location of all utilities shall be marked prior to demolition. Contractor shall protect and maintain in safe and operable condition the utilities to remain, and prevent interruption of existing utility service except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities as acceptable to governing authorities.
- e. Contractor shall clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to conditions existing prior to the start of the work.
- f. During demolition Contractor shall conform to all Federal, State and local laws and regulations for erosion and pollution control.

### 3.4 SALVAGE

- a. Prior to demolition the Contractor shall carefully remove, for reuse by the Owner, any items so identified by the Owner. Contractor shall notify the Owner in writing two weeks in advance of demolition to allow for field identification by the Owner of salvage items.
- b. All salvaged items shall be removed in their largest pieces that can be easily handled and stored by the Owner's personnel. The Contractor shall deliver these items to the local location designated by the Owner. Contractor shall contact the Owner's Representative to coordinate delivery of salvaged items. All salvaged mechanical and electrical equipment shall be removed in a workmanlike manner and all necessary precautions shall be taken to prevent damage to the existing equipment

### 3.5 PAVEMENTS, SIDEWALKS, CURBING AND SIMILAR STRUCTURES

- a. Removal of existing pavements, sidewalks, curbing and similar structures shall end at an existing joint or a sawed joint. Sawed joints shall be straight, neat and free from chipped or damaged edges.
- b. For removal of non-reinforced concrete adjacent to concrete that is to remain, the saw cut shall be the full thickness of the concrete.
- c. For removal of reinforced concrete, the depth of saw cut shall be sufficient to cut all steel unless specified otherwise.
- d. If the concrete is coated with a bituminous surface or other material, the depth of saw cut shall be sufficient to cut into the concrete, not including the coating depth, as specified above.

### 3.6 EXCAVATION OF RIGID PAVEMENT

- a. The Contractor shall excavate rigid pavement, consisting of concrete or concrete base with a wearing surface of brick or bituminous concrete, wherever such excavation is required for the purposes of this Contract.
- b. Pavement shall be excavated to neat lines and to widths required for trenches for pipe laying and for construction of structures. Adequate provision shall be made to prevent settlement and breakage of pavement beyond the approved limits of excavation. Concrete pavement shall be cut with a concrete saw in conformance with this section.
- c. All pavement broken or damaged beyond the limits above stated, or the approved extension thereof, shall be replaced by the Contractor at his expense.

### 3.7 MANHOLES, CATCH BASINS, INLETS AND SIMILAR STRUCTURES

- a. Unless otherwise noted on the drawings, existing manholes, catch basins, inlets and similar structures designated to be removed shall be completely removed unless otherwise noted on the drawings.

- b. Manholes, catch basins, inlets and similar structures designated to be abandoned shall be removed to an elevation of at least four (4) feet below ground surface or two (2) feet below the finished subgrade, whichever is greater. The remaining void shall be filled with granular backfill material compacted to ninety five percent (95%) of maximum dry density per AASHTO T-180 (Modified Proctor/ ASTM D1557).
- c. All sewer openings in manholes located on sewer lines shall be plugged with 3300-PSI concrete. Length of all concrete plugs shall be a minimum of one and one-half (1-1/2) times the diameter of the pipe.
- d. In-service sewers connected to structures removed or abandoned shall be rebuilt through the area with new pipe. Sewer flow shall be maintained between removal and replacement operations. Abandoned sewers shall be sealed and made watertight with concrete plugs as specified above.
- e. All castings salvaged from abandoned or removed structures shall become the property of the Contractor unless otherwise shown or directed.
- f. The Contractor shall replace, at no cost to the Owner, materials lost or damaged by negligence or by the use of improper methods.

### 3.8 GUARDRAIL AND FENCE

- a. Existing guardrail and fence shall be carefully dismantled and stored for reuse or for salvage by the Owner unless otherwise shown or directed.
- b. Wood posts and other materials not considered salvageable by the Owner's Representative shall be disposed of by the Contractor.
- c. The Contractor shall replace, at no cost to the Owner, material lost or damaged by negligence or by the use of improper methods.

### 3.9 DISPOSAL OF DEBRIS

- a. Contractor shall not allow debris and/or excess material to accumulate. All debris shall be hauled away from the site as soon as removed.
- b. All debris resulting from demolition operations (i.e. broken concrete, masonry, pipe, miscellaneous metal, trees and brush, etc., as well as mechanical and electrical equipment not designated by the City for salvage) shall be trucked from the work site by the Contractor and disposed of at spoil sites in a legal manner, in full compliance with all Federal, State and local laws and regulations.
- c. The Contractor shall police the hauling of debris to ensure that all spillage from trucks is promptly and completely removed and cleaned up.
- d. During and upon completion of the demolition and salvage operations, the Contractor shall promptly remove unused tools and equipment, surplus materials, rubbish, debris, and dust and shall leave work areas in a clean condition.

- e. The Contractor shall not sweep, grade, or flush surplus materials, rubbish, or debris into storm drains, channels, lakes, or streams.

#### 3.10 MAINTENANCE OF OWNER'S OPERATIONS

- a. Demolition shall be scheduled and performed in strict conformance with these Specifications and in a manner which results in no interruption of Owner's normal operations beyond that provided for and approved by the Owner. The date and time of commencing the separate items of demolition work shall be submitted to the Owner's Representative for review, and no demolition work shall commence until the Owner's Representative's approval of date and time is given.
- b. All equipment, labor and material costs which are made necessary by the requirements of the Contractor's sequence of operations shall be borne by the Contractor.

#### 3.11 USE OF EXPLOSIVES

- a. The use of explosives for the work of removal of structures and obstructions is PROHIBITED.

### **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02100**  
**CLEARING AND GRUBBING**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes grubbing, stripping and otherwise clearing of the construction site in accordance with the drawings and as specified herein or ordered.
- b. This work includes the removing and disposal of all trees, roots, stumps, vegetation and debris as necessary to accommodate new construction or to grade the site and the preservation of all vegetation and other objects designated to remain.

**1.2 SUBMITTALS**

- a. Spoil Site Permit: When the material and debris resulting from the clearing and grubbing operations are disposed of at locations off the project, the Contractor shall obtain written permission from the Owner of the property upon which the material and debris is to be placed. Contractor shall also obtain any required permits to dispose of waste materials as required by appropriate jurisdictions. Upon request by the Owner, the Contractor shall submit copies of the written permission and permits.

**1.3 PROTECTION**

- a. The Contractor shall provide the necessary protection to prevent damage, injury or loss of property at the site or adjacent thereto, including wetland areas, trees, shrubs, lawns, walks, pavements, roadways, monuments, structures and utilities not designated for removal, relocation or replacement in the course of construction.

**PART 2: PRODUCTS**

**2.1 MATERIALS**

- a. Paint required for cut or scarred surfaces of trees or shrubs designated to remain shall be a suitable product designed for the specific application.

**PART 3: EXECUTION**

**3.1 GENERAL**

- a. Information on the drawings showing existing conditions does not constitute a guarantee that other items may not be found or encountered. All such items not shown on the drawings or specified to remain shall be removed as a part of this contract at the expense of the Contractor.
- b. Verify actual field conditions. Inspect related work and adjacent surfaces. Report all conditions which prevent proper execution of this work to the Owner/Owner's Representative.

- c. All materials and work shall conform to the requirements of the Building Code and other agencies of the governing body having jurisdiction over the work.
- d. Contractor shall obtain permits and inspections and pay all fees required for this work.
- e. All companies or authorities owning conduits, wires or pipes running over or under property shall be notified so that arrangements can be made for the removal of any utilities and the capping of any pipes that are to be abandoned. Record location of caps.
- f. Existing trees to remain, as noted on plans or as noted below. Do not disturb or dig into root system.

### 3.2 CLEARING AND GRUBBING

- a. Only those trees and shrubs shall be removed that are in actual interference with excavation or grading work (or within clearing limits shown on the drawings), and such removal shall be subject to approval by the Owner's Representative. The Owner's Representative reserves the right to order additional trees or shrubs removed at no additional cost to the Owner if, in his opinion, they cannot be maintained or have been damaged by the Contractor's operations.
- b. Clear area within work limits of all surface vegetation, including trees, stumps, down timber, brush, roots, weeds, grasses and deleterious matter.
- c. Clear and remove all internal fences from the site. Perimeter property line fences to remain in place unless otherwise shown or directed.
- d. All trees, stumps, vegetation and debris which are NOT designated to remain shall be cleared and/or grubbed. Stumps and root balls within improved areas or areas with engineered fills shall be removed completely, as well as all significant roots (generally  $\frac{3}{4}$ " or larger in diameter) and other interfering objects, to the satisfaction of the Owner's Representative.
- e. Special grubbing treatment in areas with non-engineered fills to be as follows:
  - 1) Undisturbed stumps, roots and non-biodegradable solid objects which will be at least 3 feet below the final subgrade or embankment surfaces will not require removing, providing they do not extend more than 6 inches above the existing ground surface.
  - 2) In locations to be seeded, stumps, roots and other protruding obstructions shall be removed to a minimum of 6-inches below the final ground surface.
- f. Remove no trees, shrubbery or other vegetation outside of designated clearing limits. Trees and shrubs not designated for removal to be protected from damage during clearing and grubbing operations. Unless otherwise approved by the Owner's Representative, protect roots 2-inches in diameter or larger on trees to remain (such roots shall be neatly cut where removal is required).

- g. Tree branches which extend into the work areas within 8 feet vertically from finish grade shall be clean-cut off next to the trunk and the cuts shall be treated with an approved tree sealant.
- h. The clearing and grubbing shall extend 5 feet beyond the top of the backslope and/or toe of embankment, unless otherwise shown or directed.
- i. At all times, the Contractor shall remain within the property lines and/or easement areas.
- j. Except in areas to be excavated, all holes resulting from the clearing and grubbing operations shall be backfilled and compacted in accordance with applicable sections contained herein.
- k. All timber shall become the property of the Contractor unless otherwise specified.
- l. Protect existing facilities, adjacent properties and survey monuments from damage.
- m. Comply with safety requirements per Federal, State and local codes.
- n. Cleanup adjacent work areas of all litter and debris resulting from the Contractor's operations under this section.

### 3.3 STRIPPING

- a. Areas of excavation or embankment shall be stripped a minimum of six-inches of roots, sod, grass, crop residue, decayed vegetable matters and other organic materials, unless otherwise shown or directed.

### 3.4 DISPOSAL OF DEBRIS

- a. Debris resulting from the clearing and grubbing operations shall be disposed of at spoil sites in a legal manner, in full compliance with applicable codes and ordinances. Stumps, branches, roots, etc. shall not be disposed of within the project limits.

## **PART 4: SPECIAL PROVISIONS**

None.



**SECTION 02201**  
**EXCAVATION, FILLS AND SUBGRADE PREPARATION**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. Work shall include, but not be limited to, the following:
- 1) Stripping of sod and organic matter.
  - 2) Stripping, stockpiling and placing topsoil
  - 3) Rough grading and fine grading.
  - 4) Excavations.
  - 5) Fill construction.
  - 6) Moisture control and compaction.
  - 7) Finishing subgrade and slopes.
  - 8) Disposal of materials.
  - 9) Over-excavation as authorized by the Owner's Representative
  - 10) Protection of existing & new facilities, including shoring & bracing.
  - 11) Coordinating and obtaining all required testing & inspections.
  - 12) Clean up.
  - 13) Construction access roads and staging areas
  - 14) Excavation dewatering (until backfilling or permanent improvements are complete).
  - 15) Conformance with recommendations of project geotechnical report, or requirements of the design drawings, whichever is more stringent.

**1.2 LABORATORY SERVICES & CERTIFICATION OF ENGINEERED FILLS**

- a. Laboratory & Compaction Testing
- 1) Unless otherwise specified or shown on the drawings, the Contractor shall provide laboratory services by an approved independent laboratory as described below and as noted on the drawings. The Contractor shall be responsible for obtaining & providing all samples as required to complete the work.
  - 2) Laboratory Testing. The approved independent laboratory shall complete one moisture density curve per AASHTO T-180 (Modified Proctor/ ASTM D1557) for each type of subgrade material encountered, and for each type of fill material used on or imported to the site. The maximum dry weight and optimum moisture content shall be indicated. The cost of all retests required due to any unauthorized change in fill material shall be borne by the Contractor.
  - 3) Field Testing. The approved independent laboratory shall test the subgrade and compacted fill material for conformance with specified "Compaction Requirements," contained herein:

- a) Where tests indicate insufficient values, perform additional tests as required by the Owner. Testing shall continue until specified values have been attained by additional compaction effort. Retests shall be referenced to the corresponding failing test. The cost of all re-tests shall be borne by the contractor.
- b) Identification of subgrade soils as uncompactable by the independent laboratory shall not authorize the Contractor to begin overexcavation without written authorization from the Owner's Representative.

### 1.3 CONSTRUCTION SUBMITTALS

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include, but not be limited to, the following:
  - 1) Submittals for Review. Submittals shall include but not limited to the following:
    - a) Certification that material conforms to the requirements contained herein.
    - b) Laboratory test results, including sieve analysis & proctor values as applicable.
    - c) Documentation that granular baserock meets the requirements of OSSC (ODOT/APWA) 02630, Base Aggregate where applicable.
    - d) Location of each material source for Owner's Representative's approval.
    - e) Geotextile certification shall conform with Level B requirements per OSSC (ODOT/APWA) 02320.10.c.2.
    - f) Sheeting/shoring/dewatering plan for deep excavations, to demonstrate conformance with the specification requirements and/or recommendations of the geotechnical report as applicable.
  - 2) Submittals for Record
    - a) Field compaction test results.
  - 3) The following documentation shall be required when uncompactable soils are identified by the Owner's Representative.
    - a) Photocopy of the applicable portion(s) of the construction drawing plan sheet(s) with the approximate areas of uncompactable soils shown and bubbled. Stationing shall be indicated where available.
    - b) Dimensions of the areas of uncompactable soils, including proposed depth of overexcavation.
    - c) If the uncompactable soils are identified by the independent testing laboratory, the contractor shall submit the date and time of the field visit when the uncompactable soils were identified, along with the name of the laboratory representative.

## **PART 2: PRODUCTS**

### **2.1 GEOTEXTILE FABRIC**

- a. Unless otherwise specified or noted on the drawings, geotextile fabric shall conform OSSC (ODOT/APWA) 02320, Geosynthetics, with minimum property values conforming to Table 02320-1. Per OSSC (ODOT/APWA) 02320.10.c.2, if submittal information lists typical or average roll values instead of minimum average roll values, the specified table values under OSSC (ODOT/APWA) 02320 shall be increased by 25%.
- b. Unless heavier fabric is specified or noted on the drawings, reinforcement fabric (for over-excavation or under embankments) shall be non-woven fabric (Propex Geotex 1001, Mirafi 1000N, Linq 250EX or approved equal). Slit film fabrics are not allowed.
- c. Unless heavier fabric is specified or noted on the drawings, separation fabric (where successful proofroll allows compaction testing of subgrade to be waived) shall be non-woven fabric (Propex Geotex 701, Mirafi 170N, Linq 160EX or approved equal). Slit film fabrics are not allowed.

### **2.2 STRIPPINGS**

- a. Stripping defined as organic matter such as peat, roots, sod, grass, crop residue, vegetative matter or other materials that cannot be compacted to specified density into a stable mass.
- b. Limits of stripping subject to the Owner's Representative's approval.
- c. Stripping materials to be disposed of off-site unless otherwise noted or directed by the Owner's Representative.

### **2.3 TOPSOIL**

- a. Topsoil is defined as surface soil with organic material, free of subsoil, stones or hard earth 1 inch or larger, free of noxious weeds, roots, sticks or other extraneous material. Topsoil is typically found in depths between 3 and 18 inches below original ground surface, unless otherwise described in the site-specific geotechnical report.

### **2.4 EXCAVATIONS**

- a. Common excavation defined as all material not classified as rock excavation.
- b. Rock excavation shall be defined as follows:
  - 1) "Rock excavation shall consist only of that solid bedrock or ledge rock and boulders over two (2) cubic yards in volume which cannot be removed by a D8K (or approved equal) with four barrel hydraulics and dual rippers or 90,000 pound class Excavator (P.C 400 Komatsu or 450 John Deere or approved equal) with single shank ripper on back of bucket, which shall not be more than thirty-six inches (36") in width, but which requires systematic drilling and blasting or the use of rock splitters, pneumatic hammers and wedges. All D8K's and 90,000 pound

class Excavators shall be in excellent operating condition and operated by personnel competent to operate like machinery.”

- 2) Removal of existing concrete and asphalt does not qualify as rock excavation.

## 2.5 CURB & SIDEWALK BACKFILL

- a. Backfill behind curbs or sidewalks (and material for dressing up disturbed areas behind curbs or sidewalks) shall be approved native organic topsoil free of rocks, roots, debris or other debris.
- b. All materials shall be free of organic matter and fragments that would interfere with smooth finish and landscaping. Topsoil backfill and grading are the responsibility of the Contractor.

## 2.6 UNCOMPACTABLE SOILS

- a. Uncompactable soils are those that are soft and uncompactable due to their physical nature, as judged by the Owner’s Representative. Soil that is wet of optimum shall not be considered as uncompactable unless specifically approved in writing by the Owner’s Representative.
- b. Unauthorized over-excavation shall include all over-excavation work commenced prior to written approval of the extent and cost by the Owner’s Representative.

## 2.7 IMPROVED AREAS

- a. Improved areas are site areas that are to be covered with an improved surface, including but not limited to the following:
  - 1) Public or private streets and sidewalks
  - 2) Building crushed rock pads, floor slabs and/or foundations
  - 3) Vehicle parking or driveway areas
  - 4) Truck docks or truck turnarounds
  - 5) Emergency vehicle access drives or turn arounds
  - 6) Pedestrian pavement areas (gravel, AC or PCC)
  - 7) Utility support structures such as generator slabs, utility vaults and pump stations
  - 8) Playground equipment areas with permanent equipment
  - 9) Future improved areas when designated as such on the construction drawings
  - 10) Playground areas with pavement such as baseball courts, tether ball, 4-square etc.

## 2.8 UNIMPROVED AREAS

- a. Site areas that are outside of the boundary of improved areas as defined herein. Examples of unimproved areas are as follows:
  - 1) Planter areas
  - 2) Landscaping and seeded lawn areas
  - 3) Sportsfield areas
  - 4) Open space areas
  - 5) Playfield areas
  - 6) Bioswales, detention pond or other storm water management areas
  - 7) Any unimproved area that is irrigated or non-irrigated

## 2.9 GRASS SEED AND MULCH

- a. Grass seed and mulch shall conform to the requirements of OSSC (ODOT/APWA) Section 01030, Seeding, except as modified herein.
- b. Seed mixtures shall be compatible with the immediately surrounding vegetation.
- c. Seed mix to be approved by the Owner's Representative prior to application.
- d. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10 or between September 1 and October 1, unless otherwise specified on the drawings or by erosion control permits. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.
- e. Mulch used in landscape or lawn areas shall be either hydromulch or finely chopped fescue or rygrass straw mulch conforming with OSSC (ODOT/APWA) Section 010300.15.
- f. When use is allowed by jurisdiction in lieu of hydromulch (in areas other than landscape or lawn areas), dry, loose, weed free fescue or rygrass straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.

## **PART 3: EXECUTION**

### 3.1 CONTRACTOR RESPONSIBILITY TO OBTAIN ALL REQUIRED INSPECTIONS

- a. The Contractor shall be responsible to ensure that all inspections and testing required by the drawings, contract documents or agencies having jurisdiction are completed or witnessed by authorized inspectors prior to proceeding with subsequent work that covers or that is dependent on the work to be inspected. Work completed or covered without obtaining required inspections will be considered as unauthorized work as outlined below, and may be ordered removed at the Contractor's expense.
- b. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems arising from uninspected work.
- c. When excess excavated material is disposed of at locations off the project site, the Contractor shall obtain all necessary permits and pay all fees for disposal of material.

### 3.2 PROTECTION, CONSTRUCTION ACCESS & STAGING AREAS

- a. The Contractor shall provide the necessary protection to prevent damage, injury or loss of property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, monuments, structures and utilities, including both new and existing not designated for removal, relocation or replacement in the course of construction.

- b. All construction operations, including but not limited to work involved in excavation, hauling, delivering and/or placing earthwork and/or baserock, delivering or storing other construction materials or equipment, shall be performed in a manner to prevent damage to subgrades or other completed or partially completed work.
- c. The Contractor shall be responsible for design, construction and maintenance of any and all structures required for access to the site for construction or delivery/storage of materials, including but not limited to construction access roads and staging areas. The Owner's responsibility to provide access easements or right-of-ways to the construction site shall not be interpreted as relieving the Contractor of his responsibilities under this section.
- d. Unless otherwise shown or specified, the access road and parking lot sections shown are based upon the anticipated loads following construction and not upon the loads during the construction period. Any increase in road or parking lot size, depth or sections required to accommodate the loads due to the Contractor's choice of construction methods or sequence of operations shall be the responsibility of the Contractor, and shall be supplied at no additional cost to the Owner.
- e. Any advice or recommendations solicited from or given by the Owner's Representative to the Contractor shall not relieve the Contractor of any of his responsibilities under this section.
- f. All site earthwork, including temporary cut slopes, shall be protected from erosion damage caused by groundwater or surface water runoff.
- g. Test Pits: The Contractor shall dig such exploratory test pits as may be necessary in advance of excavation to determine the exact location and elevation of subsurface structures, pipelines and conduits which are likely to be encountered and shall make acceptable provision for their protection, support, and maintenance in operation.

### 3.3 TOLERANCES AND LINE/GRADE CONTROL

- a. Rough grade per drawing requirements to within 0.30 feet vertically and 1.0 feet horizontally of required lines and grades at any point prior to placing underground utilities unless otherwise specified or shown on the drawings.
- b. Except as otherwise noted on the drawings or specified herein, fine grade per drawing requirements to within 0.10 feet vertically and 0.30 feet horizontally of required lines and grades at any point following installation of underground utilities. Place curb backfill and dress up disturbed areas to same tolerances.
- c. All finished grading surfaces to be smooth, uniform and compact. Unless otherwise shown on the drawings, straight grades shall be run between all finish grade elevations and/or finish grade contours shown on the drawings. Finish grades at transition to existing grades shall match existing grades as required to provide a smooth, free draining surface.
- d. Contractor to provide sufficient survey instruments, blue tops, etc., as necessary to construct subgrades accurately within the above tolerances.

### 3.4 STRIPPING

- a. Areas of excavation, fills or embankments shall be stripped as required of organic matter such as peat, roots, sod, grass, crop residue, vegetative matter (decayed or otherwise) or other materials that cannot be compacted to specified density into a stable mass.
- b. Stripping limits shall be subject to the Owner's Representative's approval. Contractor shall place no engineered fills until stripping has been approved by the Owner's Representative. Failure to notify the Owner's Representative of unsuitable soil conditions or unsuitable material encountered during stripping or excavation shall result in the Contractor being fully responsible for all problems arising from such unsuitable soils or materials being covered over during filling or grading operations.

### 3.5 EXCAVATIONS

- a. Excavate to lines and grades required by drawings and/or as staked in field. Sawcut and remove existing AC pavement and PCC as shown on the drawings or as required to complete the work.
- b. Protect existing facilities from damage when excavating, including construction stakes and survey monuments.
- c. Prior to starting excavations, the Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade, true to grade. The bottom of excavations shall be smooth, free of loose materials or tooth grooves prior to placing the granular baserock material. Covering over or filling tooth grooves in the bottom of excavations with granular bedding material is prohibited, particularly where the subgrade consists of fine grained silt or clay material. If the equipment, means or methods provided by the Contractor do not provide excavation bottom conditions as specified, the Contractor shall stop excavation work until appropriate equipment or methods is available. Failure of the Contractor to pothole or otherwise determine soil conditions at the specified excavation depths in sufficient time to obtain appropriate equipment shall not be grounds for additional contract time.
- d. All excavation cut slopes shall be finished smooth, uniform and compact. Excavate for driveways where required by drawings and/or as field determined.
- e. Unauthorized over-excavation shall be backfilled at Contractor's expense in conformance with these specifications using compacted materials approved by the Owner's Representative.
- f. Unless otherwise shown or specified excavation resulting from removal of existing foundations, stumps, boulders, rock or other structures shall be backfilled with clean earth or crushed granular material and compacted to ninety five percent (95%) of maximum dry density per AASHTO T-180 (Modified Proctor/ ASTM D1557). Burial of debris shall be prohibited unless otherwise shown or directed in writing by the Owner's Representative.
- g. Excavated areas shall be graded to adjacent existing levels and left smooth, clean, free draining and free of debris as approved by the Owner's Representative.

- h. Haul suitable excavated materials for direct placement in fill areas as designated on the drawings. Excess and waste materials shall be hauled to off-site disposal arranged for by the Contractor.

### 3.6 ROCK EXCAVATION

- a. The use of explosives shall be prohibited. Rock excavation shall be by rock hammer, rock saw or other non-explosive method.
- b. After the Contractor has removed all material that does not meet the above definition of "rock excavation," he shall notify the Owner's Representative in writing and request an inspection to verify the extent of rock excavation required. The profiling of the exposed rock surface shall be done prior to commencement of rock removal activities. It shall be the responsibility of the Contractor to mark the rock in a 25 foot maximum grid pattern and provide a laser, rod and benchmark for use in measuring the rock profiles for determining quantities. The profiling of the exposed rock surface shall be done prior to commencement of rock removal activities.
- c. Excavations below design subgrade in rock shall be backfilled to subgrade with approved granular material at the Contractor's expense and thoroughly compacted.

### 3.7 SUBGRADE PREPARATION

- a. Except as required for proofrolls, loaded trucks and other heavy construction equipment shall not be operated on subgrades incapable of supporting the loads without deflection.
- b. Except as otherwise allowed herein or by the drawing details or notes, immediately following stripping and grading operations, compact subgrade to a minimum depth of 8-inches below finish subgrade elevation to 95% of the maximum dry density per AASHTO T-180 test method (Modified Proctor/ ASTM D1557). Subgrade must be inspected and approved by the Owner's authorized representative before placing embankments, engineered fills or fine grading for base rock.
- c. Where compaction of subgrade is required prior to placement of fills or baserock, subgrade that is wet of optimum shall be ripped and aerated as necessary to achieve optimum moisture content for compaction to specified densities. Where compaction of subgrade is required, subgrade that is dry of optimum shall be scarified and sprinkled with water as necessary to achieve optimum moisture content for compaction to specified densities.
- d. Final subgrades shall be finished smooth and uniform to required lines and grades within job tolerances prior to proof rolling or baserock placement.
- e. All design subgrades shall be proof-rolled prior to placement of baserock. Unless otherwise approved by the Owner's Representative, proofrolls shall be conducted with a 10-yard dump truck fully loaded with granular baserock.



- f. Where allowed by the drawing details, compaction testing of street or parking lot subgrades may be waived as outlined below.
- 1) If subgrade passes proof-roll but cannot be compacted to 95% optimum density per AASHTO T-180 / ASTM D1557 (or the Contractor chooses not to test the compaction), separation geotextile fabric (as specified) shall be placed on the subgrade prior to placement of the baserock. If the Contractor elects to provide the geotextile separation fabric in lieu of compacting the subgrade, the fabric shall be provided at no additional cost to the Owner. If the Contractor elects to compact the subgrade rather than provide the separation fabric, the Contractor shall not be entitled to additional compensation or contract time in order to complete the specified compaction work.
  - 2) Granular baserock shall be graded and compacted to the specified density at the finish rock grade.
- g. The Contractor shall notify the Owner's Representative immediately if soft and uncompactable native subgrade soils are encountered. Soil that is wet of optimum shall not be considered as un-compactible unless specifically approved in writing by the Owner's Representative. Native subgrade judged by the Owner's Representative as soft and uncompactable shall be over-excavated to undisturbed soil and backfilled with baserock over reinforcement geotextile fabric as required to allow compaction of upper (design) baserock section and to maintain structural integrity of native subgrade soils, and as outlined below. These provisions shall apply whether the over-excavation consists of small isolated areas, large areas or the entire street, parking lot or pad.
- 1) Soft or spongy subgrade that exhibits deflection under proof rolling shall be over excavated and backfilled only as directed by the Owner's Representative. It shall remain the Contractor's responsibility to notify the Owner's Representative immediately if such subgrade is encountered, and submit change order pricing for approval prior to commencing overexcavation.
  - 2) Over-excavation of the subgrade shall be accomplished using a large trackhoe with a smooth-edged bucket. Soils that are soft as evidenced by excessive tearing upon excavation by the trackhoe or which evidences excessive pumping under foot pressure may be considered too soft to support and compact the baserock, and additional over-excavation may be required. Excavation work shall not be conducted during nor subgrade left exposed to heavy rains. Typical minimum over-excavation required is 12-inches unless otherwise directed or approved by the Owner's representative.
  - 3) Following over-excavation, geotextile reinforcement fabric as specified shall be placed on the subgrade prior to placement of the well graded granular baserock.
  - 4) No equipment shall be allowed to run directly on the over-excavated subgrade until the full baserock section is in place. Baserock shall be end dumped into the excavated subgrade in a manner to provide at least the full rock section to distribute truckloads and prevent damage to the subgrade. Granular baserock to be spread in lifts using a small dozer to the full rock section indicated prior to operating loaded trucks on the section.

- 5) Granular baserock as specified shall be graded, and shall be compacted to the specified density at the finish rock grade.
- h. Any soft spots identified by either compaction testing or which exhibit deflection under proof rolling shall be corrected and retested prior to paving or curb placement. By definition, “soft” spots are defined as any area(s) for which the required compaction specification cannot be met, or which deflect, pump or rut under loads.
- i. Should inclement weather (i.e. significant rain) occur between the time the proof roll is performed and either curb placement or paving, another proof roll may be required prior to paving.

### 3.8 COMPACTION REQUIREMENTS

- a. Compact earthwork to be at least the following densities, relative to the maximum dry density per AASHTO T-180 test method (Modified Proctor/ ASTM D1557).
  - 1) Subgrade .....95%
  - 2) Fill and embankment lifts .....95%
  - 3) Backfill of over excavation .....95%
  - 4) Curb backfill.....85%
    - Under sidewalk .....92%
  - 5) Unimproved areas (planters, landscaping).....82% min, 90% max
- b. Each lift shall be tested and accepted prior to proceeding with the next lift. Materials not placed in accordance with these specifications shall be reconsolidated or removed and replaced, as the Owner’s Representative directs and at the expense of the Contractor.
- c. Contractor shall coordinate with the independent laboratory and the Owner’s Representative in the performance of in-place density tests.
- d. In addition to moisture-density testing, each compacted layer may be proof rolled to check for deflection or reaction and to verify that no soft or pumping areas remain in any layer or foundation soil.

### 3.9 MAINTAIN LOCAL TRAFFIC

- a. Excavate in manner to allow local traffic flow with a minimum of inconvenience during construction.
- b. Provide ramps up to existing grades as required to maintain traffic and vehicular access to existing driveways impacted by the work.
- c. Store materials and equipment to avoid interruption of traffic flow or parking.

### 3.10 CLEAN UP & NATIVE SURFACE RESTORATION

- a. Contractor to clean up site of work of all litter and construction debris caused by him following each of his rough and fine grading operations.

- b. Materials judged unsuitable for placement in any fill area to be removed from site by the Contractor.
- c. Contractor shall replace trees, shrubbery, flowers, and ground cover in kind to match existing as approved by the Owner's Representative.
- d. **Reseeding & Mulching:** Contractor shall seed and mulch (hydroseed or uniformly by hand) all exposed slopes and disturbed areas which are not scheduled to be landscaped. Grass seed and mulch shall conform to the requirements of OSSC (ODOT/APWA) Section 01030, Seeding, except as modified herein. Mulch used in landscape or lawn areas shall be either hydromulch or well chopped fescue or ryegrass mulch conforming with OSSC (ODOT/APWA) Section 010300.15.
  - 1) All areas to be seeded & mulched shall be made substantially clear and free of debris, weeds, briars, sticks, loose stones greater than 1-inch, and any other debris detrimental or toxic to the growth of grass.
  - 2) The surface soil in all areas to be seeded shall be in a condition favorable for the germination and growth of grass seed. A minimum of 1/2-inch and maximum of 1-1/2 inches of surface soil shall be in a loose condition.
  - 3) Soil preparation operations shall be directional along the contours of the areas involved.
  - 4) Seed and mulch shall be applied at a time approved by the Owner's Representative when conditions are favorable for germination. Seeding during periods where natural moisture is insufficient to allow germination and growth may require thicker mulch layers and watering to ensure establishment of groundcover.

**PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02226**  
**TRENCH EXCAVATION AND BACKFILL**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes all trench excavation, backfill and related work for the construction of the designated pipelines and other incidental work.
- b. Trench Excavation and Backfill Includes:
  - 1) Work of making all necessary trench excavations for the construction of all contract work.
  - 2) Furnishing, placing and use of sheeting, shoring and sheet piling necessary in excavating for and protecting the work and workmen.
  - 3) Performing all pumping and fluming necessary to keep the trenches free from water.
  - 4) Providing for uninterrupted flow of existing rivers, treatment plant processes, drains and sewers and the temporary disposal of water from other sources during the progress of the work.
  - 5) Damming and cofferdamming where necessary. To be the Contractor's design.
  - 6) Supporting and protecting all structures, pipes conduits, culverts, railroad tracks, posts, poles, wires, fences and buildings, as well as other public and private property adjacent to the work.
  - 7) Removing and replacing existing sewers, culverts, pipelines and bulkheads where necessary.
  - 8) Removing after completion of the work all sheeting and shoring not necessary to support the sides of excavations.
  - 9) Removing all surplus excavated material.
  - 10) Performing all backfilling, rough grading and compaction to the limits specified or ordered by the Owner's Representative.
  - 11) Restoring all property damaged as a result of the work included under this section.
- c. The Work includes obtaining and transporting suitable fill material from offsite when onsite material is not available.

- d. The Work includes transporting surplus excavated material (not needed for backfill at the location where the excavation is made) to other parts of the work where fill or embankments are required, or to stockpile locations shown on the drawings or directed by the Owner, or disposal of all surplus material to offsite locations provided by the Contractor.

## 1.2 LABORATORY SERVICES

- a. Unless otherwise specified or shown on the drawings, the Contractor shall provide laboratory services by an approved independent laboratory as described below and as noted on the drawings. The Contractor shall be responsible for providing all samples as required to complete the work.
  - 1) Sieve Analysis (ASTM C136): One test for each material source and type:
    - a) Selected backfill.
    - b) Granular backfill.
  - 2) Backfill Compaction:
    - a) One moisture density curve (AASHTO T-180) for each size and type of material used for backfill. The maximum dry weight and optimum moisture content shall be indicated. The cost of all retests required due to any unauthorized change in backfill material shall be borne by the Contractor.
    - b) Test consolidated backfill material in trenches above pipes for conformance with specified "Compaction Requirements," contained herein:
      - (1) Where tests indicate insufficient values, perform additional tests as required by the Owner. Testing shall continue until specified values have been attained by additional compaction effort. Retests shall be referenced to the corresponding failing test. The cost of all retests shall be borne by the Contractor.
  - 3) If CDF or CLSM is required or used on the project, the Contractor shall coordinate and provide CDF or CLSM test cylinders for laboratory testing by an independent testing laboratory as outlined below.
    - a) Test cylinders shall be prepared in conformance with ASTM D-4832. Unless otherwise directed by the Owner's Representative, a set of test cylinders shall be prepared for each day CDF or CLSM is placed on the project. A set shall consist of four (4) cylinders, two for testing at 7 days and two for testing in 28 days.
    - b) Other testing methods more suitable for low strength concrete may be permitted by the Owner's Representative.

### 1.3 CONSTRUCTION SUBMITTALS

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include, but not be limited to, the following:
  - 1) Submittals for Review. Submittals shall include but not limited to the following:
    - a) Laboratory test results, including sieve analysis and Proctor values.
    - b) Documentation that granular baserock meets the requirements of OSSC (ODOT/APWA) 02630, Base Aggregate where applicable, as well as additional requirements specified herein.
    - c) HMAC mix designs (if applicable).
    - d) Concrete mix design (if applicable).
    - e) CDF or CLSM mix design (if applicable).
    - f) Sheeting/shoring/dewatering plan, to demonstration conformance with the specification requirements and/or recommendations of the geotechnical report.
  - 2) Submittals for Record. In addition to the Owner's Representative, copies of all field test reports shall be provided to all other jurisdictions with authority over right-of-way where trench backfill work is occurring (ie. City, County, ODOT, etc.).
    - a) Field compaction test results.
    - b) CDF or CLSM test cylinder break results.

### 1.4 DEFINITIONS

- a. Classification of Excavated Materials
  - 1) Common Excavation (Unclassified) shall be defined, as all material not classified as rock excavation.
  - 2) Rock Excavation shall be defined as follows:
    - a) "Rock excavation shall consist only of that solid bedrock or ledge rock and boulders over two (2) cubic yards in volume which cannot be removed by a D8K (or approved equal) with four barrel hydraulics and dual rippers or 90,000 pound class Excavator (P.C. 400 Komatsu or 450 John Deere or approved equal) with single shank ripper on back of bucket, which shall not be more than thirty-six inches (36") in width, but which requires systematic drilling, blasting or the use of rock splitters pneumatic hammers and wedges. All D8K's and 90,000 pound class Excavators shall be in excellent operating condition and operated by personnel competent to operate like machinery."
    - b) "Removal of existing concrete and asphaltic surfaces does not qualify as rock excavation."

b. Trench Backfill Zones

- 1) Pipe Bedding - The area from 6-inches under the pipe to springline of the pipe for the width of the trench.
- 2) Pipe Zone - The area from the top of the pipe-bedding zone to 12-inches above the pipe for the width of the trench.
- 3) Backfill Zone - The area from 12-inches above the pipe to bottom line of surface restoration for the width of the trench.

c. Trench Classifications

- 1) Class I Trench - Class I trench shall have granular material in all three zones for backfill material.
  - a) For use under paved roadways, gravel and paved driveways, sidewalks, foundation slabs, buildings and other improved areas, or as directed by the Owner's Representative.
  - b) Unless otherwise specifically shown or noted otherwise on the drawings, or directed otherwise in writing by the Owner's Representative, use granular backfill for water/sewer/storm service lines and electrical/control conduit runs located within the boundaries of utility facility sites (*including but not limited to pump stations, treatment plants, well sites, etc.*), regardless of surface restoration type.
- 2) Class III Trench - Class III trench shall have granular material in the pipe bedding and pipe zones and native excavated material in the backfill zone for backfill material.
  - a) For use under unimproved areas or as directed by the Owner's Representative (excluding trenches within boundaries of utility facility sites as noted above).
- 3) CLSM Trench - Where CLSM (or CDF) backfill is required by the agency with jurisdiction, CLSM trench shall have granular material in the pipe bedding and pipe zones and CLSM in the backfill zone for backfill material. Unless alternate backfill type is specifically noted on the drawings (ie. granular), CLSM trench backfill shall be used under pavements within ODOT rights-of-way or as directed by the Owner's Representative.

d. Improved Areas

- 1) Improved areas are site areas that are to be covered with an improved surface, including but not limited to the following:
  - a) Public or private streets and sidewalks
  - b) Building crushed rock pads, floor slabs and/or foundations
  - c) Vehicle parking or driveway areas
  - d) Truck docks or truck turnarounds
  - e) Emergency vehicle access drives or turn arounds
  - f) Pedestrian pavement areas (gravel, AC or PCC)
  - g) Utility support structures such as generator slabs, utility vaults and pump stations

- h) Playground equipment areas with permanent equipment
  - i) Future improved areas when designated as such on the construction drawings
  - j) Playground areas with pavement such as baseball courts, tether ball, 4-square etc.
- e. Unimproved Area
- 1) Site areas that are outside of the boundary of improved areas as defined herein. Examples of unimproved areas are as follows:
    - a) Planter areas
    - b) Landscaping and seeded lawn areas
    - c) Sportsfield areas
    - d) Open space areas
    - e) Playfield areas
    - f) Bioswales, detention pond or other storm water management areas
    - g) Any unimproved area that is irrigated or non-irrigated

## **PART 2: PRODUCTS**

### **2.1 GRANULAR BACKFILL**

- a. Unless otherwise shown on the drawings, granular backfill shall consist 3/4"-0 dense graded aggregate meeting the requirements of OSSC (ODOT/APWA) 02630, Base Aggregate, subject to the following additional limitations.
  - 1) Percent passing the #40 sieve shall not exceed 10%
  - 2) Percent passing the #200 sieve shall not exceed 5%.

### **2.2 CONTROLLED LOW STRENGTH MATERIAL (CLSM) or CONTROL DENSITY BACKFILL (CDF)**

- a. Controlled Low Strength Material (CLSM) or Controlled Density Fill (CDF) shall be a mixture of Portland Cement, fly ash, aggregates, water and admixtures proportioned to provide a non-segregating, self consolidating, free-flowing and excavatable material that will result in a hardened, dense, non-settling fill. Except as otherwise specified herein, material shall conform with OSSC (ODOT/APWA) 00442, Controlled Low Strength Material (CLSM).
- b. CLSM or CDF may be approved as an alternative to "Granular Backfill" for use at locations requested by the Contractor and approved by the Owner's Representative. Where approved by the Owner's Representative, CLSM or CDF may also be used at the option of the Contractor for foundation stabilization material and pavement base material.
- c. Materials used in CLSM or CDF mixture shall conform with the following:
  - Portland Cement: ASTM C-150 or AASHTO M-85 or OSSC 02010.10
  - Fly Ash: ASTM C-618 Class F or Class C or OSSC 02030.10
  - Aggregates: ASTM C-33 or OSSC 02690
  - Water: OSSC 02020
  - Admixtures: OSSC 0240



- d. CLSM or CDF shall attain unconfined compressive 28-day strengths from 50 psi to a maximum of 100 psi. Cylinders shall be taken to demonstrate this. Any material not meeting this requirement shall be subject to removal and replacement at the Contractor's expense.

## 2.3 NATIVE EXCAVATED MATERIAL

- a. Excavated material free of vegetable matter and debris.
- b. Excavated material approved by the Owner's Representative for use as backfill in designated locations.
- c. Individual particles less than one third (1/3) trench width in greater dimension but no more than 8-inches in diameter.

## 2.4 FOUNDATION STABILIZATION

- a. Gravel or crushed aggregate or Owner's Representative approved clean, well-graded granular material.

# **PART 3: EXECUTION**

## 3.1 GENERAL

- a. Where a conflict occurs between or within the specifications and drawings as to the type of trench excavation or backfill required, the more stringent or higher quality requirements shall apply (Owner's Representative shall decide which stipulation will provide the best installation).

## 3.2 CONTRACTOR RESPONSIBILITY TO OBTAIN ALL REQUIRED INSPECTIONS

- a. The Contractor shall be responsible to ensure that all inspections and testing required by the drawings, contract documents or agencies having jurisdiction are completed or witnessed by authorized inspectors prior to proceeding with subsequent work that covers or that is dependent on the work to be inspected. Work completed or covered without obtaining required inspections will be considered as unauthorized work as outlined below, and may be ordered removed at the Contractor's expense.
- b. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems and/or corrective measures arising from uninspected work.
- c. When excess excavated material is disposed of at locations off the project site, the Contractor shall obtain all necessary permits and pay all fees for disposal of material.

### 3.3 PREPARATION

- a. The site of an open cut excavation shall be first cleared of all obstructions preparatory to excavation. It shall be the contractor's responsibility to pothole existing utilities as required or specified to expose potential utility conflicts prior to cutting existing streets.
- b. Wherever trenches are located within paved or hard surfaced areas, a saw wheel, Asphalt Zipper or other approved cutting/grinding devices shall be used prior to excavation. Initial width of pavement cuts shall not be less than the excavated trench width. Final width of pavement cuts shall not be less than 6-inches greater than actual width of the trench just below the pavement (additional sawcutting shall be completed prior to repaving as required to meet T-cut requirements per drawing details or local jurisdiction requirements). All cut or broken pavement shall be removed from site during excavation.
- c. The Contractor shall maintain street traffic at all times and erect and maintain barricades, warning signs, traffic cones, and other safety devices during construction in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Part VI, to protect the traveling public. Provide flagmen as required during active work in roadway areas.
- d. Intent of specifications is that all streets, structures, and utilities be left in condition equal to or better than original condition. Where damage occurs and cannot be repaired or replaced, Contractor shall purchase and install new material, which is satisfactory to Owner. Plans and/or specifications cover and govern replacement and restoration of foreseeable damage.
- e. The operations shall be confined to the work limits provided. Avoid encroachment on, or damage to, private property or existing utilities unless prior arrangements have been made with copy of said arrangement submitted to Owner's Representative.
- f. Installation of franchise or private utilities (gas, power, phone, cable, data, communication, control, alarms, etc.) or associated conduits in a common trench with water, sanitary sewer or storm sewer is prohibited. Provide a minimum of 3 foot clear separation between water, sanitary sewer or storm sewer facilities and parallel franchise/private utilities or associated conduits.

### 3.4 TRENCH EXCAVATION

- a. Excavation for trenches in which pipelines and sewers are to be installed shall provide adequate space for workmen to place and joint the pipe properly, but in every case the trench shall be kept to a minimum width. The width of trench at the top of the pipe shall not exceed the limits specified or as shown on the drawings without notification and concurrence in writing by the Owner's Representative. Use of trenches wider than the minimum width will not entitle the Contractor to additional compensation.
- b. Excavation shall be to the depth necessary for placing of granular bedding material under the pipe as shown on the drawings, including proper allowance for pipe thickness.
- c. Over-excavation. If over-digging of the trench occurs (*either inadvertently or due to the need for over-excavation to remove unsuitable material as noted herein*), the trench bottom shall be filled to the design trench subgrade with compacted, well graded, granular backfill/bedding material as specified.

- d. Smooth Trench Bottom Required.
- 1) Prior to starting trench excavation, the Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade (ie. smooth end bucket or method to provide equivalent result). The bottom of the trench excavation shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.
  - 2) Covering over or filling tooth grooves in the trench bottom with granular bedding material is prohibited, particularly where the trench subgrade consists of fine grained silt or clay material.
  - 3) If the equipment, means or methods provided by the Contractor do not provide trench bottom conditions as specified, the Contractor shall immediately stop trench excavation work until appropriate equipment or methods is available.
  - 4) Failure of the Contractor to pothole or otherwise determine soil conditions at the specified trench depths in sufficient time to obtain appropriate equipment shall not be grounds for additional contract time.
- e. Timing of Trench Backfill & Compaction.
- 1) Unless otherwise permitted by the Owner's Representative, trenching operations shall not be performed beyond the distance that will be backfilled and compacted the same day.
  - 2) In general, backfilling shall begin as soon as the conduit is in approved condition to receive it and shall be carried to completion as rapidly as feasible.
  - 3) New trenching shall not be started when earlier trenches need backfilling or the surfaces of streets or other areas need to be restored to a safe and proper condition.
- f. Existing Pipe along Same Alignment. Where trenching for piping is in the same alignment as existing piping, the trench depth and pipe embedment shall extend to a minimum of 6-inches below the new piping or 6-inches below the existing piping, whichever is deeper.
- g. Existing Pipes to be Abandoned. Where the excavation activities require the removal of portions of an abandoned pipeline, 3,300-psi concrete plugs shall be installed in the open ends of the pipe. Concrete plugs to be a minimum one and one-half (1½) times the diameter of the pipe. If hand mixed sack-crete type concrete is proposed, it shall be a 4000 psi minimum mix (*approved by the Owner's Representative*), mixed with the minimum amount of water necessary for workability (*5" slump or stiffer*). In no case will dry sack-crete (*either in bags or as loose mix*) be considered as an acceptable substitute for an approved mixed concrete.
- h. Removal of Water:
- 1) The Contractor shall at all times during construction provide and maintain ample means and devices with which to remove promptly and dispose of properly all water entering the trench excavations or other parts of the work and shall keep said excavations dry until the pipelines to be placed therein are completed.

- 2) In water bearing sand, well points and/or sheeting shall be supplied, together with pumps and other appurtenances of ample capacity to keep the excavation dry as specified.
- 3) Additional excavation and/or installation of foundation stabilization materials which may be required due to the Contractor's failure to adequately control water in the trench shall be the Contractor's sole responsibility, so as to provide a stable subgrade as required to install the pipes at the grades and within the tolerances specified.
- 4) The Contractor shall dispose of water from the work in a suitable manner without damage to adjacent property or structures.
- 5) Contractor shall provide silt fences, straw bales, and/or sedimentation basins as required to clarify waters prior to discharge in accordance with Federal, State and Local requirements.

### 3.5 EXCAVATION OF UNSUITABLE MATERIALS (Trench Over-Excavation)

- a. Where soft trench subgrade is encountered in which satisfactory trench bottom stability cannot be obtained by moisture control and/or compaction, the Contractor shall notify the Owner's Representative and the unstable material shall be excavated to the depth required or approved by the Owner's Representative.
- b. Unsuitable materials existing below the Contract bottom limits for trench excavation shall be removed as directed by the Owner's Representative, as required to provide a stable subgrade at the design trench bottom grades. Unless otherwise authorized by the Owner's Representative, such excavation shall be conducted at a time when the Owner's Representative is present and shall not exceed the vertical and lateral limits as approved by the Owner's Representative. These provisions shall apply whether such over-excavation consists of multiple isolated segments or the entire trenchline.
- c. Over-excavation backfill shall be well graded granular foundation stabilization material, compacted in lifts to provide a stable foundation at the design trench grades.
- d. Where the use of open graded angular stabilization rock is specifically approved by the Owner's Representative on a case-by-case basis, the open graded rock shall have geotextile fabric installed under, around and over the open graded rock (*in order to prevent the migration of fines into the void spaces of such open graded stabilization rock, with resultant loss of support and/or settlement over time*).
- e. In all cases, the top of any foundation stabilization material shall be installed so as to allow for the installation of the full required depth of granular pipe bedding material as specified or as shown on the drawings.

### 3.6 DISPOSAL OF UNSUITABLE AND SURPLUS MATERIAL

- a. All excavated materials which are unsuitable for use in backfilling trenches or around structures, and materials excavated that are in excess of that required for backfilling and for constructing fills and embankments as shown on the drawings, shall be disposed of by the Contractor at own expense and at disposal sites provided by him as may be required.
- b. Surplus excavated material shall be disposed of at designated spoil sites in a legal manner, in full compliance with applicable codes and ordinances.

### 3.7 PROTECTION

- a. Test Pits: The Contractor shall dig such exploratory test pits as may be necessary in advance of excavation to determine the exact location and elevation of subsurface structures, pipelines and conduits which are likely to be encountered and shall make acceptable provision for their protection, support, and maintenance in operation.
- b. Sheeting, Shoring and Bracing:
  - 1) The Contractor shall furnish and install adequate sheeting, shoring, and bracing to maintain safe working conditions, and to protect newly built work and all adjacent and neighboring structures from damage by settlement.
  - 2) Bracing shall be arranged so as not to place a strain on portions of completed work until the construction has proceeded far enough to provide ample strength. Sheeting and bracing may be withdrawn and removed at the time of backfilling, but the Contractor shall be responsible for all damage to newly built work and adjacent and neighboring structures.
  - 3) All sheeting, shoring and bracing shall be of Contractor's design and shall be in accordance with all Federal, State and Local codes and requirements.
- c. Construction Sheeting Left in Place:
  - 1) The Contractor shall furnish, install, and leave in place, construction sheeting and bracing when specified or when indicated or shown on the drawings.
  - 2) Construction sheeting and bracing, placed by the Contractor to protect adjacent and neighboring structures, may be left in place if desired by the Contractor and approved by the Owner's Representative. All such sheeting and bracing left in place shall be included in the cost for excavation.

### 3.8 ROCK EXCAVATION

- a. The use of explosives shall be prohibited. Rock excavation shall be by rock hammer, rock saw or other non-explosive method.

- b. After the Contractor has removed all material that does not meet the above definition of “rock excavation,” he shall notify the Owner’s Representative in writing and request an inspection to verify the extent of rock excavation required. The profiling of the exposed rock surface shall be done prior to commencement of rock removal activities. It shall be the responsibility of the Contractor to mark the rock at 25 foot maximum intervals and provide a laser, rod and benchmark for use in measuring the rock profiles for determining quantities.
- c. Contractor to excavate and remove the overburden exposing the rock surface, allowing the Owner’s Representative to profile the excavated trench for rock measurement. The profiling of the exposed rock surface shall be done prior to commencement of rock removal activities.
- d. Where the bottom of the trench encounters ledge rock and/or boulders and large stones which meet the definition of “rock”, as described herein, said rock shall be removed to provide 6-inches of clearance to each side and below all pipe and accessories.
- e. Excavations below subgrade in rock shall be backfilled to subgrade with approved granular material at the Contractor’s expense and thoroughly compacted.

### 3.9 REMOVAL OF PCC CURBS & SIDEWALKS

- a. Where trench excavation requires removal of PCC curbs and/or sidewalks, the curbs and/or sidewalks shall be sawcut as required and removed at a tooled joint unless otherwise authorized by the Owner’s Representative.
- b. The intention of this requirement is to facilitate the replacement of curbs and sidewalks to the joint pattern of the existing and surrounding curbs and/or sidewalks. The sawcut lines for PCC sidewalk and curb cuts shown on the drawings are schematic and not intended to show the exact alignment of such cuts.

### 3.10 BACKFILL AND COMPACTION

- a. Backfill Immediately: All trenches and excavations shall be backfilled immediately after pipe is laid therein, unless otherwise directed by the Owner’s Representative. Under no circumstances shall water be permitted to rise in unbackfilled trenches after pipe has been placed.
  - 1) Backfilling With Excavated Material: Where specified or directed, material excavated in connection with the work shall be used for backfilling, in accordance with the type of trench classification shown on the contract drawings. No material shall be used for backfilling that contains stones, rock or pieces of masonry greater than 8-inches, frozen earth, debris, and earth with an exceptionally high void content, organic material, or marl. Large pieces of rock or masonry shall not be deposited closer than 12-inches from the completed outside surface of any structure or pipe.
  - 2) In no case shall backfill material deposited by machinery be allowed to fall directly on the pipe and in all cases the bucket shall be lowered so that the shock of the falling backfill material will not cause damage.

b. Pipe Bedding

- 1) Pipe bedding material shall be placed in the trench, compacted and shaped to provide continuous support for the pipe between joints or fittings.
- 2) Pipe shall be laid directly on the bedding materials. Holes shall be provided for all joints or fittings as required to permit assembly.
- 3) Backfill shall be placed in uniform layers on both sides of the pipe to springline. Each layer shall be placed, then carefully and uniformly tamped to the specified density to eliminate the possibility of lateral displacement of the pipe. Care shall be taken to ensure that the material under the haunches of the pipe is sufficiently compacted.

c. Pipe Zone

- 1) Pipe zone material shall be carefully placed around the pipe and thoroughly hand compacted in uniform layers to provide complete support of the pipe and to prevent deflection or damage.
- 2) The Contractor shall prevent the pipe from moving either horizontally or vertically during placement and compaction of pipe zone material.

d. Backfill Zone

- 1) After the backfill has been placed and compacted around the structures and conduits to a height of 12-inches over the top as specified above, the remainder of the trench may be backfilled by machine.
- 2) The backfill material shall be deposited in horizontal layers not exceeding 30-inches thick, and each layer shall be thoroughly compacted to the specified density by approved methods before the succeeding layer is placed.

e. Backfilling Under Existing Conduits

- 1) Where it is necessary to undercut or replace existing utility conduits and/or service lines, the excavation beneath such lines shall be backfilled the entire length with granular bedding material tamped in place in 6-inch layers to the required density. The granular bedding shall extend outward from the spring line of the conduit a distance of 2 feet on either side and thence downward at its natural slope.

f. Backfilling Under Pavement, Walks & Improved Areas

- 1) Where any pavement, driveway, parking lot, curb and gutter, walk *or improved area* is to be placed over a backfill area, granular material shall be used. The material shall be placed and compacted to the required density in accordance with the specification contained herein.

### 3.11 COMPACTION REQUIREMENTS

- a. In Class I and III trench classification, compaction in the pipe zone shall be achieved by hand compaction in horizontal lifts or other approved method to ninety percent (90%) of the maximum dry density per AASHTO T-180 test method.
- b. In Class I trench classification, compaction in the backfill zone shall be achieved by mechanical compaction in horizontal lifts or other approved method to ninety-two percent (92%) of the maximum dry density per AASHTO T-180 test method.
- c. In Class III trench classification, compaction in the backfill zone shall be achieved by ramming, vibration or a combination thereof to at least eighty-five percent (85%) of the maximum dry density per AASHTO T-180 test method.

### 3.12 COMPACTION TESTS

- a. Before mandrel testing and/or TV inspection of sewers or storm lines, all trench compaction shall be completed and compaction tests submitted.
- b. Trenches shall be backfilled and consolidated in layers, as specified, to the existing ground surface. Compaction tests, when performed, shall be performed on each layer immediately after compaction.
- c. The initial test series for each type of backfill material shall be continued until the method of consolidation employed has proven to attain the required compaction. Any change in the proven method of consolidation will not be permitted unless approved by the Owner. Tests shall be in locations and at depths acceptable to the Owner's Representative.
- d. Unless specified on the drawing notes, subsequent tests or series of tests shall be in locations and at depths ordered by the Owner's Representative. The Contractor shall be responsible to perform adequate testing to ensure that settlement does not occur. Any settlement shall be repaired at the Contractor's expense.
- e. The cost of all retests shall be borne by the Contractor.

### 3.13 SURFACE RESTORATION AND CLEAN UP

- a. Surface restoration shall conform to these Contract Documents where applicable. Restore ground surfaces to original conditions and elevations unless otherwise specified or directed.
- b. Maintenance of such surfaces shall be for a minimum of 12 months following acceptance of work, or the length of the warranty period, whichever is longer.
- c. Clean up and remove all excess materials, construction materials, debris from construction, etc. Replace or repair any fences, mailboxes, signs, landscaping, or other facilities removed or damaged during construction. Replace all lawns, topsoil, shrubbery, flowers, etc., damaged or removed during construction. Contractor to be responsible for seeing that lawns, shrubs, etc. remains alive. Leave premises in condition equal to or better than original condition before construction.



**PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02231**  
**AGGREGATE BASE ROCK**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes furnishing all material, equipment; labor and supervision required installing aggregate baserock as specified or as shown on the drawings, including streets, driveways, parking areas, building pads, granular backfill (except trenches) around structures, etc. The terms “granular base”, “granular baserock” or “granular backfill” as used herein, on the drawings or in the Contract Documents refers to aggregate base rock.
- b. All preparatory work and incidental work required to properly complete the work shall also be included under this section.

**1.2 LABORATORY SERVICES**

- a. Unless otherwise specified or shown on the drawings, the Contractor shall provide laboratory services by an approved independent laboratory as described below and as noted on the drawings. The Contractor shall be responsible for providing all samples as required to complete the work.
- b. Laboratory tests shall be performed to demonstrate that granular baserock meets the requirements of OSSC (ODOT/APWA) 02630, Base Aggregate where applicable (including sieve or screen analysis of fine and coarse aggregate), as well as additional requirements specified herein.
- c. The sample shall meet limits established in OSSC (ODOT/APWA) 02630, Base Aggregate, as well as additional requirements specified herein. If the sample fails to meet set limits, a new source shall be found. The Owner’s Representative shall approve each source of material(s).
- d. Compaction:
  - 1) One moisture density curve per AASHTO T-180 (Modified Proctor/ ASTM D1557) for each size and type of material used. The maximum dry weight and optimum moisture content shall be indicated. The cost of all retests required due to any unauthorized change in backfill material shall be borne by the Contractor.
  - 2) Test consolidated fill material for conformance with specified "Compaction Requirements," contained herein:
    - a) Where tests indicate insufficient values, perform additional tests as required by the Owner. Testing shall continue until specified values have been attained by additional compaction effort.
    - b) Retests shall be referenced to the corresponding failing test. The cost of all retests shall be borne by the Contractor.

### 1.3 CONSTRUCTION SUBMITTALS

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include, but not be limited to, the following:
  - 1) Submittals for Review. Submittals shall include but not limited to the following:
    - a) Laboratory test results, including sieve analysis and Proctor values.
    - b) Documentation that granular baserock meets the requirements of OSSC (ODOT/APWA) 02630, Base Aggregate where applicable, as well as additional requirements specified herein.
    - c) Documentation that granular baserock meets the requirements for other laboratory tests as specified herein.
    - d) CDF mix design (if specified or required).
  - 2) Submittals for Record. In addition to the Owner's Representative, copies of all field test reports shall be provided to all other jurisdictions with authority over right-of-way where trench backfill work is occurring (ie. City, County, ODOT, etc.).
    - a) Field compaction test results.
    - b) Weight tickets for all material delivered (where payment is by weight).

## **PART 2: PRODUCTS**

### 2.1 BASE AND LEVELING ROCK

- a. Base rock and leveling rock shall be dense graded aggregate in conformance with the requirements of OSSC (ODOT/APWA) Section 2630, Base Aggregate, subject to the following additional limitations.
  - 1) Percent passing the #40 sieve shall not exceed 10%
  - 2) Percent passing the #200 sieve shall not exceed 5%.
- b. Gradation shall be as indicated on the drawings. Where not specified on the drawings, gradation shall be as follows:
  - 1) Base Rock: 1-1/2"-0
  - 2) Leveling Rock: 3/4"-0
  - 3) Alternate single size 1"-0 aggregate as approved by the Owner's Representative.

## **PART 3: EXECUTION**

### 3.1 GENERAL

- a. The subgrade shall be checked for grade and compaction and accepted by the Owner's Representative prior to placement of aggregate baserock.
- b. Aggregate baserock shall be placed over approved subgrade in accordance with OSSC (ODOT/APWA) Section 00641, Aggregate Subbase, Base and Shoulders, except that plant mixing of aggregate and water shall not be required.
- c. Existing graveled driveways shall be re-rocked and restored to match existing surface(s) where disturbed by construction. Finish with 3/4-inch minus aggregate baserock a minimum of 6-inches deep.

### 3.2 COMPACTION

- a. The maximum compacted thickness of each lift of aggregate baserock shall be 6-inches.
- b. The Contractor shall have tests performed to determine the maximum dry density and optimum moisture content of the aggregate baserock.
- c. All aggregate baserock shall be compacted to 95 percent (95%) of the maximum dry density per AASHTO T-180 (Modified Proctor/ ASTM D1557).
- d. All structures shall be protected from damage when placing and compacting aggregate baserock and backfill.
- e. Contractor shall sprinkle the aggregate baserock with water as necessary to achieve the required compaction.

### 3.3 TOLERANCES

- a. Aggregate base courses shall be finished accurately to lines and grades shown on the drawings and within the tolerances specified.
- b. The maximum tolerance on finished rock grade is ½-inch on a 16-foot straightedge with no birdbaths.
- c. All rims shall be adjusted to final grade after leveling rock course is placed and compacted.

### 3.4 ACCEPTANCE

- a. Final acceptance of the material will be from samples taken on the finished grade in the compacted state.

## **PART 4: SPECIAL PROVISIONS**

None.

## **SECTION 02260 GEOTEXTILE FABRIC**

### **PART 1: GENERAL**

#### **1.1 SCOPE**

- a. This section includes the furnishing and installing of geotextile fabric and incidentals on the project.

#### **1.2 SUBMITTALS**

- a. Submittals shall be in accordance with the requirements of the Contract Documents and shall include:
  - 1) For the Owner's Representative's review - Geotextile certification shall conform with Level B requirements per OSSC (ODOT/APWA) 02320.10.c.2.

### **PART 2: PRODUCTS**

#### **2.1 GEOTEXTILE FABRIC**

- a. Unless otherwise specified or noted on the drawings, geotextile fabric shall conform OSSC (ODOT/APWA) 02320, Geosynthetics, with minimum property values conforming to Table 02320-1 as noted below. Per OSSC (ODOT/APWA) 02320.10.c.2, if submittal information lists typical or average roll values instead of minimum average roll values, the specified table values under OSSC (ODOT/APWA) 02320 shall be increased by 25%.
- b. Reinforcement Fabric. Unless heavier is specified or noted on the drawings, reinforcement fabric (for over-excavation or under embankments) shall be non-woven fabric (Propex Geotex 1001, Mirafi 1000N, Linq 250EX or approved equal). Slit film fabrics are not allowed.
- c. Separation Fabric. Unless heavier is specified or noted on the drawings, separation fabric (where successful proofroll allows compaction testing of subgrade to be waived) shall be non-woven fabric (Propex Geotex 701, Mirafi 170N, Linq 160EX or approved equal). Slit film fabrics are not allowed.
- d. Drainage Fabric. Unless heavier fabric is specified or noted on the drawings, drainage fabric shall be conform with Type 2 Drainage Geotextile (OSSC/ODOT/APWA 02320), non-woven fabric (Propex Geotex 601, Mirafi 160N, Linq 150EX or approved equal). Slit film or woven fabrics are not allowed.
- e. Riprap Fabric. Unless heavier is specified or noted on the drawings, fabric under riprap shall be conform with Type 2 Riprap Geotextile (OSSC/ODOT/APWA 02320), non-woven fabric (Propex Geotex 1071, Mirafi 1120N, Linq 275EX or approved equal). Slit film or woven fabrics are not allowed.

## 2.2 PROTECTION

- a. The geotextile shall be furnished in a protective wrapping which shall protect the fabric from ultraviolet radiation and from abrasion due to shipping and handling.

## **PART 3: EXECUTION**

### 3.1 SURFACE PREPARATION

- a. The surface to receive the geotextile shall be prepared to a smooth condition free of obstructions, depressions and debris.

### 3.2 PLACEMENT

- a. The fabric shall be placed loosely, not in a stretched condition.
- b. The fabric shall be covered immediately after placement to limit exposure to ultraviolet radiation.
- c. The crushed rock shall be placed so that the geotextile is not punctured.
- d. The maximum drop height for placing crushed rock on the geotextile shall be 3 feet. This specification shall be strictly adhered to so as to avoid damaging the geotextile fabric.
- e. The geotextile fabric shall be installed per plan details.
- f. Transverse joints between fabric panels shall be overlapped for a length in the direction of baserock placement sufficient to prevent movement of the fabric.

## **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02501**  
**TRENCH SURFACE RESTORATION**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes all surface restoration and related work for the construction of the designated pipelines and other work as required for the completion of the project.
- b. Surface restoration includes, but is not limited to, the following:
  - 1) Restoration of all surfaces disturbed during construction including A.C. pavement, concrete, gravel, lawns, topsoil, trees, shrubbery, flowers, fences, mailboxes, signs, landscaping, etc.
  - 2) Surfaces shall be restored in-kind unless otherwise shown on the drawings or directed by the Owner's Representative.
  - 3) Maintenance of all surfaces until final surface restoration is completed. Temporary AC pavement cold patching or hot patching shall be required for all street crossings which are not permanently restored within seven (7) days of excavation.
  - 4) Depth, type and compaction of materials shall be equal to original surfaces unless otherwise specified herein or shown on the drawings.

**1.2 CLASSIFICATIONS**

- a. Class A: Paved street restoration for use on public streets, collectors and arterials, where shown on the drawings, or as directed by the Owner's Representative.
- b. Class B: Paved street restoration for use on minor streets and paved driveways, where shown on the drawings, or as directed by the Owner's Representative.
- c. Class C: Gravel shoulder restoration.
- d. Class D: Graveled road or street restoration, including graveled driveways.
- e. Class E: Unimproved or open areas.
- f. Concrete Curbing, Walks and Driveways: Restoration of existing structures.

**1.3 LABORATORY SERVICES**

- a. Unless otherwise specified or shown on the drawings, the Contractor shall provide laboratory services by an approved independent laboratory as described below or as noted on the drawings. The Contractor shall be responsible for obtaining and providing all samples as required to complete the work.
  - 1) Granular Material: As specified in Section 02226, Trench Excavation and Backfill.

- 2) AC Pavement Compaction: Laboratory tests & field compaction tests as specified.
  - a) Unless otherwise specified or noted on the drawings, a compaction test shall be performed for every 20 tons of material placed, or a minimum of one test per lift for each 300 linear feet of trench, whichever is greater.
- 3) Retests shall be referenced to the corresponding failing test. The cost of all retests shall be borne by the Contractor.

#### 1.4 SUBMITTALS

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include:
  - 1) Submittals for Review. Submittals shall include but not limited to the following:
    - a) Laboratory test results, including sieve analysis and Proctor values.
    - b) Documentation that granular baserock meets the requirements of OSSC (ODOT/APWA) 02630, Base Aggregate where applicable, as well as additional requirements specified herein.
    - c) HMAC mix designs (*as applicable*).
    - d) Concrete mix design (*as applicable*).
  - 2) Submittals for Record. In addition to the Owner's Representative, copies of all field test reports shall be provided to all other jurisdictions with authority over right-of-way where trench backfill work is occurring (ie. City, County, ODOT, etc.).
    - a) Field compaction test results.

### **PART 2: PRODUCTS**

#### 2.1 GRANULAR MATERIAL

- a. Unless otherwise shown on the drawings (or approved in writing by the Owner's Representative and agency with jurisdiction), granular backfill shall consist 3/4"-0 dense graded aggregate meeting the requirements of OSSC (ODOT/APWA) 02630, Base Aggregate, subject to the following additional limitations.
  - 1) Percent passing the #40 sieve shall not exceed 10%
  - 2) Percent passing the #200 sieve shall not exceed 5%.

#### 2.2 TOPSOIL

- a. Native topsoil shall be used for topsoil replacement when possible.
- b. Imported topsoil shall conform to requirements of OSSC (ODOT/APWA) Section 01040, Planting.
- c. Depth of topsoil shall be determined by actual existing field conditions unless otherwise approved by the Owner's Representative.



### 2.3 A.C. PAVEMENT

- a. A.C. pavement shall conform to the requirements of OSSC (ODOT/APWA) Section 00744, hot mixed Asphalt Concrete Pavement, for 1/2" dense graded AC pavement, Level 2 Job Mix Formula.

### 2.4 TACK COAT

- a. The tack coat material shall be CSS-1, or CSS1h, and shall meet the requirements of OSSC (ODOT/APWA) Section 00730, Emulsified Asphalt Tack Coat.

### 2.5 JOINT/CRACK SEAL FABRIC

- a. Where specified or noted on the drawings or details, joint seal fabric shall be self-adhering, non-woven geotextile paving fabric product with rubberized mastic adhesive and pre-tacked (ie. asphalt tack coating on top to ensure strong bond with pavement), and specifically designed for paving.
- b. Unless wider widths are specified on the drawings, all joint/crack seal fabric shall be provided in rolls with a minimum width of 18-inches.
- c. Joint/crack seal fabric shall be self-adhesive paving fabric, PetroTac or Mirafi MTK or approved equal.

### 2.6 PORTLAND CEMENT CONCRETE

- a. All concrete shall conform to the requirements of OSSC (ODOT/APWA) Section 00440, Commercial Grade Concrete, 3,300 psi.

### 2.7 GRASS SEED AND MULCH

- a. Grass seed and mulch shall conform to the requirements of OSSC (ODOT/APWA) Section 01030, Seeding, except as modified herein.
- b. Seed mixtures shall be compatible with the immediately surrounding vegetation.
- c. Seed mix to be approved by the Owner's Representative prior to application.
- d. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10 or between September 1 and October 1, unless otherwise specified on the drawings or by erosion control permits. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.
- e. Mulch shall be either hydromulch or finely chopped fescue or rygrass mulch conforming with OSSC (ODOT/APWA) Section 01030.15
  - 1) **CEREAL GRAIN STRAW (wheat or similar) IS NOT AN ACCEPTABLE SUBSTITUTE without specific written approval.**

- f. When use is allowed by jurisdiction in lieu of hydromulch (in areas other than landscape or lawn areas), dry, loose, weed free fescue or rygrass straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.

## **PART 3: EXECUTION**

### **3.1 GENERAL**

- a. The intent of this specification is that cleanup activities and surface restoration work immediately follow the installation of pipe, construction of structures, etc. This is imperative so as to impact activities by the property owner, or other users, as little as possible.
- b. Trench backfill and subgrade shall meet compaction requirements as set forth in the applicable sections contained herein prior to proceeding with surface restoration work.
- c. Where a conflict occurs between or within the specifications and drawings as to the type of surface restoration required, the more stringent or higher quality requirements shall apply (Owner's Representative shall decide which stipulation will provide the best installation).
- d. All workmanship for AC pavement surface restoration shall conform to the requirements of OSSC (ODOT/APWA) Section 00744 (hot mixed Asphalt Concrete Pavement) for dense graded AC pavement mix or local jurisdiction requirements, whichever are more stringent.
- e. The Contractor shall notify the Owner's Representative a minimum of 24 hours in advance of performing any A.C. pavement surface restoration work. No AC pavement surface restoration work shall be performed when weather conditions, in the Owner's Representatives opinion, are not suitable for placement of AC pavement.
- f. All workmanship for PCC restoration shall conform to the requirements of OSSC (ODOT/APWA) Section 00440, Commercial Grade Concrete or local jurisdiction requirements, whichever are more stringent.
- g. In areas designated for Class E surface restoration, topsoil shall be removed and stored at an approved location prior to excavation.

### **3.2 PROTECTION**

- a. No heavy construction vehicle shall operate on any pavement, curbing or walk until it is fully cured and/or unless fully protected from damage.
- b. Asphalt Pavements:
  - 1) Bituminous mixtures shall be placed only when the surface is dry and weather conditions are such that proper handling, finishing and compaction can be accomplished. In no case shall bituminous mixtures be placed when the surface temperature is below the minimum established below:

<u>Course Thickness</u>	<u>Min. Surface Temperature</u>
Less than 1½-inch	60°F <sup>1,2</sup>
1½-inch to 2½-inches	50°F <sup>1,2</sup>
Over 2½-inches	45°F <sup>1,2</sup>

<sup>1</sup> - If placing HMA between March 15 and September 30, surface temperature requirements may be lowered by 5°F if approved by the Owner's Representative.

<sup>2</sup> - Use of field burners or other devices to heat existing pavement surfaces to the minimum temperatures is prohibited.

- 2) Traffic shall be prohibited on newly installed asphalt pavement until it has cooled sufficiently to avoid marking.
- 3) No heavy construction vehicle shall operate on any finished pavement surfaces without prior written approval from the Owner's Representative.

c. Concrete Curbing and Walks:

- 1) No concrete shall be mixed, transported, placed or finished when the temperature of the base, subgrade or air is below 40°F or whenever, in the opinion of the Owner's Representative, the temperature may fall below 40°F within twenty four (24) hours after the concrete has been placed.
- 2) The Contractor shall take such precautions as are necessary to protect newly placed concrete from rain.
- 3) The Contractor shall protect newly placed concrete from freezing for no less than seven (7) days.

### 3.3 AC TRENCH PATCH EDGE PREPARATION

- a. The width of the pavement T-cut (ie. width that the sawcut pavement exceeds the width at the top of the excavated trench) shall be as indicated on the drawing details or per local jurisdiction requirements.
- b. Where initial trench excavation sawcuts do not provide adequate width to meet T-cut requirements per drawing details or local jurisdiction requirements, additional sawcutting shall be completed as required after completion of trench excavation and backfill.
- c. Where feasible, the Contractor may choose to grind and remove the existing AC using an Asphalt Zipper or similar technology, and then sawcut a clean edge prior to trench patching (in order to eliminate the need to sawcut twice where initial pavement removal widths do not meet the T-cut requirements shown on the drawing details).
- d. The Owner's Representative shall inspect and approve AC pavement edges prior to paving. Damaged edges shall be identified for additional sawcutting.
- e. Where AC pavement cuts are damaged during excavation, pipe installation or backfilling, they shall sawcut after backfilling to provide a clean surface against which to pave at no additional cost to the Owner.

### 3.4 AC FINISH AND COMPACTION

- a. Finish pavement surfaces shall be a smooth, well sealed, tight mat at all locations. Bony or open graded pavement surfaces shall be repaired to the satisfaction of the Owner's Representative, prior to final acceptance of the work.
- b. Contractor shall protect new pavement against traffic until it has cooled sufficiently to avoid tracking.
- c. Compaction for asphalt concrete pavement shall be a minimum of ninety-one percent (91%) at all locations for standard duty mix as determined by the Rice Standard Method (AASHTO T-29). A roller pattern shall be established by the Contractor to achieve the required compaction at the beginning of the paving process. The roller pattern and compaction tests results from an independent testing lab retained by the Contractor shall be used to verify compaction.
- d. Contractor shall adjust the rate of AC placement as required to allow AC temperatures to be maintained as required to achieve compaction before the temperature drops below the limits specified under OSSC 00744.49.

### 3.5 SAND SEAL

- a. Tack coat and sand seal shall be installed at all pavement joints.
- b. Tack coat and sand seal shall be installed as required to completely seal any sawcuts which extend beyond the limits of pavement removal. Sawcuts shall be cleaned out as required to allow for penetration of tack coat for the full depth of the sawcut.
- c. Excess sand shall be removed from the surface after the sand seal has set up.

### 3.6 CLASS A - AC SURFACE RESTORATION

- a. Surface restoration shall conform to all standards and requirements of the governing agency.
- b. Surface restoration shall conform to drawing details and specifications contained herein including "T" saw cutting, bench grind where specified, joint seal fabric where specified, tack coat and sand seal.
- c. The wearing course shall match the existing pavement in line and grade but in no case shall the pavement thickness be less than four (4) inches placed in two (2) lifts.
- d. Where designated on the drawings, the edge of trench cuts shall be include a bench grind along the joint between the new AC and existing AC per drawing details (to avoid a full depth joint) prior to trench patching. As an alternate, the contractor may repave the trench full depth (as temporary surface restoration prior to grinding to avoid the long-term need for steel plates), and then bench grind both the new AC across the trench width and along the trench edge (into the existing AC) as shown on the drawing details, followed by an AC inlay that encompasses the trench width plus the bench grind into the existing AC.

### 3.7 CLASS B - AC SURFACE RESTORATION

- a. Surface restoration shall conform to all standards and requirements of governing agency.
- b. Surface restoration shall conform to drawing details and specifications contained herein including "T" sawcutting, tack coat and sand seal.
- c. The wearing course shall match the existing pavement in line and grade, but in no case shall the pavement thickness be less than three (3) inches placed in two (2) lifts.

### 3.8 CLASS C – GRANULAR SURFACE RESTORATION

- a. Surface restoration shall conform to all standards and requirements of the governing agency.
- b. Surface restoration shall conform to drawing details and specifications contained herein.
- c. Where any portion of the trench excavation falls within the shoulder, the shoulder shall be restored & regarded to its full width (24 inches or original width, whichever is greater).
- d. Gravel shoulders shall be compacted by mechanical means to ninety five percent (95%) of the maximum dry density per AASHTO T-180 (Modified Proctor/ ASTM D1557) unless otherwise directed by the Owner's Representative.

### 3.9 CLASS D – GRANULAR SURFACE RESTORATION

- a. Surface restoration shall conform to all standards or requirements of the governing agency.
- b. Surface restoration shall conform to drawing details and specifications contained herein.
- c. The base and leveling course shall match the existing road surface in depth, line and grade, but in no case shall the finish rock surface be less than nine (9) inches in depth.
- d. All Class D surface restoration shall be compacted by means of mechanical compaction to ninety five percent (95%) of the maximum dry density per AASHTO T-180 (Modified Proctor/ ASTM D1557).

### 3.10 CLASS E - NATIVE SURFACE RESTORATION

- a. Surface restoration shall conform to all standards and requirements of the governing agency.
- b. Surface restoration shall conform to drawing details and specifications contained herein, including placement of topsoil in the upper trench zones (6" minimum unless greater depths shown on drawings or details). If native topsoil is not stockpiled by the contractor, imported topsoil shall be provided by the Contractor at no additional expense to the Owner.
- c. Compact by means of wheel loading unless otherwise directed by the Engineer.

- d. Contractor shall replace trees, shrubbery, flowers, and ground cover in kind to match existing as approved by the Owner's Representative.
- e. Reseeding & Mulching:
  - 1) All areas to be seeded & mulched shall be made substantially clear and free of weeds, briars, and sticks, loose stones greater than 1-inch, and all other debris detrimental or toxic to the growth of grass.
  - 2) The surface soil in all areas to be seeded shall be in a condition favorable for the germination and growth of grass seed. A minimum of 1/2-inch and maximum of 1-1/2 inches of surface soil shall be in a loose condition.
  - 3) Soil preparation operations shall be directional along the contours of the areas involved.
  - 4) Seed and mulch shall be applied at a time approved by the Owner's Representative when conditions are favorable for germination. Seeding during periods where natural moisture is insufficient to allow germination and growth may require thicker mulch layers and watering to ensure establishment of groundcover.
- f. Where Class E surface restoration is placed over granular backfill, the depth of topsoil shall not be less than 8-inches, nor exceed 12 inches unless otherwise specified or shown on the drawings or details.

### 3.11 CONCRETE CURBING, WALKS AND DRIVEWAYS

- a. All soil subgrade under driveways, curbs, curb and gutter and walks shall be compacted in accordance with the requirements of the applicable sections contained herein.
- b. All curbs, sidewalks and driveways shall conform to the lines, grades and thickness' of existing structures, but in no case shall the thickness be less than sixteen (16) inches for Type "C" curbs, four (4) inches for sidewalks, and six (6) inches for driveways and driveway aprons.
- c. A minimum 2-inches of 3/4"-0" granular baserock leveling course shall be provided under all curbs, sidewalks and driveways.
- d. Unless otherwise authorized by the Owner's Representative, sidewalks and/or curbs shall be constructed to match the joint pattern of the existing and surrounding sidewalks and/or curbs.

### 3.12 RESTORATION OF PRIVATE PROPERTY

- a. This project includes the reconstruction of the private portions of certain sanitary sewer service laterals. This work will include entering onto private property. The Contractor shall restore the private property to equal or better than the preexisting condition.

- b. The Contractor shall furnish the Owner, before final acceptance of the Work by the Owner, a written release from all private property owners, or proper authority citing for the owner of the property affected, stating that the restoration of structures and surfaces has been satisfactorily accomplished. If in the opinion of the Owner the release is arbitrarily withheld, the Owner may at its sole discretion, accept the portion of the Work involved and cause final payment therefore to be made. Otherwise, final payment to the Contractor will not be made until all certifications are provided to the Owner.

### 3.13 RESTORATION OF PAVEMENT MARKINGS

- a. After completion of surface restoration paving and/or concrete work, any and all paving marking damaged, disturbed or removed during construction shall be fully restored by the Contractor, including but not limited to parking stalls, handicapped spaces, cross walks, stop bars, curb markings, etc.
- b. Restoration shall include replacement in kind of painted striping and/or roadway durable striping in conformance with OSSC (ODOT/APWA) Section 00860 (Longitudinal Pavement Marking – Paint) and Section 00865 (Longitudinal Pavement Marking – Durable), as applicable, or local jurisdiction standards.
- c. Restoration of the pavement markings shall be completed to the satisfaction and to the standards the agency with jurisdiction over each area, or to the satisfaction of the property owner where restoration work is on private property.

### 3.14 FINAL CLEANUP

- a. Cleanup of construction area shall closely follow trench backfill activities.

### 3.15 TIMEFRAME FOR RESTORATION OF EXISTING STREET SURFACES.

- a. Restoration timeframes shall be as summarized in Section 01043.

### 3.16 SURFACE RESTORATION PRIOR TO SUBSTANTIAL COMPLETION

- a. Unless otherwise provided in the Contract Documents, or otherwise approved in writing by the Owner's Representative, all paved and gravel surface final restoration (*both within public right-of-ways and on private property*) for a phase must be complete in order for the phase to be considered substantially complete. All other surface restoration within the phase, including but not limited to seeding/mulching of unimproved areas, landscaping, final fence restoration, etc. must be entirely completed within the time period specified for final completion for that phase.

## **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02510**  
**HOT MIXED ASPHALT CONCRETE (HMAC) PAVEMENTS**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes the construction of hot-mix asphalt concrete pavements (ACP) as shown on the drawings, specified herein or directed by the Owner's Representative. As used herein, HMAC refers to ACP as defined in the Oregon OSSC.
- b. This section includes the construction of one or more courses of AC pavement, adjustment of manhole castings, catch basins, junction and valve boxes, etc. to conform to new pavement courses, and other work and materials incidental to the construction of pavements.
- c. This section includes cutting and preparation of joints where new paving will meet existing paving.
- d. This section includes repaving disturbed asphalt concrete driveways to equal the original condition and blend-in to match drop curbs.

**1.2 LABORATORY SERVICES**

- a. Unless otherwise specified or shown on the drawings, Contractor shall provide laboratory services by an approved independent laboratory as described below or as noted on the drawings. The Contractor shall be responsible for obtaining & providing all samples as required to complete the work.
  - 1) A compaction test shall be performed for every 50 tons of material placed, or a minimum of one test per lift for each 100 linear feet of street, whichever is greater.
  - 2) The laboratory shall provide a satisfactory certificate furnished by the manufacturer stating that the bituminous materials conform to OSSC (ODOT/APWA) 00744, hot-mixed Asphalt Concrete Pavements (ACP).
  - 3) Asphalt Concrete:
    - a) Plant Certification: The laboratory shall certify or furnish recent certification (within one year) from the ODOT that the plant meets State requirements.
    - b) Plant Inspection: For the first day of production and for every day when more than 200 tons of material is being delivered to the project, the laboratory shall provide a representative at the plant who will inspect the plant, make mix design adjustments, check the temperature and take the required samples.



- c) Quality Control Testing: Each day the laboratory representative is on the project, a sample of the mix shall be taken for each 400 tons of bituminous material or fraction thereof delivered to the project. An extraction test AASHTO T16470 and a mechanical analysis AASHTO T-3070 shall be performed on the mix samples.

### 1.3 SUBMITTALS

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include:
  - 1) Submittals for Review. Submittals shall include but not limited to the following:
    - a) Certification that bituminous material conforms to the requirements contained herein.
    - b) HMAC mix designs.
  - 2) Submittals for Record. In addition to the Owner's Representative, copies of all field test reports shall be provided to all other jurisdictions with authority over right-of-way where trench backfill work is occurring (ie. City, County, ODOT, etc.).
    - a) Laboratory test results (as applicable).
    - b) Field compaction test results.

## PART 2: PRODUCTS

### 2.1 TACK COAT

- a. Edge Tack: The tack coat material where new ACP abuts sawcut edges, grind edges, curbs or structures shall be CSS-1, or CSS1h, and shall meet the requirements of OSSC (ODOT/APWA) Section 00730, Emulsified Asphalt Tack Coat.
- b. Overlay Tack: Hot oil tack coat shall be used prior to placement of the overlay fabric for AC overlays. Use of emulsion tack coats shall be prohibited with overlay fabric.

### 2.2 JOINT SEAL

- a. The joint seal shall meet the test requirements of ASTM D-244.
- b. The joint seal material shall be CRS-1, CRS-2 or approved equal and shall meet the requirements of OSSC (ODOT/APWA) Section 00730, Emulsified Asphalt Tack Coat, for cationic emulsified rapid setting asphalt.

### 2.3 BITUMINOUS MATERIAL AND ASPHALT CONCRETE

- a. Bituminous Material: The asphalt cement shall be PG 64-22 and shall meet the requirements of OSSC (ODOT/APWA) 00744.11, Asphalt Cement & Additives.

b. Design Mix:

- 1) AC pavement shall meet the requirements of OSSC (ODOT/APWA) 00744, hot-mixed Asphalt Concrete Pavements (ACP), 1/2" dense graded mix as summarized below. Where noted on the drawings, Class C refers to 1/2" dense graded mix.
  - a) Unless otherwise identified on the drawings, AC pavement for public streets shall be Level 2 Job Mix Formula (JMF).
  - b) Unless otherwise specified or shown on the drawings, AC pavement for private streets/alleys/driveways and parking lots shall be Level 2 Job Mix Formula (JMF).

2.4 OVERLAY FABRIC

- a. Overlay fabric shall be non-woven fabric specifically designed for paving.
- b. Unless heavier fabric is specified or noted on the drawings, overlay fabric shall be Propex Petromat 4598, Mirafi MPV500 or approved equal.

2.5 JOINT/CRACK SEAL FABRIC

- a. Where specified or noted on the drawings or details, joint seal fabric shall be self-adhering, non-woven geotextile paving fabric product with rubberized mastic adhesive and pre-tacked (ie. asphalt tack coating on top to ensure strong bond with pavement), and specifically designed for paving.
- b. Unless wider widths are specified on the drawings, all joint/crack seal fabric shall be provided in rolls with a minimum width of 18-inches.
- c. Joint/crack seal fabric shall be self-adhesive paving fabric, PetroTac or Mirafi MTK or approved equal.

**PART 3: EXECUTION**

3.1 GENERAL

- a. All soil subgrade and crushed rock base under pavements and driveways shall be compacted in accordance with the requirements of these Contract Documents.
- b. All valve and service boxes, manholes, inlets, clean outs, junction boxes and other structures shall be adjusted or reconstructed to the finish grades in both new and resurfaced pavement areas.
- c. It shall be the Contractor's responsibility to notify all residents a minimum of two (2) business days prior to paving a street section and to assure that vehicles are removed from street areas prior to paving operations.

### 3.2 PROTECTION

#### a. Asphalt Pavements:

- 1) Bituminous mixtures shall be placed only when the surface is dry and weather conditions are such that proper handling, finishing and compaction can be accomplished. In no case shall bituminous mixtures be placed when the surface temperature is below the minimum established below:

<u>Course Thickness</u>	<u>Min. Surface Temperature</u>
Less than 1½-inch	60°F <sup>1,2</sup>
1½-inch to 2½-inches	50°F <sup>1,2</sup>
Over 2½-inches	45°F <sup>1,2</sup>

<sup>1</sup> - If placing ACP between March 15 and September 30, surface temperature requirements may be lowered by 5°F if approved by the Owner's Representative.

<sup>2</sup> – Use of field burners or other devices to heat existing pavement surfaces to the minimum temperatures is prohibited.

- 2) Traffic shall be prohibited on newly installed asphalt pavement until it has cooled sufficiently to avoid marking.

#### b. No heavy construction vehicle shall operate on any finished pavement surfaces.

### 3.3 SITE PREPARATION

- a. Unless otherwise specified or directed by the Owner's Representative, edges of existing pavements shall be saw cut in a neat manner wherever new pavement will join existing pavement.
- b. Private utility companies shall be advised of Contractor's construction schedule so their surface appurtenances can be adjusted by them to finished grade prior to commencement of paving operations.
- c. Tack Coat. Tack coat material shall be liberally applied to all joints with existing pavement, manhole frames, catch basins, curbs, etc., shortly prior to paving as specified herein.

### 3.4 PAVEMENT INSTALLATION

- a. All construction shall be in conformance with applicable portions of OSSC (ODOT/APWA) 00744, hot mixed Asphalt Concrete Pavements (ACP), except as modified herein.
- b. Time Limit from Tack Coat Installation. First course shall be placed to the compacted thickness shown on the drawings within two (2) hours of applying tack coat.

- c. Time Limit between Lifts. Wearing course shall be placed to the compacted thickness shown on the drawings within two (2) hours of completing the placing and compacting the first course. If the wearing course is not placed within the time frame specified, a hot oil tack coat shall be applied prior to placement of the wearing course.
- d. Temporary Edges. In the event that full width paving is not completed in one work day, the Contractor shall place signs warning the motorists of abrupt edges. Takeoffs and ends of pavement panels unable to be completed shall be temporarily ramped at the rate of one (1) inch rise per six (6) horizontal feet at the end of the workday and signing placed warning the traffic.
- e. HMAC Temperature. Contractor shall be responsible for transporting AC mix in a manner to maintain the minimum placement temperatures as specified under OSSC (ODOT/APWA) 00744, Asphalt Concrete Pavement (ACP), section 00745.43.b. Standard minimum AC temperature behind the paver (or immediately after placement if hand spread) is 240°F.

### 3.5 PAVEMENT JOINTS/SEAM LOCATIONS

- a. Per OSSC 744.44, place ACP in panel widths to minimize the number of longitudinal joints to a minimum.
- b. For multi-lift paving, offset the longitudinal and/or transverse joints in one panel by at least 6-inches from the joints in the panel immediately below (OSSC 744.44.a).
- c. Longitudinal pavement panel joints/seams shall be at or within 6 inches of the centerline of the street unless otherwise approved by the Owner's Representative and agency with jurisdiction. Joints offset from centerline shall be installed at or within 6 inches of lane lines or fog lines. In no case shall longitudinal pavement joints be allowed in travel lanes or adjacent to travel lane wheel paths.
- d. Where pavement stripping is shown on the drawings or specified, longitudinal joints in the wearing (top) course shall be offset approximately 6-inches from the design stripping location.
- e. All pavement joints shall be tack coated prior to paving (except for joints between adjacent pavement panels installed on the same day within the time limits specified herein).

### 3.6 LINES AND GRADES

- a. Lines and grades shall conform accurately to lines and grades shown on the drawings and as staked in the field. Tolerance on grade shall be 3/8-inch on a 16-foot straightedge at any point.
- b. Surface Tolerance: The top surface of the finished pavement shall be uniform in texture, smooth and conform to the specified crown and grade. The top surface of the asphalt concrete pavement shall not vary more than 0.02 feet (1/4-inch) when tested by a 12-foot straightedge. Job control testing shall be performed with a 12-foot straightedge furnished and operated by the Contractor. The Owner's Representative or his authorized

representative may observe this testing or require additional testing to be performed under this supervision. Any surface irregularities exceeding the above tolerances shall be corrected by the Contractor at no additional cost to the Owner.

- c. Finish pavement grades at transition to existing pavement shall match existing pavement grades or be feathered past joints with existing pavement as required to provide a smooth, free draining surface.

### 3.7 FINISH AND COMPACTION

- a. Pavement surface shall be a smooth, well sealed, tight mat. Bony or open graded pavement surfaces shall be repaired to the satisfaction of the Owner's Representative, prior to final acceptance of the work.
- b. Contractor shall protect new pavement against traffic as required herein, until it has cooled sufficiently to avoid tracking.
- c. Compaction for asphalt concrete pavement shall be a minimum of ninety-one percent (91%) at all locations for standard duty mix as determined by the Rice Standard Method (AASHTO T-29). A roller pattern shall be established by the Contractor to achieve the required compaction at the beginning of the paving process. The roller pattern and compaction tests results from an independent testing lab retained by the Contractor shall be used to verify compaction.
- d. Contractor shall adjust the rate of AC placement as required to allow AC temperatures to be maintained as required to achieve compaction before the temperature drops below the limits specified under OSSC 00744.49.

### 3.8 JOINT SAND SEAL

- a. Tack coat and sand seal shall be installed at all pavement joints.
- b. Tack coat and sand seal shall be installed as required to completely seal any sawcuts which extend beyond the limits of pavement removal. Sawcuts shall be cleaned out as required to allow for penetration of tack coat for the full depth of the sawcut.
- c. Excess sand shall be removed from the surface after the sand seal has set up.

### 3.9 PAVEMENT OVERLAY

- a. Overlay fabric shall be as specified. Fabric shall be installed per manufacturer specifications.
- b. Existing Pavement Preparation & Cleaning.
  - 1) Prior to placing the pre- leveling course or fabric, the existing pavement shall be thoroughly cleaned of all loose material, dust, sand, dirt, gravel. All vegetation, leaves and other objectionable material shall be completely removed to the satisfaction of the Owner's Representative. Any standard cleaning method is acceptable. However, if water is used, the following restrictions shall apply.

- a) Means shall be provided to prevent loose aggregate, sand, vegetation or other materials entering catch basins or other drainage structures.
  - b) Cracks shall be allowed to dry thoroughly before application of the crack seal or fine AC mix.
- 2) Cracks greater than 3/4-inch wide shall be thoroughly cleaned by removing all foreign material from the crack within the full depth of the asphalt concrete. The cleaned crack should be thoroughly tack coated and filled with fine aggregate hot mix asphalt concrete prior to or in conjunction with the pre-leveling course.
- 3) Potholes shall be cleaned out to remove dirt or loose material, and to provide as clean of an edge as feasible for pothole patching and pre-leveling, to the satisfaction of the Owner's Representative.
- 4) The Contractor shall also remove any raised traffic buttons, and replace after paving (including centerline reflector buttons marking fire hydrant locations).
- c. Tack Coat Installation.
  - 1) After installation of any crack seal, pothole filling and pre-leveling course, the contractor shall install a hot oil tack coat and overlay fabric as specified.
  - 2) The tack coat shall be installed immediately prior to installation of the overlay fabric. Any traffic not essential to the installation of the overlay fabric shall be kept off the tack coat.
  - 3) Care shall be taken when applying the tack coat to prevent the spray from adhering to any objects other than the surface to be paved. The Contractor will be responsible for removing tack coat from objects other than the pavement surface.
  - 4) The contractor shall apply tack coat only to those streets which will be covered with overlay fabric and paved that day.
- d. Overlay Fabric Installation.
  - 1) The overlay fabric shall be placed on the tack coat using mechanical or manual laydown equipment capable of providing a smooth installation with a minimum of wrinkling or folding.
  - 2) Slit all wrinkles or folds exceeding 1 inch, and lay flat. Fabric seams shall be shingle lapped not more than 6-inches in the direction of paving. Additional hand-placed tack coat material may be required at laps as necessary to ensure wetting of the overlay fabric.
  - 3) Limit traffic to the extent possible prior to and during paving. Turn paver machines and other vehicles gradually to avoid overlay fabric movement and damage.
- e. The Contractor shall rake the takeoff and end of each overlaid section (and at driveways) to achieve a ramp that has a rise between 0.25 inches and 2.5 inches in 25 lineal feet. The Contractor shall also rake a feathered taper at curb-lines to feathered thicknesses as noted on drawings. The feathered edges shall be raked such that only the fines in the asphalt material are left in place. The feathered edges shall be finished such that the water will drain without leaving pockets of standing water.

- f. Pavement shall be blended to meet catch basin inlets, existing pavements, etc. The A.C. pavement thickness shall be tapered to match existing catch basin grate elevations. The length of feathered taper shall be six (6) feet and the minimum asphalt thickness shall be 0.25-inch.

### 3.10 AC PAVEMENT DRIVEWAYS

- a. Disturbed asphalt concrete driveways shall be reconstructed as specified to existing or better conditions, using materials specified for AC pavements.
- b. Existing asphalt concrete driveways shall be reconstructed as specified or shown on the Drawings, using materials specified for AC pavements.

### 3.11 AC PAVEMENT LIMITS FOR FENCED SITES

- a. Unless otherwise specifically shown on the drawings or otherwise specified, where pavement is shown installed on the interior side of fenced sites, the AC pavement shall extend a minimum of 3 inches beyond the fence alignment, with the fence posts installed after placement & compaction of the pavement along the fence line *(to allow the concrete around the fence posts to be crowned slightly to direct surface drainage away from the post)*.

## **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02580**  
**STRIPING & PAVEMENT MARKINGS**

**PART 1: GENERAL**

1.1 SCOPE

- a. This section includes pavement marking, including but not limited to parking stalls, handicapped spaces, cross walks, stop bars and curb markings.
- b. This section includes painted striping and/or roadway durable striping in conformance with OSSC (ODOT/APWA) Section 00860 (Longitudinal Pavement Marking – Paint) and Section 00865 (Longitudinal Pavement Marking – Durable), as applicable.
- c. This section includes work necessary to maintain access for vehicular and pedestrian traffic as required for other construction activities, including the use of flagmen, barricades, warning signs and warning lights as required.

1.2 RELATED SECTIONS

- a. Section 02502 - Concrete Curbs and Sidewalks
- b. Section 02510 – Hot Mixed Asphalt Concrete (HMAC) Pavements

1.3 SUBMITTALS

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include:
  - 1) Manufacturers literature & certifications.
  - 2) Copy of complete manufacturer's application instructions.
  - 3) Evidence that product is on ODOT's Qualified Products List (QPL).
  - 4) Evidence that the contractor or subcontractor who will install the pavement markings is certified by the marking materials manufacturer for the specified marking material and method, per OSSC (ODOT/APWA) 00850.31.
  - 5) Warranty.
    - a) After installation, manufacturer's warranty for durable pavement markings shall be submitted per OSSC (ODOT/APWA) 00865.75 (ie. three years for thermoplastic markings and four years for all other durable markings).

**PART 2: PRODUCTS**

2.1 MATERIALS

- a. Paint pavement marking products shall be as specified or noted on the drawings and shall conform to OSSC (ODOT/APWA) Section 00850 (*Common Provisions for Pavement Markings*) and be on the ODOT Qualified Products List (QPL).



- b. Durable pavement marking products shall be as specified or noted on the drawings, and shall conform to OSSC (ODOT/APWA) Section 00850 (*Common Provisions for Pavement Markings*) and be on the ODOT Qualified Products List (QPL).
- c. Transverse pavement marking products (legends and bars) shall conform to OSSC (ODOT/APWA) Section 00850 (*Common Provisions for Pavement Markings*) and be on the ODOT Qualified Products List (QPL).

## **PART 3: EXECUTION**

### **3.1 PREPARATION**

- a. Prepare pavement per OSSC (ODOT/APWA) Section 00850 (Common Provisions for Pavement Markings).
- b. Where striping is to be installed within an ODOT right-of-way, Contractor shall schedule a Pre-Striping Conference with ODOT (and the Owner) and attend with the striping subcontractor, and provide all information as required per OSSC (ODOT/APWA) 00850.42.
- c. Contractor shall sweep and clean all surfaces to completely eliminate loose material and dust, prior installation of new pavement markings.

### **3.2 PAVEMENT MARKING REMOVAL**

- a. Remove any existing pavement markings noted on the drawings, or which will adversely affect the bond of new pavement markings. Except as otherwise noted herein, existing markings shall be removed per OSSC (ODOT/APWA) 00851 on the same day that permanent markings are applied.
- b. Pavement markings to be removed shall be obliterated until blemishes caused by the pavement marking removal conform to the coloration of the adjacent pavement. Pavement marking removal method shall be such that the pavement surface is not damaged below a maximum depth of 1/16-inch.
- c. Vacuum shrouded equipment, or other equally effective containment means shall be used to contain and collect all pavement marking debris, water or spent abrasive. Collected water and debris shall be disposed of off the project site in accordance with all local, state and federal regulations.
- d. At the Contractor's option, sandblasting, steel shot blasting or hydroblasting shall be used for removing pavement markings (paint and/or durable/profile markings).

### **3.3 PAINT APPLICATION**

- a. Paint markings shall be installed in strict conformance with the provisions of OSSC (ODOT/APWA) 00860, based on the marking material specified or noted on the drawings.

- b. Contractor shall apply two (2) coats of paint at manufacturer's recommended rate without the addition of thinner, with a maximum application rate of 125 square feet per gallon.
- c. Apply with mechanical equipment to produce uniform straight edges. At sidewalk curbs and crosswalks, a straightedge shall be used to ensure a uniform, clean and straight stripe.
- d. The following items shall be painted with the colors noted below:

Pedestrian crosswalks	White
Exterior sidewalk curbs and guard posts/bollards	Yellow
Fire lanes	Red or per local code ( <i>contractor to verify with Fire Chief</i> )
Lane striping and parking lot light pole bases	Yellow
Handicap symbols	Per local or state code
Parking stall striping	White, unless otherwise noted on plans or required by local code ( <i>contractor to verify with local jurisdiction</i> )

### 3.4 DURABLE MARKING APPLICATION

- a. Durable pavement markings shall be installed in strict conformance with the provisions of OSSC (ODOT/APWA) 00865, based on the marking material specified or noted on the drawings.

## **PART 4: SPECIAL PROVISIONS**

None.

**SECTION 02606**  
**CATCH BASINS, INLETS & JUNCTION STRUCTURES**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes furnishing and constructing precast or cast-in-place inlets, catch basins and junction boxes of designated types and at locations shown on the drawings and schedule details.
- b. This section includes all necessary excavation, removal of existing structures, furnishing and installation of concrete, reinforcing steel, precast solid concrete block, Portland cement mortar and/or non-shrink grout, precast concrete inlet structures, flexible joints where specified, inlet castings, making watertight connections to new or existing storm sewers, and other incidental work.

**1.2 DEFINITIONS**

- a. The terms catch basins, inlets, junction boxes and area drains as used herein refer to nomenclature on standard drawings for specified structures and on details shown on the drawings.
- b. Types of catch basins, inlets, junction boxes and area drains included under this section shall be as designed and detailed on the drawings or as required by regulating authority.

**1.3 SUBMITTALS**

- a. Submittals shall be in accordance with the requirements of these Contract Documents and shall include:
  - 1) Detailed shop drawings of frames & grates.
  - 2) Shop drawings of precast catch basin structures (if used).
  - 3) Manufacturer's literature and certification for review purposes.

**PART 2: PRODUCTS**

**2.1 CAST-IN-PLACE CONCRETE**

- a. Cast-in-place concrete shall conform to OSSC (ODOT/APWA) 00440, Commercial Grade Concrete, 3,300 psi.

**2.2 PRECAST CONCRETE**

- a. Unless otherwise allowed on the drawings or details, all cast-in-place or precast concrete shall be 4,000 psi at 28 days.

## 2.3 MORTAR AND GROUT

- a. Mortar
  - 1) Mortar used for the structures specified herein shall conform to ASTM C-270, Type S, containing no masonry cement. The mortar shall be composed of one part Portland cement to two parts sand by volume.
- b. Non-Shrink Grout
  - 1) Non-metallic non-shrink grout shall be Speed Crete Red Line, or approved equal.

## 2.4 PRIVATE STEEL or PRECAST CONCRETE CATCH BASINS

- a. Private catch basin sizes and configuration shall be as shown or noted on the drawings, and as required to conform with local jurisdiction requirements and the Oregon Plumbing Code.

## 2.5 PRIVATE PVC CATCH BASINS

- a. Private catch basin sizes and configuration shall be as shown or noted on the drawings, and as required to conform with local jurisdiction requirements and the Oregon Plumbing Code.
- b. Unless otherwise shown on the drawings or required by local jurisdiction, all private catch basins shall be PVC body (24" diameter) traffic rated drain basins, with a ductile iron frame and a ductile iron herring-bone style grate, and shall be provided with a removable HPDE outlet trap secured with stainless steel clips.
- c. Private catch basin castings shall conform to standard details for frame and grate, and shall be ductile iron per ASTM A536 Grade 70-50-05.
- d. Private catch basins shall be Nyloplast traffic rated drain basin or approve equal with Nyloplast frame & grate.

## 2.6 PRIVATE PVC JUNCTION STRUCTURES (24" DIAMETER STORM MANHOLES)

- a. Private PVC junction structure sizes and configuration shall be as shown or noted on the drawings, and as required to conform with local jurisdiction requirements and the Oregon Plumbing Code.
- b. Unless otherwise shown on the drawings or required by local jurisdiction, all private junction structures shall be PVC body (24" minimum diameter) traffic rated drain basins, with a ductile iron frame and a ductile or cast iron solid cover.
- c. Private catch basins shall be Nyloplast traffic rated drain basin or approve equal with Nyloplast frame & storm drain manhole lid.

## 2.7 PRIVATE PVC AREA DRAINS

- a. Private area drains sizes and configuration shall be as shown or noted on the drawings, and as required to conform with local jurisdiction requirements.

- b. Unless otherwise shown on the drawings, area drains shall consist of the following.
  - 1) 15-inch inline drain basin with a 15" ductile iron hinged grate with cast iron frame mounted to a PVC drain basin, as manufactured by Nyloplast or approved equal.
  - 2) The PVC drain basin fitting shall include an integral single piece transition from the 15-inch grate to a gasketed socket the size of the area drain riser pipe shown on the drawings.
  - 3) A 22½° bend shall be installed immediately below the PVC drain basin fitting to allow the 15-inch grate to be installed at an incline. The grate hinge shall be installed on the upper edge of the area drain.

### **PART 3: EXECUTION**

#### **3.1 GENERAL**

- a. Location and type of inlets and catch basins installed shall be as shown on the drawings, scheduled and specified herein.
- b. Standard detail drawings of the regulating authorities required catch basins and inlets shall be obtained by the Contractor.

#### **3.2 INSTALLATION**

- a. Installation shall be in conformance with standard detail drawings.
- b. Catch basin concrete shall be free from fractures, honeycombs, surface roughness and slipped edges. Damaged precast sections will be rejected.
- c. All work shall conform to requirements of OSSC (ODOT/APWA) 00440, Commercial Grade Concrete, as to workmanship for cast-in-place concrete.
- d. Contractor shall dewater excavations prior to installation of structures.
- e. Base section shall be placed on four (4) inches of compacted granular material.
- f. Backfill shall be placed and compacted in 8-inch lifts around structures. Backfill type and compaction shall be the same as for adjacent pipe.
- g. Pipe connections shall be let into precast or monolithic concrete walls smoothly. Any broken out concrete shall be grouted back solid for minimum of six (6) inches around the entire connection using non-metallic non-shrink grout.
- h. Catch basins on public or private streets shall have two four (4)-inch diameter weepholes with granular material surrounding at subgrade level per standard drawing details.

- i. Frames and extension rings shall not be grouted in until rims can be set accurately to final grade.
- j. Unless otherwise specified or shown on the drawings, catch basin rims in paved areas shall be set one (1)-inch below grade and the pavement apron feathered thereto per standard details.
- k. Unless otherwise specified or shown on the drawings, public catch basins (ie. those located within public streets) shall be provided with sumps with a minimum depth of 12-inches. Unless otherwise approved the Owner's Representative and agency with jurisdiction (on a case-by-case basis), the sump depths for public catch basin shall not exceed 24 inches.

**PART 4: SPECIAL PROVISION**

None.

**SECTION 02936  
SEEDING AND MULCHING**

**PART 1: GENERAL**

**1.1 SCOPE**

- a. This section includes fine grading, furnishing and placing topsoil, seed fertilizer and mulching material to areas designated on the drawings, specified, or ordered by the City, and watering until growth is assured.
- b. The Contractor shall seed and mulch all disturbed areas or areas damaged by his operations.
- c. Unless otherwise specified herein or directed, work shall be in conformance with OSSC (ODOT/APWA) 01000, Seeding.
- d. Slope protection matting shall be placed over seeding on all slopes steeper than 3H:1V in accordance with OSSC (ODOT/APWA) 00280, Erosion & Sediment Control.

**1.2 SUBMITTALS**

- a. Submittals shall be in accordance with the requirements of Section 01300 and shall include:
  - 1) Manufacturer's material certification.
  - 2) To Owner:
    - a) Invoices showing the weight, brand and composite analysis of all fertilizer used on the project.
    - b) Bag tickets showing weight and composition of all seed used on the project.

**1.3 PROTECTION**

- a. Seed shall be sown only between the dates of February 1 and May 15, or August 1 and October 30, unless otherwise permitted by the Owner's Representative.
- b. The operation of finish grading and sowing shall not be performed when the ground is frozen or muddy.
- c. Permanent seeding on all embankments and disturbed areas shall be established as soon as construction is completed.

## **PART 2: PRODUCTS**

### **2.1 SEED**

- a. Dwarf grass seed mixture (low height, low maintenance) shall consist of dwarf perennial ryegrass (80% by weight) and creeping red fescue (20% by weight). Application rates shall be a minimum of 100 lbs per acre.

### **2.2 FERTILIZER**

- a. Grass seed shall be fertilized with slow release fertilizer in accordance with manufacturer's recommendations.

### **2.3 MULCHING MATERIAL**

- a. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10 or between September 1 and October 1, unless otherwise specified on the drawings or by erosion control permits. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.
- b. Mulch used in landscape or lawn areas shall be either hydromulch or finely chopped fescue or ryegrass straw mulch conforming with OSSC (ODOT/APWA) Section 010300.15.
- c. When use is allowed by jurisdiction in lieu of hydromulch (in areas other than landscape or lawn areas), dry, loose, weed free fescue or ryegrass straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.

### **2.4 TOPSOIL**

- a. Material consisting of loose, friable, loamy topsoil without admixture of subsoil or refuse. It shall be reasonably free from peat, muck, roots, hard clay, coarse gravel, stones, weeds, tall grass, brush, sticks or other litter. For topsoil to be considered loamy, the fraction passing No. 10 sieve shall contain not more than 40% clay. Topsoil shall contain not less than 5% nor more than 20% organic matter as determined by loss on ignition of oven dried samples to constant weight at 212°F.

### **2.5 SLOPE PROTECTION MATTING**

- a. Slope protection matting shall conform with OSSC (ODOT/APWA) 00280, Erosion & Sediment Control.



- b. For slopes steeper than 3H:1V but less than 2H:1V (or where slope protection matting is indicated on the drawings), the erosion matting shall be a type that has a extended term functional longevity (ie. minimum 12 months degradability) and specifically designed for use on slopes 3:1 to 2:1 to ensure that the steep slopes are protected until they have adequate vegetation cover established before the matting biodegrades away.
  - Slope protection matting shall be S150 matting by Tensar/North American Green, or approved equal.
- c. For slopes 2H:1V or steeper (or where slope protection matting is indicated on the drawings), the erosion matting shall be a type that has a extended term functional longevity (ie. minimum 24 months degradability) and specifically designed for use of 2:1 or steeper slopes to ensure that the steep slopes are protected until they have adequate vegetation cover established before the matting biodegrades away.
  - Slope protection matting shall be SC150 matting by Tensar/North American Green, or approved equal.

### **PART 3: EXECUTION**

#### **3.1 PREPARATION OF AREAS TO BE SEEDED**

- a. Those areas to be seeded shall be at established grades, cross sections, and finish specified at the time of seeding.
- b. All areas to be seeded shall be made substantially clear and free of weeds, briars, sticks, loose stones greater than 1-inch, and all other debris detrimental or toxic to the growth of grass.
- c. The surface soil on all areas to be seeded shall be in a condition favorable for the germination and growth of grass seed. When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover. The Contractor shall coordinate with the City for any required temporary water service, and pay all fees associated with such water service.
- d. A minimum of ½-inch and maximum 1½ inches of surface soil shall be in a loose condition. Soil preparation operations shall be directional along the contours of the areas involved. On cut and fill slopes, the operation shall parallel the roadbed center line to form minor ridges to retard erosion and retain the grass seed.
- e. All areas to be seeded shall be prepared in accordance with OSSC (ODOT/APWA) 01000, Seeding.

#### **3.2 SEEDING**

- a. The mixture to be applied through a pressure-spray distribution system providing a continuous, non-fluctuating discharge. The application of the materials shall be by using a sweeping, horizontal motion of the distributing device.

### 3.3 SLOPE PROTECTION MATTING

- a. Install slope protection matting on all slopes steeper than 5H:1V as specified herein, and in accordance with OSSC (ODOT/APWA) 00280, Erosion & Sediment Control.

### 3.4 WATERING AND MAINTENANCE

- a. Seeded areas shall be watered and maintained as specified below until they are established.
  - 1) The seed bed shall be thoroughly watered, as soon as the seed is covered, at the rate of 120 gal/1,000 sf.
  - 2) Water shall be applied by a hydroseeder or water tank under pressure with a nozzle producing a spray that will not dislodge the mulching material.
  - 3) The Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover. Water applications shall be made at least once a week, provided significant rainfall has not occurred within the weekly period. The rate of application shall be 120 gal/1,000 sf.
  - 4) Maintenance shall consist of the repair of areas damaged by erosion, wind, fire, inadequate watering or other causes. The soil in these damaged seeded areas shall be restored to the condition and grade existing prior to application of matting, and restored areas shall be re-limed, re-fertilized, and reseeded.

### 3.5 NOTIFICATION

- a. The Contractor shall give at least two days notice to the Owner's Representative of the time and place of starting his operations and shall keep the Owner's Representative advised of his schedule of operations. Favorable weather conditions shall be selected by the Contractor and approved by the Owner's Representative.

## **PART 4: SPECIAL PROVISIONS**

None.

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GENERAL NOTES:

1. Unless otherwise specified or noted on the drawings, all grading, rocking, paving, utility and related work shall conform to Oregon Standard Specifications for Construction – OSSC (ODOT/APWA), 2018 edition, or local jurisdiction standards, whichever is more stringent.

2. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952–001–0010 through OAR 952–001–0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232–1987).

3. Contractor to notify County and all utility companies a minimum of 48 business hours (2 business days) prior to start of construction, and comply with all other notification requirements of agencies with jurisdiction over the work.

4. A copy of final approved construction drawings and any required permits shall be kept on-site at all times, for review by inspectors upon request.

5. Unless otherwise approved by Marion, construction shall be done between 7:00 a.m. and 6:00 p.m., Monday through Friday.

6. The Contractor shall perform all work necessary to complete the project in accordance with the approved construction drawings including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.

7. Any inspection by the County or other agencies shall not, in any way, relieve the Contractor from any obligation to perform the work in strict compliance with the contract documents, applicable codes, and agency requirements.

8. Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record all approved deviations in construction from the approved drawings, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the Owner or Owner's Representative upon request. Failure to conform to this requirement may result in delay in payment and/or final acceptance of the project.

9. Upon completion of construction of all new facilities, Contractor shall submit a clean set of field record drawings containing all as-built information to the Engineer. All information shown on the Contractor's field record drawings shall be subject to verification. If significant errors or deviations are noted, an as-built survey prepared and stamped by a registered professional Land Surveyor shall be completed at the Contractor's expense.

10. Elevations shown on the drawings are based from City of Salem benchmark 470260, Elevation 244.687 (NGVD 1929 datum), located at the southwest corner of bridge on Kuebler Blvd. over Mill Creek, 1.1 miles east of I–5, located on top of gm rail, 4 inches east of west end of rail. Surveying for design was completed by Barker Surveying at (503) 588–8800.

11. The contractor shall retain and pay for the services of a registered Civil Engineer and/or Land Surveyor licensed in the State of Oregon to establish construction control and perform initial construction surveys to establish the lines and grades of improvements as indicated on the drawings. Staking for buildings, structures, curbs, gravity drainage pipes/structures and other critical improvements shall be completed using equipment accurate to 0.04 feet horizontally and 0.02 feet vertically, or better. Use of GPS equipment for final construction staking of these critical improvements is prohibited. The registered professional surveyor shall provide the design engineer with copies of all grade sheets for construction staking performed for the project.

TRAFFIC CONTROL

12. Contractor shall erect and maintain barricades, warning signs, traffic cones (and all other traffic control devices required) per City, County and ODOT requirements in accordance with the current MUTCD (including Oregon amendments). Access to driveways shall be maintained at all times. All traffic control measures shall be approved and in place prior to any construction activity. Prior to any work in the existing public right-of-way, Contractor shall submit final traffic control plan to the City, County and ODOT for review and issuance of a Lane Closure or Work in Right-of-Way Permit.

TESTING AND INSPECTION:

13. The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems and/or corrective measures arising from uninspected work.

14. Unless otherwise specified, the "Required Testing and Frequency" table outlines the minimum testing schedule for the project. This testing schedule is not complete, and does not relieve the Contractor of the responsibility of obtaining all necessary inspections or observations for all work performed, regardless of who is responsible for payment. Cost for retesting shall be borne by the Contractor.

EXISTING UTILITIES & FACILITIES:

15. The location and descriptions of existing utilities shown on the drawings are compiled from available records and/or field surveys. The Engineer or utility companies do not guarantee the accuracy or the completeness of such records. Contractor shall field verify locations and sizes of all existing utilities prior to construction.

16. Contractor shall field verify location and depth of all existing utilities where new facilities cross. All utility crossings marked or shown on the drawings shall be potholed using hand tools or other non-invasive methods prior to excavating or boring. Contractor shall be responsible for exposing potential utility and other conflicts for enough ahead of construction to determine necessary grade, alignment or depth modifications without delaying the work or requiring otherwise unnecessary materials, fittings or structures. If grade, alignment or depth modification is necessary, Contractor shall notify the Design Engineer, and the Design Engineer or the Owner's Representative shall obtain approval from the City prior to construction.

17. All facilities shall be maintained in-place by the Contractor unless otherwise shown or directed. Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. Contractor to leave existing facilities in an equal or better-than-original condition and to the satisfaction of the City and Owner's Representative.

18. Utilities that are abandoned in place, or interfering portions of utilities, shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug the remaining exposed ends of abandoned utilities after appropriate verification procedures have taken place (grout or concrete plugs, if used, shall be installed to fill the full pipe diameter for a distance of two times the pipe diameter back from the pipe end).

19. Contractor shall remove all existing signs, mailboxes, fences, landscaping, etc., as required to avoid damage during construction and replace them to existing or better condition.

20. The Contractor shall be responsible for managing construction activities to ensure that public streets and right-of-ways are kept clean of mud, dust or debris. Dust abatement shall be maintained by adequate watering of the site by the Contractor.

GRADING, PAVING & DRAINAGE:

21. Contractor to review soils report prepared by GeoEngineers and conform to all recommendations listed in the report.

22. Unless otherwise noted, all grading, rocking and paving to conform to OSSC (ODOT/APWA), 2018 edition.

23. Clear and grub within work limits all surface vegetation, trees, stumps, brush, roots, etc. Do not damage or remove trees except as shown or noted on the drawings, or as approved by the Owner's Representative. Protect all roots two inches in diameter or larger on trees which are not to be removed.

24. Immediately following stripping and grading operations, compact subgrade to 95% of the maximum dry density per AASHTO T–180 test method (Modified Proctor). Subgrade must be inspected and approved by the Owner's authorized representative before placing embankments, engineered fills or fine grading for base rock.

25. Granular baserock shall conform to the requirements of OSSC (ODOT/APWA) 02630.10 (Dense Graded Base Aggregate).

26. Compact granular baserock to 95% of the maximum dry density per AASHTO T–180 test method (Modified Proctor). Written baserock compaction test results from an independent testing laboratory must be received by the Owner's authorized representative before placing AC pavement, and a finished rock grade proof-roll (witnessed by the Owner) must be performed.

27. AC pavement shall conform to OSSC (ODOT/APWA) 00744 (hot mixed Asphalt Concrete Pavement –ACP) for standard duty mix. Unless otherwise specified or shown on the drawings, ACP shall be 1/2" dense graded mix. Unless otherwise specified or shown on the drawings, AC pavement for parking lots and streets shall be Level 2 mix (superpave 65 gyrations) per OSSC (ODOT/APWA) 00744.13.

28. AC Pavement shall be compacted to a minimum of 91% or 92% of maximum density as determined by the Rice standard method and called for on the drawings. Written AC pavement compaction test results from an independent testing laboratory must be received by the Owner's authorized representative before final payment.

29. Pavement surface shall be a smooth, well-sealed, tight mat without depressions or bird baths. Bony or open graded pavement surfaces shall be repaired to the satisfaction of the Owner's Representative, prior to final acceptance of the work.

30. ACP mixtures shall be placed only when the surface is dry and weather conditions are such that proper handling, finishing and compaction can be accomplished. In no case shall bituminous mixtures be placed when the surface temperature is below the minimum established under 2015 OSSC (ODOT/APWA) 00744.40 (AC – Season and Temperature Limitations) or the project specifications, whichever is more stringent.

31. Contractor shall protect new pavement against traffic as required, until it has cooled sufficiently to avoid tracking.

32. Unless otherwise shown on the drawings or details, straight grades shall be run between all finish grade elevations and/or finish contour lines shown (exception: where grades shown cross sidewalks, slopes shall be adjusted to ensure that maximum allowable sidewalk cross slopes are not exceeded).

33. Finish pavement grades at transition to existing pavement shall match existing pavement grades or be feathered past joints with existing pavement as required to provide a smooth, free draining surface.

34. All existing or constructed manholes, cleanouts, monument boxes, gas valves, water valves and similar structures shall be adjusted to match finish grade of the pavement, sidewalk, landscaped area or median strip wherein they lie. Verify that all valve boxes and risers are clean and centered over the operating nut.

35. All street signs, traffic control signs, curb & pavement painting or striping, and/or reflectors shall be installed (in conformance with Owner and MUTCD standards) prior to requesting final inspection by the Owner.

36. Pavement Markings. Stop bars shall be provided at all stop signs, located behind the pedestrian crossing at a location acceptable to Public Works. All stop bars, crosswalk striping and other roadway marking and emblems shall be pre-formed thermoplastic (Premark BD by Ennis-Flint). Installation shall be by methods and by a contractor approved by the Owner.

37. Contractor shall seed and mulch all exposed slopes and disturbed areas which are not scheduled to be landscaped, including trench restoration areas. Mulch shall be either hydromulch or finely chopped fescue or rygrass mulch conforming with OSSC (ODOT/APWA) Section 01030.15 Per the OSSC, CEREAL GRAIN STRAW (wheat or similar) IS NOT AN ACCEPTABLE SUBSTITUTE without specific written approval.

CURBS & SIDEWALKS:

38. Unless otherwise shown or indicated on the drawings, 6–inches nominal curb exposure used for design of all parking lot and street grades.

39. Construction of all curbs & sidewalks shall conform to the applicable requirements of OSSC (ODOT/APWA) Section 00759, Miscellaneous Portland Cement Concrete Structures, including placement, curing, finishing and the repairing of minor defects. Major defects (as determined by the Owner's Representative) will require removal and replacement of the defective portions as directed.

40. Where new curbing connects to existing curbing or is installed along existing streets or pavement, the gutter grade shall match the existing street grades so as to allow drainage from the street to the gutter, as wells as through any transitions or connections between old & new curbs. The Contractor shall notify the Owner's Representative in writing of any grade discrepancies or problems prior to curb placement.

41. All curbs, sidewalks and driveways shall be constructed using 3300–psi concrete, and shall be cured with Type 1 or Type 1D clear curing compound. All sidewalks shall be ADA compliant.

42. Finish sidewalk grades at transition to existing sidewalks shall match existing sidewalk grades as required to form a continuous, smooth, free draining surface. The Contractor shall notify the Owner's Representative in writing of any grade discrepancies or problems prior to sidewalk placement.

43. Curb & sidewalk concrete shall be placed only during periods when it will not be damaged by rain (protect unhardened concrete from precipitation). Concrete shall not be placed on frozen baserock. Do not begin concrete placement until temperature in the shade is a minimum of 35F and rising, and stop placement if air temperature falls below 35F. Protect concrete from freezing for a minimum of 5 days after placement per OSSC (ODOT/APWA) 0000440.40.d & 00756.40 or the project specifications, whichever is more stringent.

44. Contraction joints shall be installed directly over any pipes that cross under the sidewalk, to control cracking. In general, cracks in new curbs or sidewalks (at locations other than contraction joints) are not acceptable, and cracked panels shall be removed & replaced unless otherwise approved by the Owner and the design engineer.

45. Private Sidewalks: All private sidewalks shall be ADA compliant. Direction of sidewalk cross slope shall conform with the slope direction shown on the grading plan. Sidewalk cross slopes shall not exceed 1:67 (1.5%) nor be less than 1%. Longitudinal slope shall not exceed 1:20 (5%).

46. Where trench excavation requires removal of PCC curbs and/or sidewalks, the curbs and/or sidewalks shall be sawcut and removed at a tooled joint unless otherwise authorized in writing by the Owner. The sawcut lines shown on the drawings are schematic and not intended to show the exact alignment of such cuts.

PIPED UTILITIES:

47. The Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade. The bottom of the trench excavation shall be shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.

48. All pipes shall be bedded with minimum 6–inches of 3/4"–0 crushed rock bedding and backfilled with compacted 3/4"–0 crushed rock in the pipe zone (crushed rock shall extend a minimum of 12–inches over the top of the pipe in all cases). Unless CLSM, CDF or other backfill is shown or noted on the drawings, crushed rock trench backfill shall be used under all improved areas, including pavement, sidewalks, foundation slabs, buildings, etc.

49. Granular trench bedding and backfill shall conform to the requirements of OSSC (ODOT/APWA) 02630.10 (Dense Graded Base Aggregate), 3/4"–0. Unless otherwise shown on the drawings, compact granular backfill to 92% of the maximum dry density per AASHTO T–180 test method (Modified Proctor).

50. If trenches are over-excavated for any reason, over-excavation shall be filled to the design trench subgrade (ie. to the bottom of the 6" thick pipe bedding layer) with compacted, well-graded granular backfill as specified (the use of open graded rock for trench foundation stabilization is prohibited unless it is completely encapsulated in geotextile fabric & approved in writing by the AHJ).

51. All piped utilities abandoned in place shall have all openings closed with concrete plugs with a minimum length equal to 2 times the diameter of the abandoned pipe.

52. All water, sanitary and storm sewer piping shall have an electrically conductive insulated 12 gauge solid core copper tracer wire the full length of the installed pipe using blue wire for water and green wire for storm and sanitary piping. Tracer wire shall be extended up into all valve boxes, catch basins, manholes and lateral cleanout boxes. Tracer wire penetrations into manholes shall be within 18 inches of the rim elevation and adjacent to manhole steps. The tracer wire shall be tied to the top manhole step or otherwise supported to allow retrieval from the outside of the manhole. All tracer wire splices shall be made with waterproof splices or waterproof/corrosion resistant wire nuts.

53. Warning Tape. All underground water, sanitary and storm sewer piping shall have a 6–inch wide warning tape installed in the upper reaches of the trench as shown on details (color & "Caution: Buried \_\_\_\_ Below" wording as required for water, sewer, storm drain, etc.).

54. No trenches in sidewalks, roads, or driveways shall be left in an open condition overnight. All such trenches shall be closed before the end of each workday and normal traffic and pedestrian flows restored.

55. Before mandrel testing or final acceptance of gravity pipelines, all trench compaction shall be completed and all sewers and storm drains flushed & cleaned to remove all mud, debris & foreign material from the pipelines, manholes and/or catch basins.

STORM DRAIN SYSTEM:

56. Storm sewer pipe materials shall conform to the construction drawings and Owner requirements. Contractor shall use uniform pipe material on each pipe run between structures unless otherwise directed or approved. Jointed HDPE pipe shall not be used for slopes exceeding ten percent (10%). All materials and workmanship for all private storm drains, including storm drains located within any building envelope, shall be installed in conformance with Oregon Plumbing Specialty Code requirements.

57. Catch basins and junction boxes shall be set square with buildings or with the edge of the parking lot or street wherein they lie. Storm drain inlet structures and paving shall be adjusted so water flows into the structure without ponding water.

58. Unless otherwise approved by the Engineer, all storm drain connections shall be by manufactured tees or saddles.

59. Sweep (deflect) storm sewer pipe into catch basins and manholes as required. Maximum joint deflection shall not exceed 5 degrees or manufacturers recommendations, whichever is less.

60. Unless otherwise shown or directed, install storm sewer pipe in accordance with manufacturer installation guidelines.

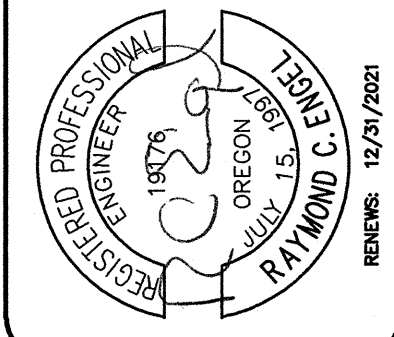
61. Storm Cleaning. After manhole channeling and prior to mandrel testing or final acceptance, flush and clean all sewers, and remove all foreign material from the mainlines, manholes and catch basins.

62. Mandrel Testing. Contractor shall conduct deflection test of flexible storm sewer pipes by pulling an approved mandrel through the completed pipeline following trench compaction. The diameter of the mandrel shall be 95% of the initial pipe diameter. Test shall be conducted not more than 30 days after the trench backfilling and compaction has been completed.

63. Prior to acceptance, the Owner's Representative may lamp storm lines upstream & downstream of structures to verify that the pipes are clean and there is no grout or concrete in the mainlines, and that there are no observable bellies in the line. When necessary, sufficient water to reveal low areas shall be discharged into the pipe by the Contractor prior to any such inspection by the Owner's Representative or the Owner.

REQUIRED TESTING AND FREQUENCY TABLE		Party Responsible for payment	
		Contractor	Others (see note 1)
Streets, Fire Lanes, Common Driveways, Parking Lots, Pads, Fills, etc.			
Subgrade	1 Test/4000 S.F./Lift (4 min), locations acceptable to approving agency (typically alternate sides of road or access aisles)	✓	See note 2 & note 3
Baserock	1 Test/4000 S.F./Lift (4 min), locations acceptable to approving agency (typically alternate sides of road or access aisles)	✓	See note 2 & note 3
Asphalt	1 Test/6000 S.F./Lift (4 min), locations acceptable to AA (typ. alternate as above)	✓	See note 2
Piped Utilities, All			
Trench Backfill	1 Test/200 Foot Trench/Lift (4 min)	✓	See note 2
Trench AC Restoration	1 Test/300 Foot Trench (4 min)	✓	See note 2
Storm			
Mandrel	95% of actual inside diameter	✓	See note 4
Concrete, Block, etc.			
Slump, Air & Cylinders for structural & reinforced concrete, equipment slabs, curbs, sidewalks & PCC pavements. Unless otherwise specified, one set of cylinders per 100 cubic yards (or portion thereof) of each class of concrete placed per day. Slump & air tests required on same load as cylinders.		✓	See note 2
Note 1: "Others" refers to Owner's authorized Representative or Approving Agency as applicable. Contractor responsible for scheduling testing. All testing must be completed prior to performing subsequent work.			
Note 2: Testing must be performed by an approved independent testing laboratory.			
Note 3: In addition to in-place density testing, the subgrade and base rock shall be proof-rolled with a loaded 10 yard dump truck provided by the Contractor. Baserock proofroll shall take place immediately prior to (within 24 hours of) paving, and shall be witnessed by the Owner's authorized Representative or approving agency. Location and pattern of testing and proofroll to be as approved or directed by said Owner's authorized Representative or approving agency.			
Note 4: To be witnessed by the Owner's Representative or approving agency. The Contractor shall perform pretests prior to scheduling witnessed waterline or sanitary sewer pressure tests, or pipeline mandrel test.			
Note 5: Regardless of who is responsible for payment, the Contractor is responsible for scheduling and coordinating any and all required inspections and Special Inspections as required by applicable building codes or jurisdictions having authority.			

VERIFY SCALE	1"
BAR IS ONE INCH ON ORIGINAL DRAWING	
IF NOT ONE INCH ON PLOT, SCALE ACCURATELY	
DSN.	RCE
DRN.	RCE
OKD.	RCE
DATE: JUN 2020	



**WESTTECH ENGINEERING, INC.**  
CONSULTING ENGINEERS AND PLANNERS

3841 Fairview Industrial Dr., S.E., Suite 100, Salem, OR 97302  
Phone: (503) 585–2474 Fax: (503) 585–3986  
E-mail: westech@westech-eng.com

MARION COUNTY

CORRECTIONAL FACILITY PARKING LOT IMPROVEMENTS PHASE II

Construction Notes

DRAWING

C1.1

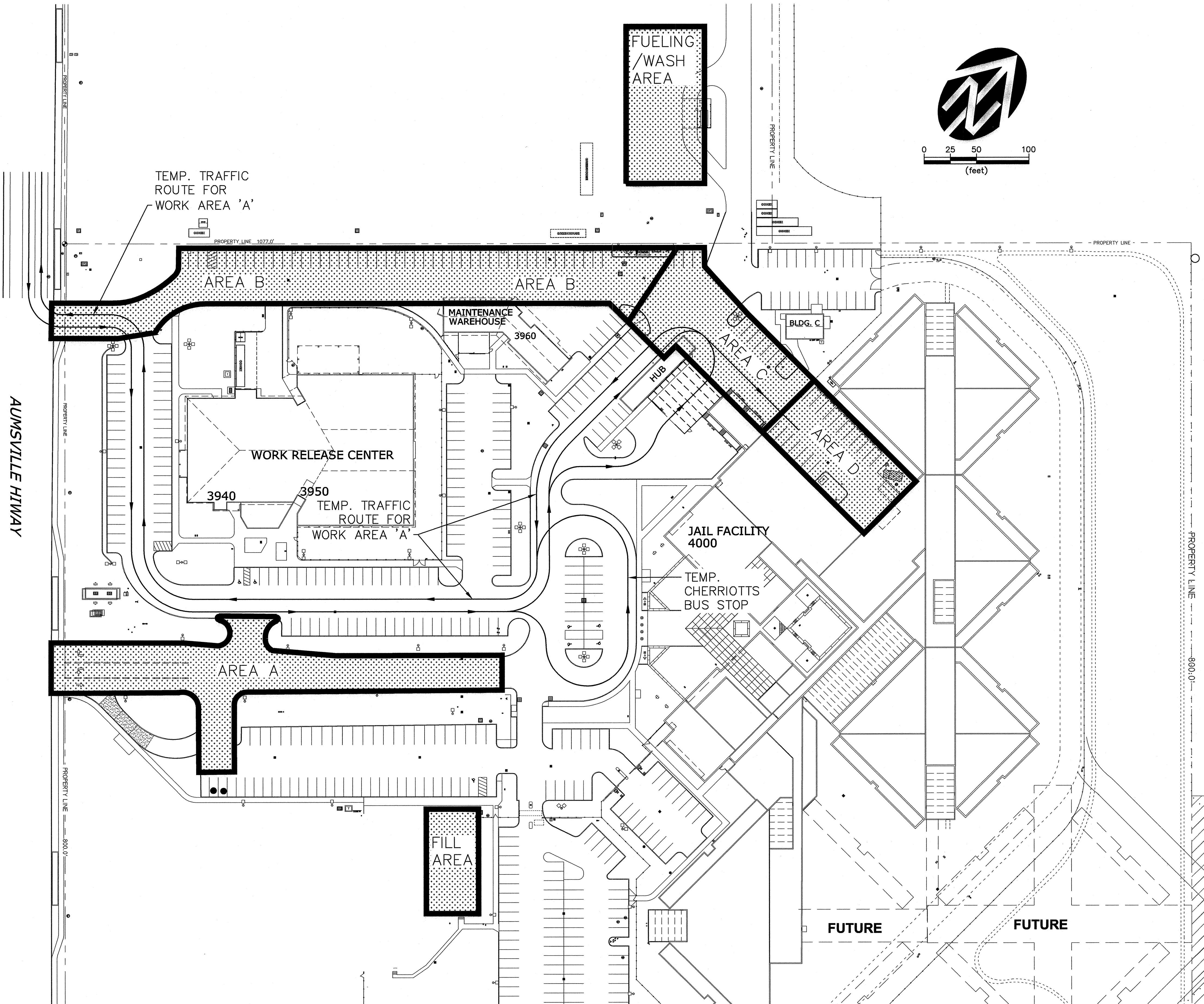
JOB NUMBER

2868.0300.0



SEQUENCING & COORDINATION NOTES:

1. THE CONTRACTOR HAS A MAXIMUM OF 60 CALENDAR DAYS FROM AN AGREED UPON START DATE WITH THE OWNER TO SUBSTANTIAL COMPLETION.
2. DURING CONSTRUCTION WORK FOR AREAS A, B, C & D, EXCEPT AS FOLLOWS THE CONTRACTOR MAY RESTRICT MOST NON-CONSTRUCTION ACCESS TO THOSE AREAS AS NEEDED TO PERFORM THE CONSTRUCTION WORK. WHILE WORK IS OCCURRING IN AREAS B, C, & D THE CONTRACTOR SHALL PROVIDE ESSENTIAL OPERATIONAL ACCESS, SUCH AS MATERIAL DELIVERIES, TO AREAS AFFECTED BY THE CLOSURE OF THOSE AREAS.
3. WORK IN AREAS A & B & C MUST BE PERFORMED SEQUENTIALLY. NO WORK MAY OCCUR IN ANY OF THESE AREAS AT THE SAME TIME.
4. THE MAXIMUM ALLOWABLE TIME FOR WORK IN AREA A IS 21 CALENDAR DAYS. FROM THE TIME EXCAVATION STARTS UNTIL FINAL PAVING IS COMPLETE SHALL BE NO MORE THAN 21 CALENDAR DAYS.
5. THE MAXIMUM ALLOWABLE TIME FOR WORK IN AREA B IS 21 CALENDAR DAYS. FROM THE TIME EXCAVATION STARTS UNTIL FINAL PAVING IS COMPLETE SHALL BE NO MORE THAN 21 CALENDAR DAYS.
6. THE MAXIMUM ALLOWABLE TIME FOR WORK IN AREA C IS 3 CALENDAR DAYS AND MUST OCCUR ON A SINGLE WEEKEND CONSISTING OF FRIDAY, SATURDAY AND MONDAY. PAVING MUST BE COMPLETE BY THE END OF MONDAY. STRIPING MAY OCCUR AT ANYTIME DURING THE REMAINDER OF THE OVERALL WORK PERIOD.
7. THE MAXIMUM ALLOWABLE TIME FOR WORK IN AREA D IS 3 CALENDAR DAYS. FROM THE TIME THE AREA IS CLEARED FOR THE CHIP SEAL UNTIL ALL TRAFFIC IS RESTORED SHALL BE NO MORE THAN 3 CALENDAR DAYS. THE ACTUAL CHIP SEAL SHALL OCCUR ON A SATURDAY AND BE COMPLETED IN ONE DAY.
8. NO SPECIAL PHASE TIME LIMITATIONS ARE PLACED ON THE WORK FOR THE FUELING/VEHICLE WASH AREA. THE CONTRACTOR SHALL CONDUCT THE WORK IN THIS AREA IN A MANNER THAT MAINTAINS ACCESS TO THE FUELING STATION AT ALL TIMES, UNLESS OTHER SPECIFIC ARRANGEMENTS ARE MADE WITH THE OWNER FOR SPECIAL, BRIEF INTERRUPTIONS OF THIS ACCESS.
9. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SIGNS, BARRICADES AND OTHER MEASURES TO NOTIFY TRAFFIC REGARDING CLOSED WORK AREAS AND IDENTIFY TEMPORARY ALTERNATE TRAVEL ROUTES.



MARION COUNTY		CORRECTIONAL FACILITY PARKING LOT IMPROVEMENTS PHASE II		Sequencing Plan		DRAWING C1.2		JOB NUMBER 2868.0300.0	
WESTTECH ENGINEERING, INC. CONSULTING ENGINEERS AND PLANNERS 3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302 Phone: (503) 585-2474 Fax: (503) 585-3986 E-mail: westtech@westtech-eng.com		REGISTERED PROFESSIONAL ENGINEER RAYMOND C. RICE OREGON EXPIRY 12/31/2021		DATE: JUN 2020		NO. DATE		DESCRIPTION REVISIONS	
VERIFY SCALE BASE IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALE, SCALE ACCORDINGLY		DSN. RCE		DRN. RCE		CKD. RCE			



CONTROL MEASURE	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
Silt Fencing					
Construction Entrance					
Sediment Traps					
Storm Inlet Protection			X	X	
Concrete Washout			X	X	
Rock Outlet Protection					
Permanent Seeding and Planting					X
Phase 1: Prior to Ground Disturbance Phase 2: After Completion of Rough Grading Phase 3: After Installation of Storm Facilities Phase 4: After Paving & Construction Phase 5: After Project Completion and Cleanup					

BMP Rationale

A comprehensive list of available Best Management Practices (BMP) options based on DEQ's 1200-C Permit Application and ESCP Guidance Document has been reviewed to complete this Erosion and Sediment Control Plan. Some of the above listed BMPs were not chosen because they were determined to not effectively manage erosion prevention and sediment control for this project based on specific site conditions, including soil conditions, topographic constraints, accessibility to the site, and other related conditions. As the project progresses and there is a need to revise the ESCP, an Action Plan will be submitted.

SOIL TYPE(S): PER MARION CO. SOIL SURVEY THE SITE SOILS INCLUDE AMITY SILT LOAM.

EROSION HAZARD: PER MARION CO. SOIL SURVEY EROSION HAZARD RANGES FROM "NOT A HAZARD" TO "SLIGHT".

SITE AREA: ±18 Ac

DISTURBANCE AREA: 0.9 Ac

3. Erosion control measures shall be maintained in such a manner as to ensure that sediment and sediment-laden water does not enter the drainage system, roadways, or violate applicable water quality standards.
2. The erosion control construction, maintenance, replacement and upgrading of the erosion control facilities is the responsibility of the Contractor until all construction is completed and approved, and permanent erosion control (i.e. vegetation/landscaping) is established on all disturbed areas.
3. All recommended erosion control procedures are dependent on construction methods, staging, site conditions, weather and scheduling. During the construction period, erosion control facilities shall be upgraded as necessary due to unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.
4. The Contractor is responsible for control of sediment transport within project limits. If an installed erosion control system does not adequately contain sediment on site, then the erosion control measures shall be adjusted or supplemented by the Contractor as necessary to ensure that sediment laden water does not leave the site. Additional measures shall be provided as required to ensure that all paved areas are kept clean for the duration of the project. Additional interim measures will include, at a minimum, installation of silt fences in accordance with the details shown on the drawings. These measures shall be installed along all exposed embankments and cut slopes to prevent sediment transport.
5. All existing and newly constructed storm inlets and drains shall be protected until pavement surfaces are completed and/or vegetation is established.
6. Erosion control facilities and sediment fences on active sites shall be inspected by the Contractor at least daily during any period with measurable precipitation. Any required repairs or maintenance shall be completed immediately. The erosion control facilities on inactive sites shall be inspected and maintained by the Contractor a minimum of once a month or within 24 hours following the start of a storm event.
7. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system. The Contractor shall remove all accumulated sediment from all impacted catch basins and storm pipes prior to acceptance by the Owner.
8. The Contractor is solely responsible for protection of all adjacent property and downstream facilities from erosion and siltation during project construction. Any damage resulting from such erosion and siltation shall be corrected at the sole expense of the Contractor.
9. The Contractor shall provide site watering as necessary to prevent wind erosion of fine-grained soils.
10. Unless otherwise indicated on the drawings, all temporary erosion control facilities, including sediment fences, silt sacks, bio-bags, etc. shall be removed by the Contractor within 30 days after permanent landscaping/vegetation is established.
11. Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to a post.
12. Sediment fence shall be installed per drawing details. Sediment fences shall have adequate support to contain all silt and sediment captured.
13. The standard strength filter fabric shall be fastened securely to stitched loops installed on the upslope side of the posts, and 6 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
14. Bio-filter bags shall be clean 100 percent wood product waste. Bags shall be 18-inch x 18-inch x 30-inch, weigh approximately 45 lbs., and be contained in a bag made of 1/2-inch plastic mesh.
15. Sediment barriers shall be maintained until the up-slope area has been permanently stabilized. At no time shall more than 10-inches of sediment be allowed to accumulate behind sediment fences. No more than 2 inches of sediment shall be allowed to accumulate behind bio-filter bags. Sediment shall be removed prior to reaching the above stated depths. New sediment barriers shall be installed uphill as required to control sediment transport.
16. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.
17. The Contractor shall verify that all trucks are well sealed when transporting saturated soils from the site. Water dripage from trucks transporting saturated soils must be reduced to less than 1 gallon per hour prior to leaving the site.
18. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto the public right-of-way or approved access point. The entrance may require periodic top dressing as conditions demand, and repair and/or cleanout of any structures used to trap sediment.
19. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately, and the Contractor shall provide protection of downstream inlets and catch basins to ensure sediment laden water does not enter the storm drain system.
20. Temporary grass cover measures must be fully established by October 15th, or other cover measures (ie. erosion control blankets with anchors, 3-inches minimum of straw mulch, 6 mil HDPE plastic sheet, etc.) shall be in place over all disturbed soil areas until April 30th. To establish an adequate grass stand for controlling erosion by October 15th, it is recommended that seeding and mulching occur by September 1st. Straw mulch, if used, shall not leave any bare ground visible through the straw.
21. Minimum wet weather slope protection. For slopes steeper than 3H:1V but less than 2H:1V, use Tensar/North American Green Type S150 erosion control blanket. For slopes 2H:1V or steeper, use Tensar/North American Green Type SC150 erosion control blanket. Use a minimum of 2-inches straw mulch or Tensar/North American Green Type S150 for slopes flatter than 3H:1V. Slope protection shall be placed on all disturbed areas immediately after completion of each section of construction activity, until the erosion control seeding has been established. As an option during temporary or seasonal work stoppages, a 6-mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be provided with an anchor trench at the top and bottom of the slope, and shall be sandbagged on the slopes as required to prevent damage or displacement by wind.
22. Permanent erosion control vegetation on all embankments and disturbed areas shall be re-established as soon as construction is completed.
23. Soil preparation. Topsoil should be prepared according to landscape plans, if available, or recommendations of grass seed supplier. It is recommended that slopes be textured before seeding by rack walking (ie. driving a crawling tractor up and down the slopes to leave a pattern of cleat imprints parallel to slope contours) or other method to provide stable areas for seeds to rest.
24. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10, or between September 1 and October 1. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.
25. When used in lieu of hydromulch, dry, loose, weed free straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.
26. When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover.
27. Seeding. Recommended erosion control grass seed mix is as follows. Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80 % by weight), creeping red fescue (20 % by weight). Application rate shall be 100 lbs. per acre minimum.
28. Grass seed shall be fertilized at a rate of 10 lbs. per 1000 S.F with 16- 16-16 slow release type fertilizer. Development areas within 50 feet of water bodies and wetlands must use a non-phosphorous fertilizer.
29. Prior to starting construction contractor shall acquire the services of a DEQ Certified Erosion and Sediment Control Inspector and shall submit an "Action Plan" to DEQ identifying their names, contact information, training and experience as required in Schedule A.6.b.i-ii of the 1200-C Permit
30. Contractor shall submit "Notice of Termination" to DEQ to end the 1200-C permit coverage once all soil disturbance activities have been completed and final stabilization of exposed soils has occurred.

<b>MARION COUNTY</b>		<b>CORRECTIONAL FACILITY PARKING LOT IMPROVEMENTS PHASE II</b>	
<b>Erosion Control Notes</b>			
<b>DRAWING C2.1</b>			
<b>JOB NUMBER</b>			
<b>2868.03000.0</b>			



(c) POLLUTANTS, SOLID WASTE AND HAZARDOUS MATERIALS MANAGEMENT

- (2). The contractor is solely responsible to properly manage pollutants, hazardous wastes, used oils, contaminated soils, concrete waste, sanitary waste, liquid waste, or other toxic substances discovered or generated during construction to prevent leakage, spills or release of pollutants to the environment and surface waters.

- (d) WET WEATHER PERIOD (OCTOBER 15 THROUGH APRIL 30)

- (e) MAINTENANCE

- (3). Sediment must be removed from behind all sediment control measures when it has reached a height of  $1/3$  the barrier height, and prior to the control measures removal.

- (f) INSPECTION

- (3). All BMPs shall be inspected at least every week. When a rainfall event exceeds 1/2-inch in a 24-hour period, daily inspection of the erosion controls, sediment controls, and discharge outfalls must be conducted and documented. Inspections shall be done by a representative of the permit registrant who is knowledgeable and experienced in the principles, practices, installation, and maintenance of erosion and sediment controls.

- (g) INACTIVE CONSTRUCTION PERIODS AND POST-CONSTRUCTION

- (3). Temporary grass cover measures must be fully established by October 15 or other cover measures (i.e., erosion control blankets with anchors, one-inch of straw mulch, six mil HDPE plastic sheet, etc.) shall be in place over all disturbed soil areas until April 30. To establish an adequate grass stand for controlling erosion by October 15, it is recommended that seeding and mulching occur by September 1.

- ## (h) SPECIFICATIONS

- (1). Soil preparation. Topsoil should be prepared according to the landscape plans, if available, or recommendations of the grass seed supplier. Slopes shall be textured before seeding by rack walking (i.e., driving a crawling tractor up and down the slopes to leave a pattern of cleat imprints parallel to slope contours) or other method to provide stable areas for seeds to rest.

- (2). Seeding. Erosion control grass seed mix shall be as follows: Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80 percent by weight), creeping red fescue (20 percent by weight). Application rate shall be 100 pounds per acre minimum.

- (3). Grass seed shall be fertilized at a rate of ten pounds per 1,000 square feet with 16-16-16 slow release type fertilizer. Disturbed areas within 50 feet of water bodies and wetlands must use a non-phosphorous fertilizer.

- (4). The application rate of fertilizers used to reestablish vegetation shall follow manufacturer's recommendations. Nutrient releases from fertilizers to surface waters shall be minimized. Time release fertilizers shall be used. Care shall be made in the application of fertilizers within any waterway riparian zone to prevent leaching into the waterway.

- (5). When used, hydromulch shall be applied with grass seed at a rate of 2,000 pounds per acre between April 30 and June 10, or between September 1 and October 1. On slopes steeper than ten percent, hydrosed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology shall be in accordance with seed supplier recommendations.

- (6). When used in lieu of hydromulch, dry, loose, weed-free straw used as mulch shall be applied at a rate of 4,000 pounds per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.

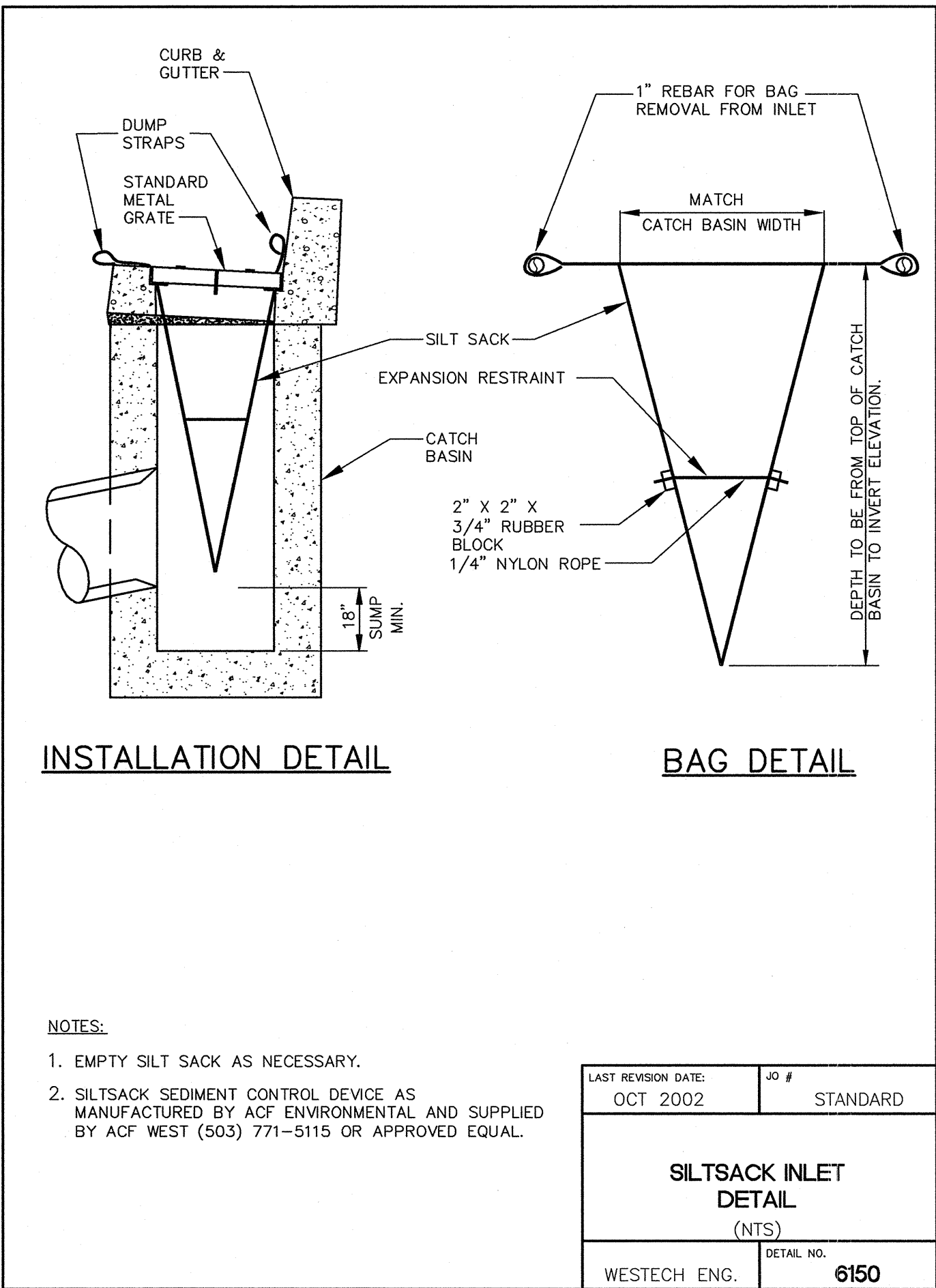
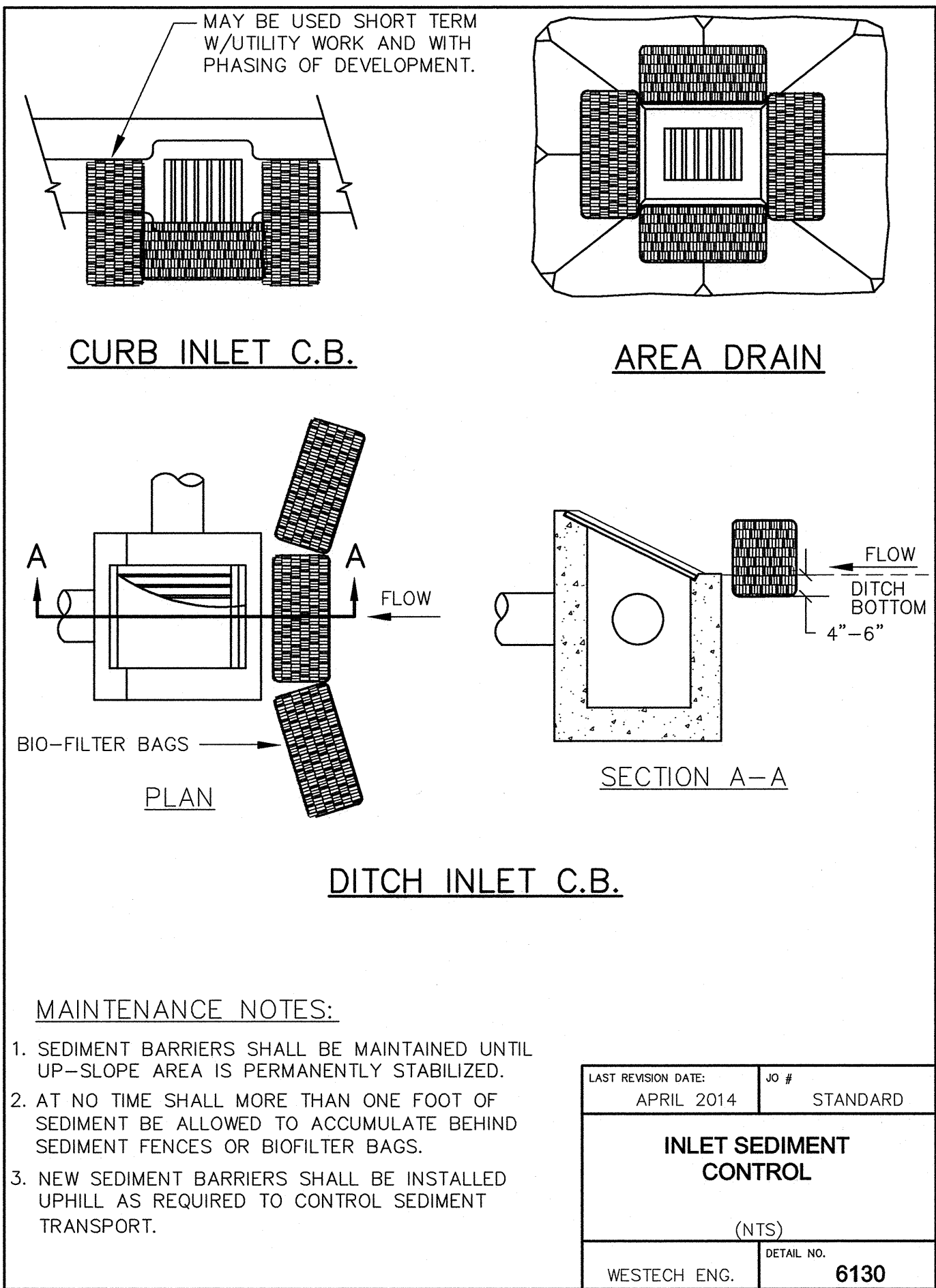
- (7). When conditions are not favorable to germination and establishment of the grass seed, the Contractor shall irrigate the seeded and mulched areas as required to establish the grass cover.

- (8). Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum six-inch overlap, and both ends securely fastened to a post.

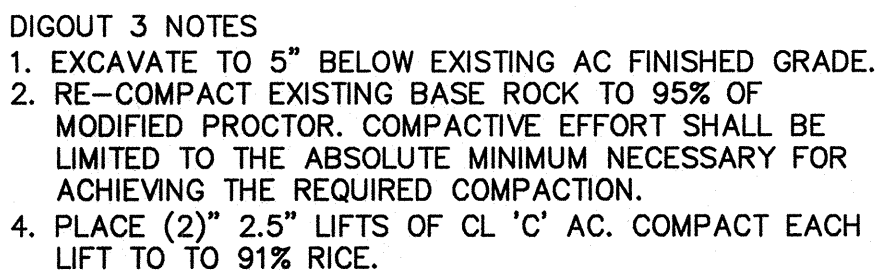
- (9). The standard strength filter fabric shall be fastened securely to stitched loops installed on the upslope side of the posts, and six inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

- (10). Bio-filter bags shall be clean 100 percent wood product waste. Bags shall be 18-inch x 18-inch x 30-inch, weigh approximately 45 pounds, and be contained in a bag made of 1/2-inch plastic mesh.

- (11). Minimum wet weather slope protection. For 3H:1V or steeper slopes use Bon Terra Type C2 or North American Green Type C125 erosion control blankets. Use a minimum of two inches straw mulch or North American Green Type S150 for slopes flatter than 3H:1V and greater than 6H:1V. Slopes flatter than 6H:1V use one inch straw mulch, hydrosseed with hydromulch and tackifier. Slope protection shall be placed on all disturbed areas immediately after completion of each section of construction activity, until the erosion control seeding has been established. As an option during temporary or seasonal work stoppages, a six-mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be provided with an anchor trench at the top and bottom of the slope, and shall be sandbagged on the slopes as required to prevent damage or displacement by wind.








SEE SHEET C3.2

VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING

1" 

IF NOT ONE INCH ON  
THIS SHEET, ADJUST  
SCALES ACCORDINGLY

DSN.	RCE
DRN.	RCE
CKD.	RCE

DATE: JUN 2020

**WESTTECH ENGINEERING, INC.**  
CONSULTING ENGINEERS AND PLANNERS

3841 Fairview Industrial Dr., S.E., Suite 100, Salem, OR 97302  
Phone: (503) 585-2474 Fax: (503) 585-3986  
E-mail: [westtech@westtech-eng.com](mailto:westtech@westtech-eng.com)

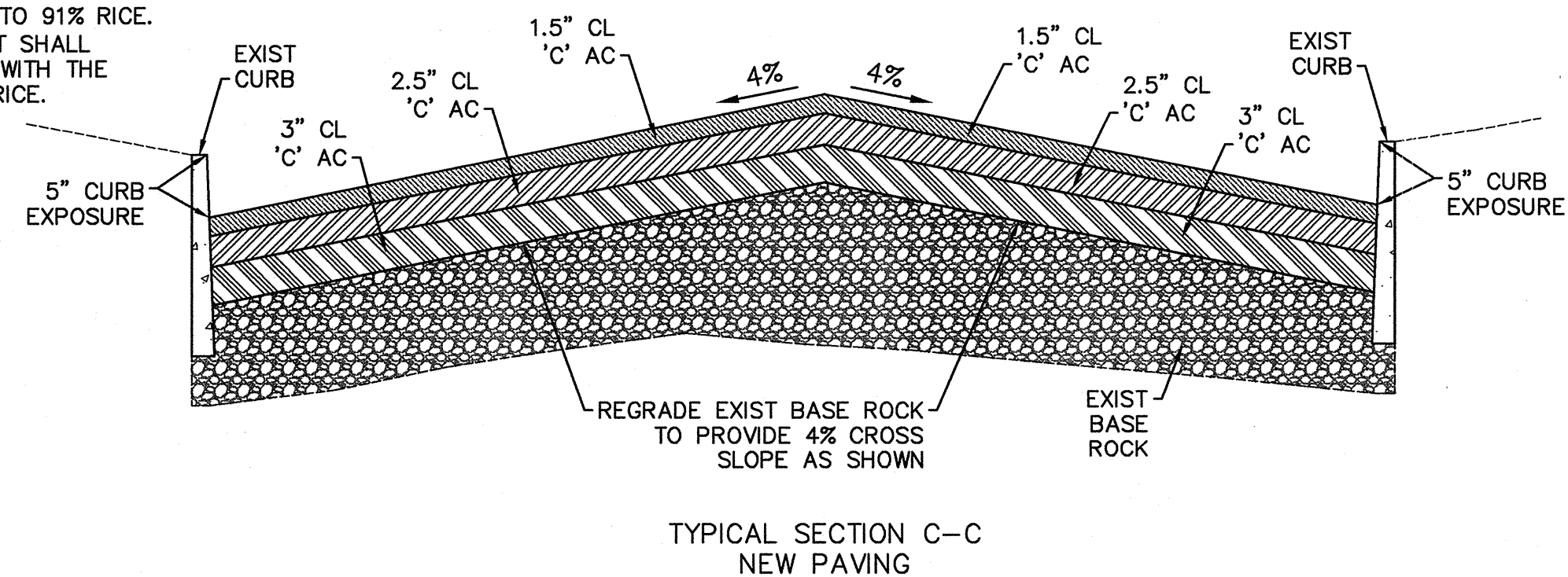
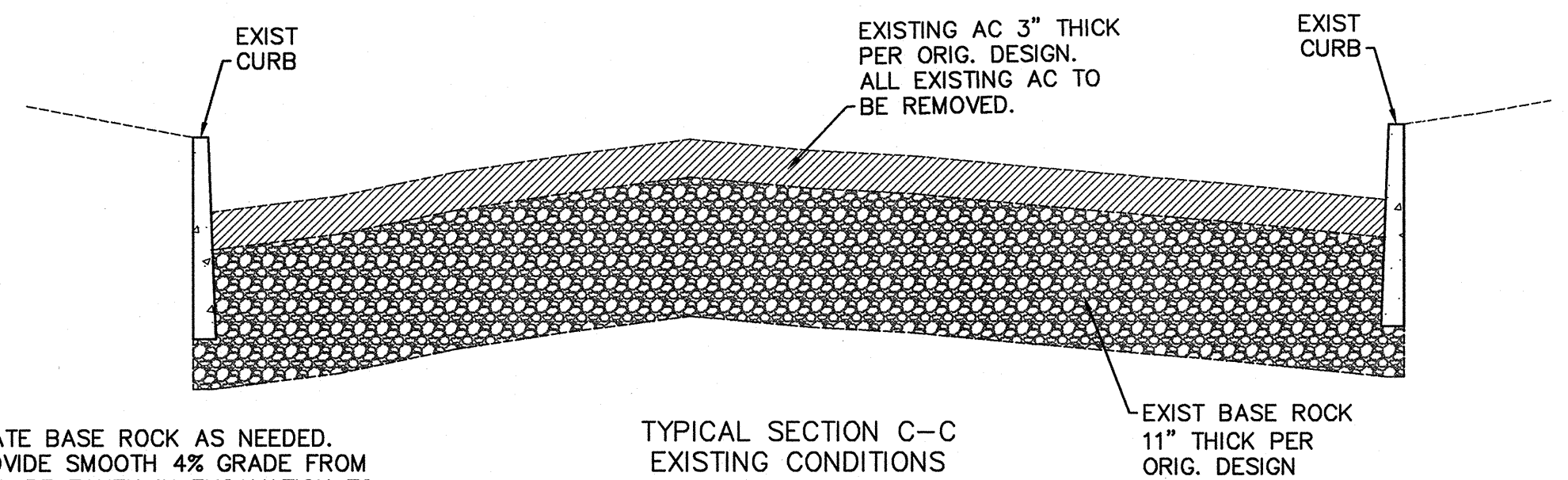
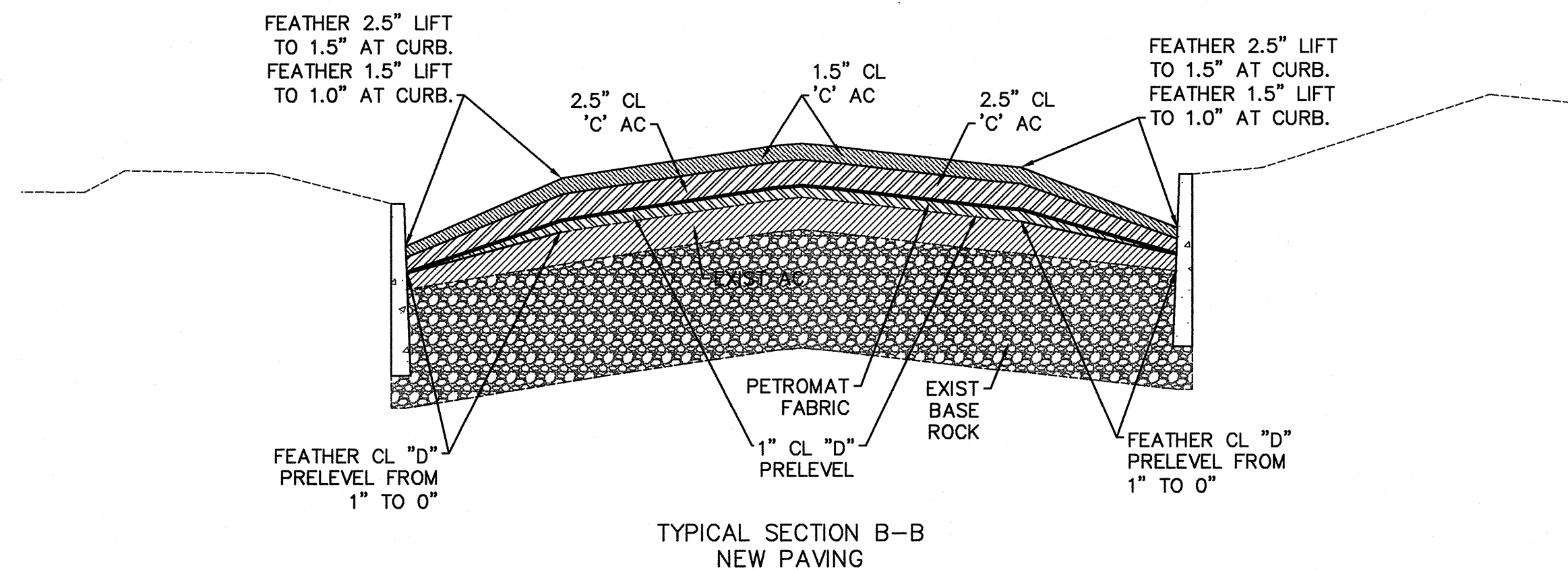
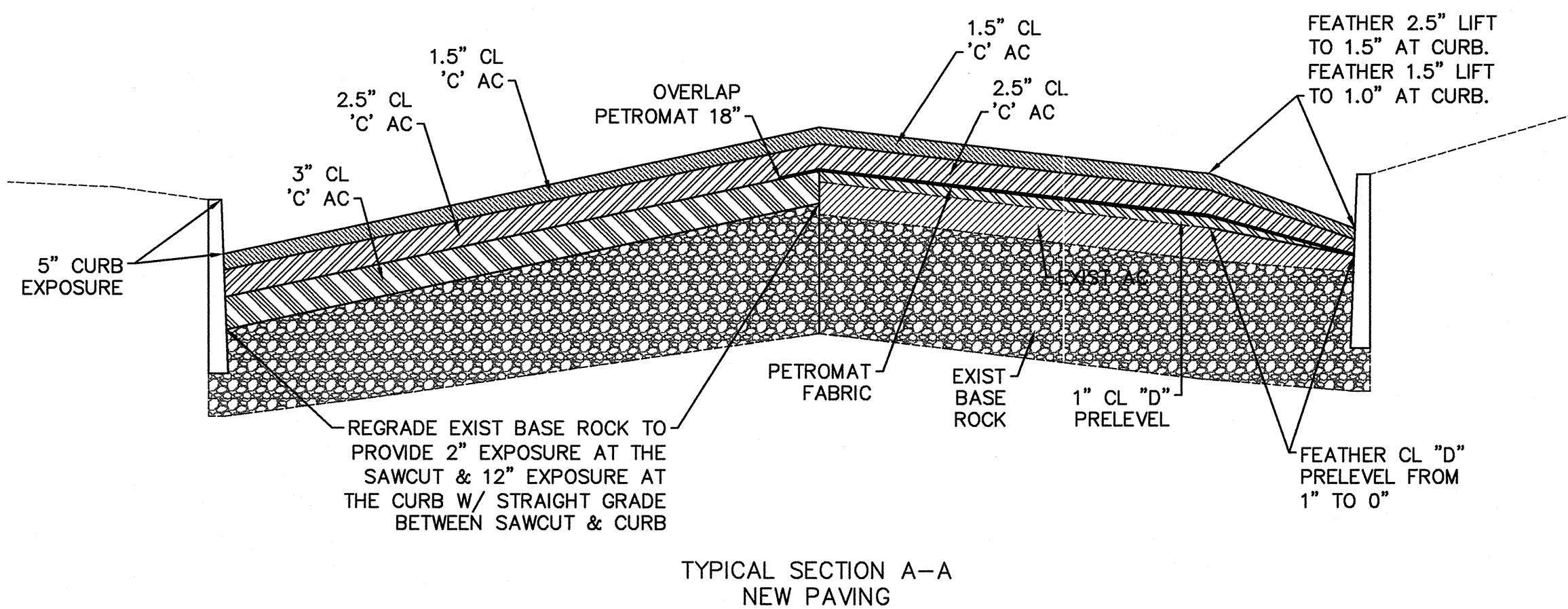
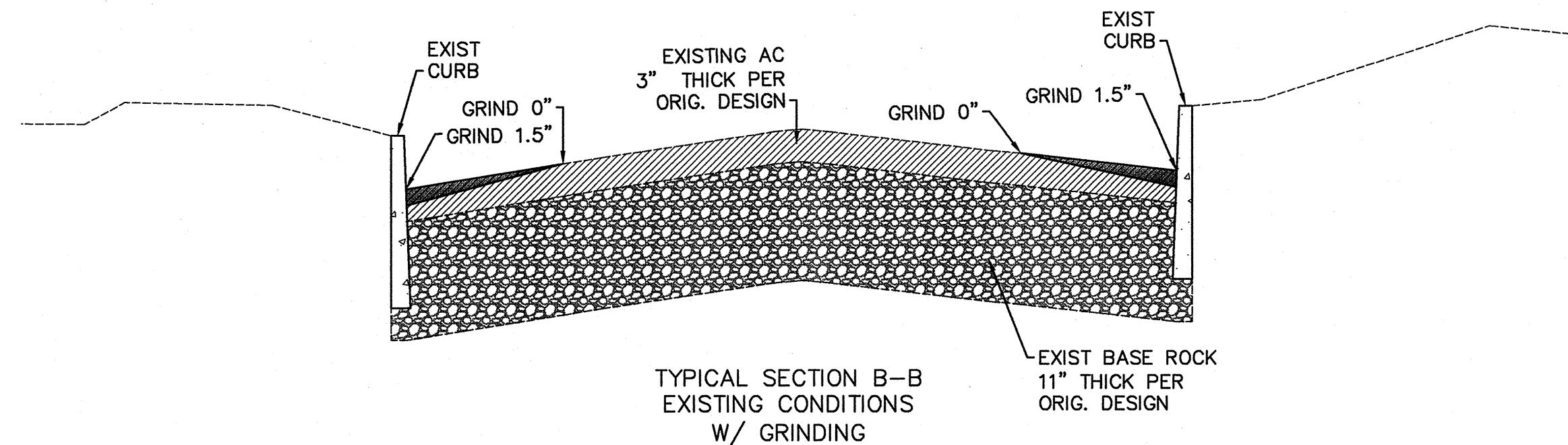
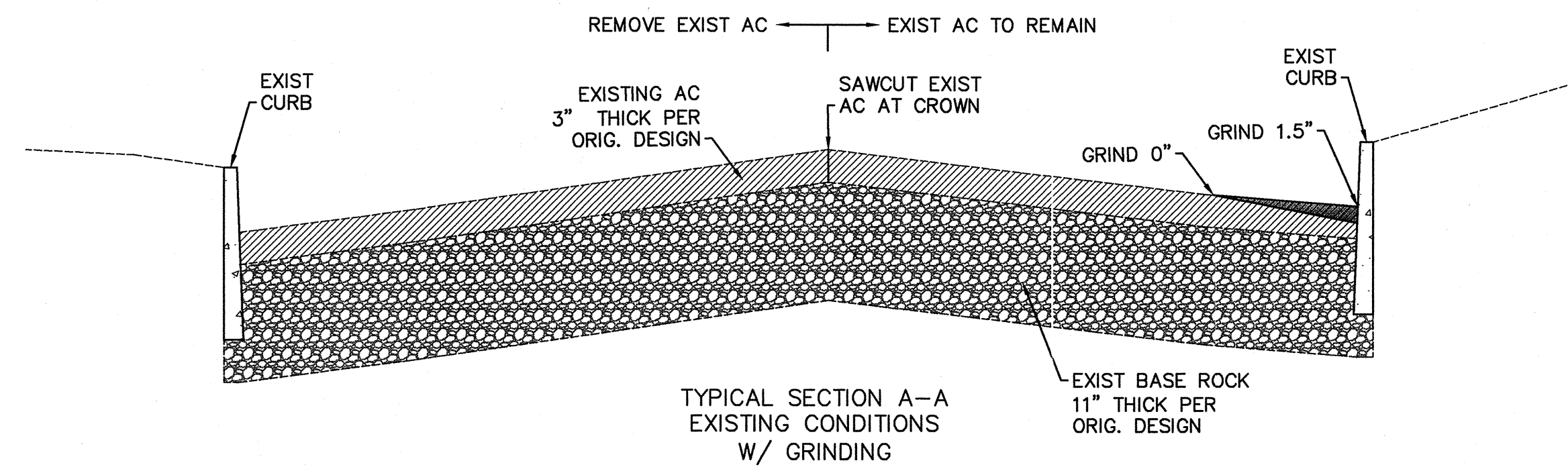
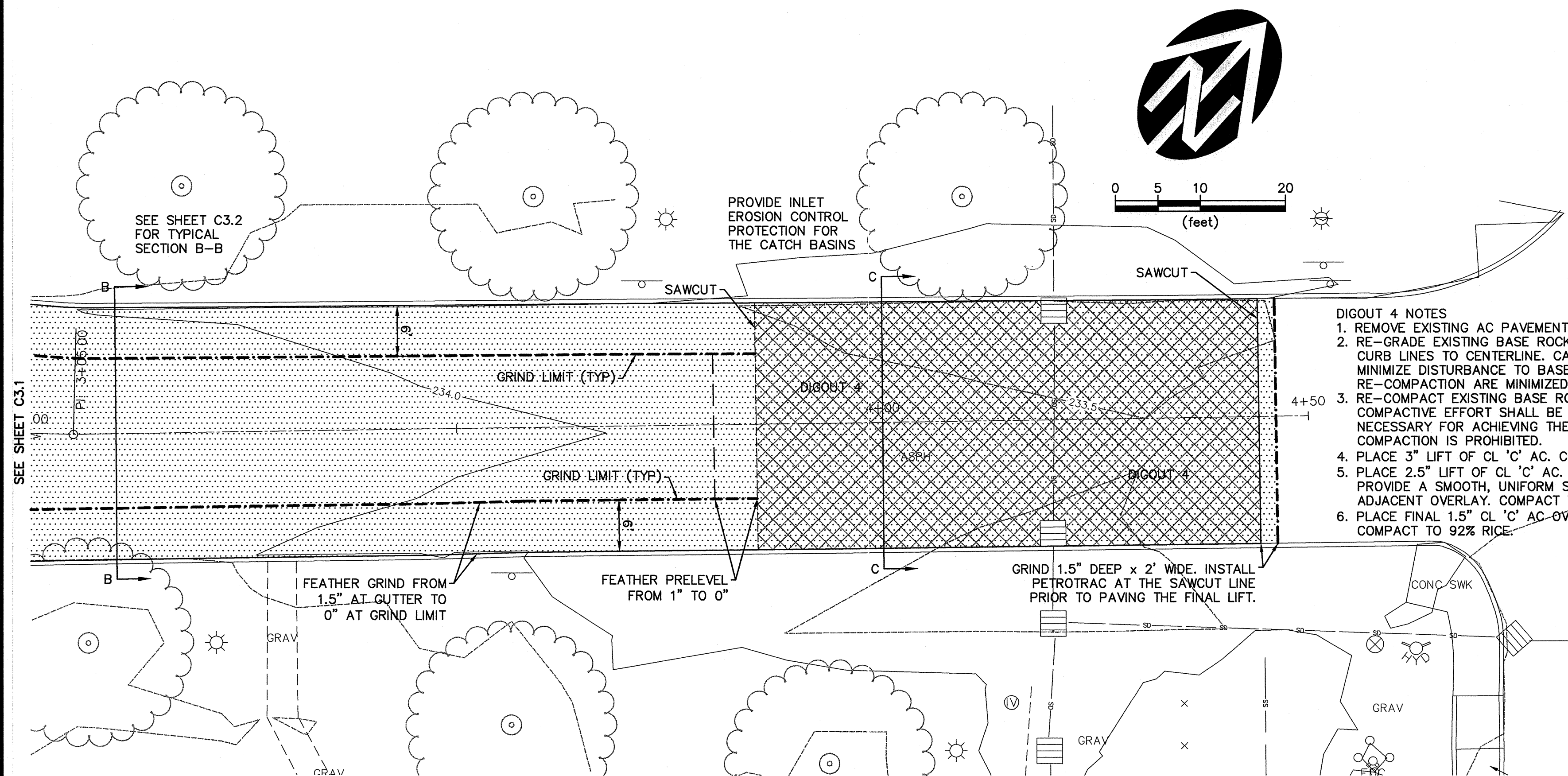
MARION COUNTY  
CORRELATIONAL FACILITY PARKING LOT  
IMPROVEMENTS PHASE II  
Surfacing Plan  
East Driveway (South)

DRAWING  
C3.1

JOB NUMBER  
2868.0300.0



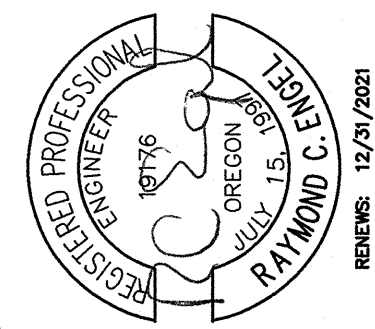
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- DIGOUT 4 NOTES
1. REMOVE EXISTING AC PAVEMENT. EXCAVATE BASE ROCK AS NEEDED.
  2. RE-GRADE EXISTING BASE ROCK TO PROVIDE SMOOTH 4% GRADE FROM CURB LINES TO CENTERLINE. CARE SHALL BE TAKEN IN EXCAVATION TO MINIMIZE DISTURBANCE TO BASE ROCK SO THAT RE-GRADING AND RE-COMPACT ARE MINIMIZED.
  3. RE-COMPACT EXISTING BASE ROCK TO 95% OF MODIFIED PROCTOR. COMPACTIVE EFFORT SHALL BE LIMITED TO THE ABSOLUTE MINIMUM NECESSARY FOR ACHIEVING THE REQUIRED COMPACTION. VIBRATORY COMPACTION IS PROHIBITED.
  4. PLACE 3" LIFT OF CL 'C' AC. COMPACT TO 91% RICE.
  5. PLACE 2.5" LIFT OF CL 'C' AC. THIS LIFT SHALL PROVIDE A SMOOTH, UNIFORM SURFACE WITH THE ADJACENT OVERLAY. COMPACT TO 91% RICE.
  6. PLACE FINAL 1.5" CL 'C' AC-OVERLAY. COMPACT TO 92% RICE.

SEE BELOW LEFT

VERIFY SCALE	DATE: JUN 2020
BASE IS ONE INCH ON ORIGINAL DRAWING	
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY	
0	
1"	
DSN. RCE	
DRN. RCE	
CKD. RCE	
NO. DATE	
REVISIONS	
DESCRIPTION	
BY	



**WESTECH ENGINEERING, INC.**  
CONSULTING ENGINEERS AND PLANNERS  
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302  
Phone: (503) 585-2474 Fax: (503) 585-3986  
E-mail: westech@westech-eng.com

MARION COUNTY  
CORRECTIONAL FACILITY PARKING LOT  
IMPROVEMENTS PHASE II  
Surfacing Plan  
East Driveway (North)  
& Cross Sections

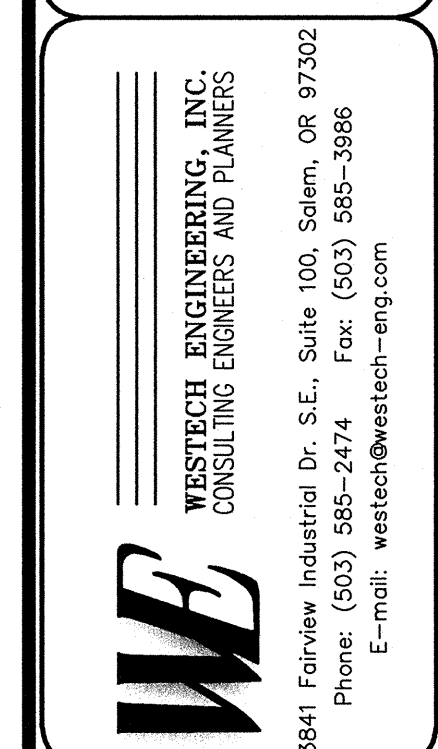
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JOB NUMBER  
2868.0300.0



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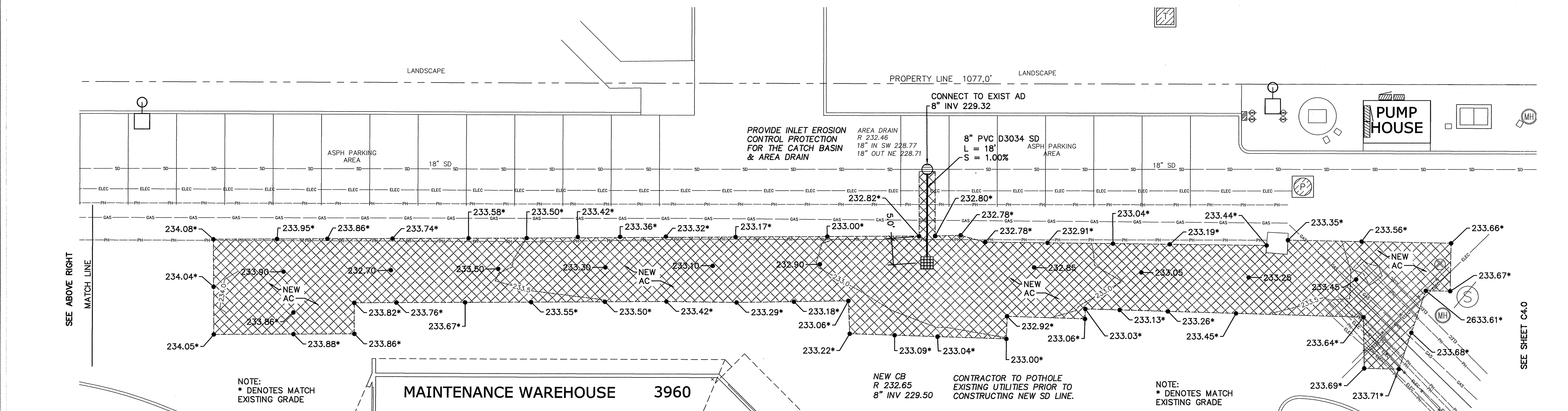


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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	CKD. RCE
	DATE: JUN 2020



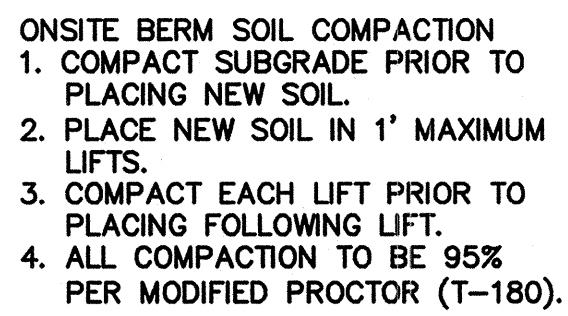
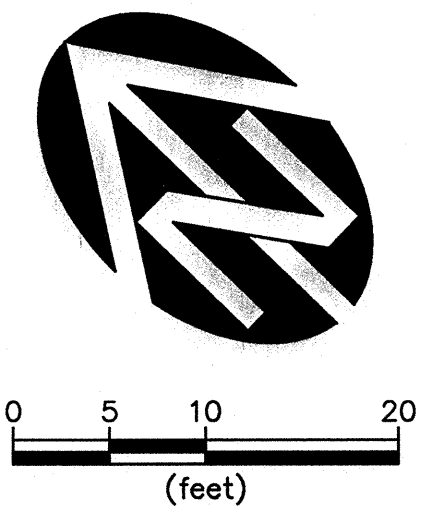
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JOB NUMBER  
2868.0300.0







MARION COUNTY	
CORRECTIONAL FACILITY PARKING LOT IMPROVEMENTS PHASE II	
Surfacing Plan	
West Driveway (South)	
DRAWING	
C5.0	
JOB NUMBER	
2868.0300.0	





<div style="text-align: center;"> <b>MARION COUNTY</b>   <b>CORRECTIONAL FACILITY PARKING LOT IMPROVEMENTS PHASE II</b>   <b>Surfacing Plan</b>   <b>Vehicle Fueling Area</b> </div>	<div style="text-align: center;">   <b>WESTECH ENGINEERING, INC.</b>          CONSULTING ENGINEERS AND PLANNERS       </div>		3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302 Phone: (503) 585-2474 Fax: (503) 585-3986 E-mail: westech@westech-eng.com		<div style="text-align: center;">  </div>		VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 <span style="border: 1px solid black; padding: 0 10px;">1"</span> IF NOT ONE INCH ON SCALES ACCORDINGLY		DSN. ROE DRN. ROE CKD. ROE DATE: JUN 2020		DESCRIPTION REVISIONS	
	DRAWING <b>C6.0</b>		JOB NUMBER <b>2868.0300.0</b>									

