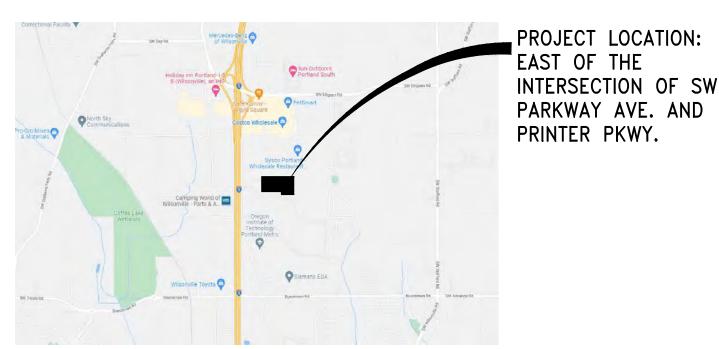
# **GENERAL CONSTRUCTION NOTES:**

- 1. UNLESS SPECIFICALLY EXCEPTED IN THE PLANS OR CONTRACT DOCUMENTS, ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND PLANS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PROMULGATED BY THE OREGON STATE DEPARTMENT OF TRANSPORTATION AND CLACKAMAS COUNTY MUNICIPAL CODE.
- 2. THE PLANS ARE SCHEMATIC AND ARE NOT INTENDED TO DEPICT ALL DETAILS OF THE WORK REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE TO FAMILIARIZE HIMSELF WITH ACTUAL SITE CONDITIONS, REQUIREMENTS AND FACTORS AFFECTING THE WORK. WHERE LACK OF DETAIL OR CONFLICT EXISTS BETWEEN THESE AND OTHER PLANS, THE CONTRACTOR SHALL NOTIFY THE OWNER TO RESOLVE THE ISSUE PRIOR TO PROCEEDING. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER
- 3. THIS PLAN MAY NOT SHOW ALL EXISTING UTILITIES. EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT (811) BEFORE YOU DIG. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION. IN THE CASE WHERE RELOCATION IS REQUIRED, THE APPLICABLE UTILITY COMPANY SHALL BE NOTIFIED AND ANY COST REQUIRED FOR RELOCATION OR ADJUSTMENTS SHALL BE AGREED UPON.
- 4. THE ENGINEER HAS ATTEMPTED TO SHOW ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES. APPEARANCE ON THESE PLANS, HOWEVER, DOES NOT GUARANTEE THE ACCURACY AND COMPLETENESS OF THE LOCATION OR EXISTENCE OF THESE UTILITIES AND/OR SUBSTRUCTURES. THE CONTRACTOR IS REQUIRED TO TAKE ALL REQUIRED PRECAUTIONARY MEANS TO LOCATE AND PROTECT ALL EXISTING UTILITIES AND SUBSTRUCTURES WHETHER SHOWN OR NOT, PRIOR TO EXCAVATION IN ANY AREA. THE CONTRACTOR SHALL MEET AT THE JOB SITE WITH REPRESENTATIVES OF THE UTILITY DISTRICTS, COMPANIES, AND OTHER OWNERS THAT MAY HAVE EXISTING FACILITIES AT THE SITE, AND DISCUSS THEIR PROTECTION.
- 5. THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF APPROVED PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY, WHO HAS THE AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR, AT THE JOB SITE DURING ALL WORKING HOURS.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND APPROVALS FROM CLACKAMAS COUNTY, AND OTHER JURISDICTIONS PRIOR TO THE START OF CONSTRUCTION. ABSENCE OF THE PERMIT MAY RESULT IN IMMEDIATE SHUT DOWN OF WORK AND POSSIBLE REMOVAL OF THE ITEMS CONSTRUCTED WITHOUT A
- 7. THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH RECORD DRAWINGS PRIOR TO FINAL APPROVAL. ALL DEVIATIONS FROM THE ORIGINAL PLANS MADE DURING THE COURSE OF THE CONSTRUCTION INCLUDING LOCATION, INVERTS, AND DEPTHS OF UTILITIES SHALL BE CLEARLY MARKED ON THE RECORD DRAWINGS. THE ENGINEER SHALL PROVIDE THE CITY ENGINEER WITH "RECORD DRAWINGS" AS REQUIRED.
- THE SURVEY IS FOR INFORMATIONAL PURPOSES ONLY. NO CERTIFICATIONS ARE EXPRESSED OR IMPLIED. THE SURVEY WAS PROVIDED BY HHPR.
- 9. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT TO CONSTRUCT AND INSTALL TO PROPER WORKING ORDER, THE DESIGN SHOWN, AS DETAILED OR CALLED OUT IN THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR BEING FAMILIAR WITH THE PROVISIONS AND REQUIREMENTS CONTAINED IN THE STANDARD SPECIFICATIONS.
- 10. IF CONSTRUCTION IS TO TAKE PLACE IN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE GOVERNING MUNICIPALITY (CLACKAMAS COUNTY OR ODOT) AND OBTAIN ALL THE REQUIRED APPROVALS AND PERMITS. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLAN(S) IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS REQUIRED. PRIOR TO DISRUPTION OF ANY TRAFFIC, A TRAFFIC PLAN SHALL BE PREPARED AND SUBMITTED TO THE GOVERNING MUNICIPALITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.
- 11. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH CLACKAMAS COUNTY PRIOR TO THE START OF CONSTRUCTION.
- 12. ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER AND CLACKAMAS COUNTY.
- 13. ALL TESTING SHALL BE IN ACCORDANCE WITH THE ODOT STANDARD SPECIFICATIONS (LATEST EDITION).
- 14. THE CONTRACTOR SHALL REMOVE ALL WASTE MATERIAL IN A SAFE AND APPROVED MANNER.
- 15. REFER TO THE REPORT OF INFILTRATION TESTING SERVICES BY NV5, DATED AUGUST 16, 2022.
- 16. PORTLAND CEMENT CONCRETE ON SITE SHALL HAVE AN 28-DAY STRENGTH OF 3,000PSI, MINIMUM. CONTRACTOR SHALL SUBMIT DOCUMENTATION CONFIRMING THESE REPORTS TO THE ENGINEER DURING CONSTRUCTION. SLUMP MAXIMUM SHALL BE 4", MAXIMUM.

# **UTILITY NOTES:**

- 1. RIM ELEVATIONS OF UTILITY STRUCTURES SHALL BE INSTALLED SO THAT THE RIM MAY BE ADJUSTED  $\pm 0.5$  FEET TO MATCH FINISHED GRADES.
- 2. CONTRACTOR SHALL PLACE MARKING TAPE IN THE EXCAVATION TRENCH AT MID-DEPTH LOCATION FOR ALL UNDERGROUND SIDE SERVICE INSTALLATIONS FOR THE PURPOSE OF ALERTING ANY FUTURE EXCAVATION IN THE
- 3. SLEEVING: PROVIDE SLEEVING AS REQUIRED UNDER SIDEWALKS, PATHS, CURBING, PAVING, ETC. AS NEEDED FOR IRRIGATION ACCESS. ALL SLEEVING SHALL BE 4" PVC WITH AT LEAST 12" OF COVER (1) FOOT BELOW FINISHED GRADE. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING SLEEVING BEFORE CURBING, SIDEWALKS, PAVING, ETC. IS INSTALLED. SEE LANDSCAPE PLANS.
- 4. UTILITY SEPARATIONS, INCLUDING WATER AND SEWER OR STORM CROSSINGS, SHALL BE IN ACCORDANCE WITH CLACKAMAS COUNTY STANDARDS OF CONSTRUCTION.
- 5. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CLACKAMAS COUNTY CONSTRUCTION INSPECTOR. APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM CORRECTION OF ANY DEFICIENCIES AND/OR FAILURES AS DETERMINED BY SUBSEQUENT TESTING AND INSPECTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY CLACKAMAS COUNTY FOR THE REQUIRED INSPECTIONS.

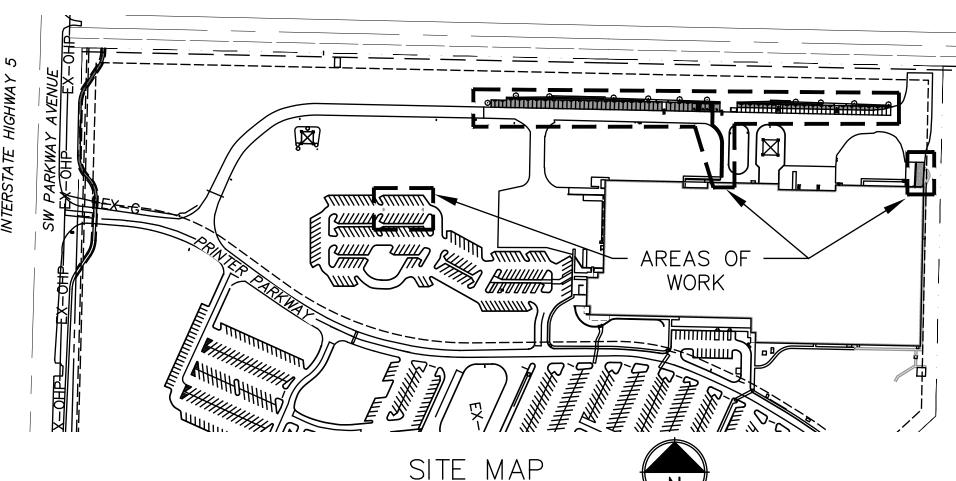
# ESS INC. SITE IMPROVEMENTS WILSONVILLE, OR







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SCALE: 1" = 200'

# SHEET INDEX

SHEET #	SHEET TITLE
C0.00	CIVIL COVERSHEET
C0.01	PARKING PLAN
C0.10	CIVIL SPECIFICATIONS
C0.11	CIVIL SPECIFICATIONS
C1.00	EXISTING CONDITIONS AND DEMOLITION PLAN - WEST
C1.01	EXISTING CONDITIONS AND DEMOLITION PLAN - EAST
C2.00	SITE LAYOUT AND STORMWATER PLAN - WEST
C2.01	SITE LAYOUT AND STORMWATER PLAN - EAST
C3.00	GRADING PLAN — WEST
C3.01	GRADING PLAN — EAST
C3.10	GRADING DETAILS
C4.00	SWALE SECTIONS
C5.00	CIVIL DETAILS
C5.01	CIVIL DETAILS
ESC9.00	EROSION AND SEDIMENT CONTROL PLAN - WEST
ESC9.01	EROSION AND SEDIMENT CONTROL PLAN - EAST
ESC9.10	EROSION AND SEDIMENT CONTROL DETAILS

IMPERVIOUS AREA CALCULATIONS: - EXISTING ONSITE = 406,974 SF - REPLACED ONSITE = 855 SF = 10,755 SFNEW ONSITE

## LEGEND

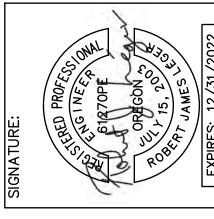
EX. STORM LINE	——EX—SD——	WATER METER	W
EX. SANITARY SEWER LINE EX. WATER LINE	——EX-SS—— ——EX-DW——	WATER VALVE	M
EX. FIRE WATER LINE EX. GAS LINE	——EX—FW—— ——EX—G——	GAS METER	0
EX. UNDERGROUND POWER LINE EX. OVERHEAD POWER LINE	——EX-PWR—— ——EX-OHP——	POWER POLE	•
NEW STORM LINE	SD	SIGN	+
NEW SANITARY SEWER LINE NEW WATER LINE	——————————————————————————————————————	CEMENT CONCRETE AREA	A A
NEW FIRE WATER LINE	——FW——	ASPHALT CONCRETE AREA	
EXISTING CONTOUR NEW CONTOUR	457—	DRAINAGE SWALE	* * * * * * * * * * * * * * * * * * *
STORM DRAIN MANHOLE	<i>⊚</i>	PROPERTY LINE	
SANITARY SEWER MANHOLE	<u>s</u>	CENTER LINE SAWCUT LINE	
COMMUNICATIONS MANHOLE	7	GRADE BREAK FENCE	X
CATCH BASIN		EXISTING SURFACE ELEV.	_FS (XXX.XX
CURB INLET		FINISHED SURFACE ELEV.	_FS XXX.XX
OVERFLOW INLET		EXISTING TOP OF CURB/	(XXX.XX) TO
CLEANOUT	۰	BOTTOM OF CURB	/ (\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
ROOF DOWNSPOUT	0	FINISHED TOP OF CURB/ BOTTOM OF CURB	XXX.XX TC / XXX.XX FS
 FIRE HYDRANT	<b>-</b>	SIGNIFICANT RESOURCE	SROZ
 FIRE DEPT. CONNECTION	¥	OVERLAY ZONE (SROZ)	5.752
NEW PARKING LOT TREE	$\odot$	SROZ IMPACT ZONE BOUNDARY (25' OFFSET)	
		•	

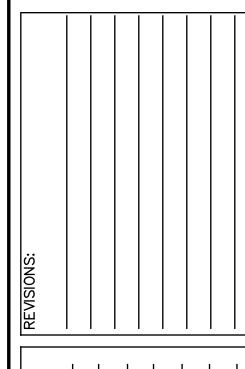
## **ABBREVIATIONS**

ACP	ASPHALT CONCRETE PAVEMENT	ΙE	INVERT ELEVATION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	IN ( " )	INCH(ES)
APPROX.		INV	INVERT
	• •	LB	POUND(S)
ARCH	ARCHITECT(URAL)	LF	LINEAR FEET
BC	BACK OF CURB	MAX	MAXIMUM
BLDG	BUILDING	мн	MANHOLE
СВ	CATCH BASIN	MIN.	MINIMUM
CC	CURB CUT	MUTCD	MANUAL ON UNIFORM TRAFFIC
CF	CUBIC FEET (FOOT)		CONTROL DEVICES
CL	CENTER LINE	PC	POINT OF CURVATURE
CONC.	CONCRETE	PIV	POST INDICATOR VALVE
CONST.	CONSTRUCTION	PP	POWER POLE
CY	CUBIC YARD	PL	PROPERTY LINE
DIA (ø)	DIAMETER	PT	POINT OF TANGENCY
DIM	DIMENSION	PVC	POLYVINYL CHLORIDE
DS	DOWN SPOUT	RAD (R)	RADIUS
DWG	DRAWING	ROW	RIGHT OF WAY
EL.=	ELEVATION	SD	STORM DRAIN
EOP	EDGE OF PAVEMENT	S.F.	SQUARE FEET
EV	ELECTRICAL VAULT	SQ	SQUARE
FDC	FIRE DEPARTMENT CONNECTION	SROZ	SIGNIFICANT RESOURCE OVERLAY ZONE
FFE	FINISH FLOOR ELEVATION	SS	SANITARY SEWER
FH	FIRE HYDRANT	STA	STATION
FL	FLOW LINE	STD	
FS	FINISHED SURFACE		STANDARD TRANSFORMER AND DAD
FT ( ')	FOOT (FEET)	T TBM	TRANSFORMER AND PAD TEMPORARY BENCH MARK
GB	GRADE BREAK		
GM	GAS METER	TC	TOP OF CURB
GV	GATE VALVE	RIM	TOP OF GRATE
		TYP.	TYPICAL

WATER METER







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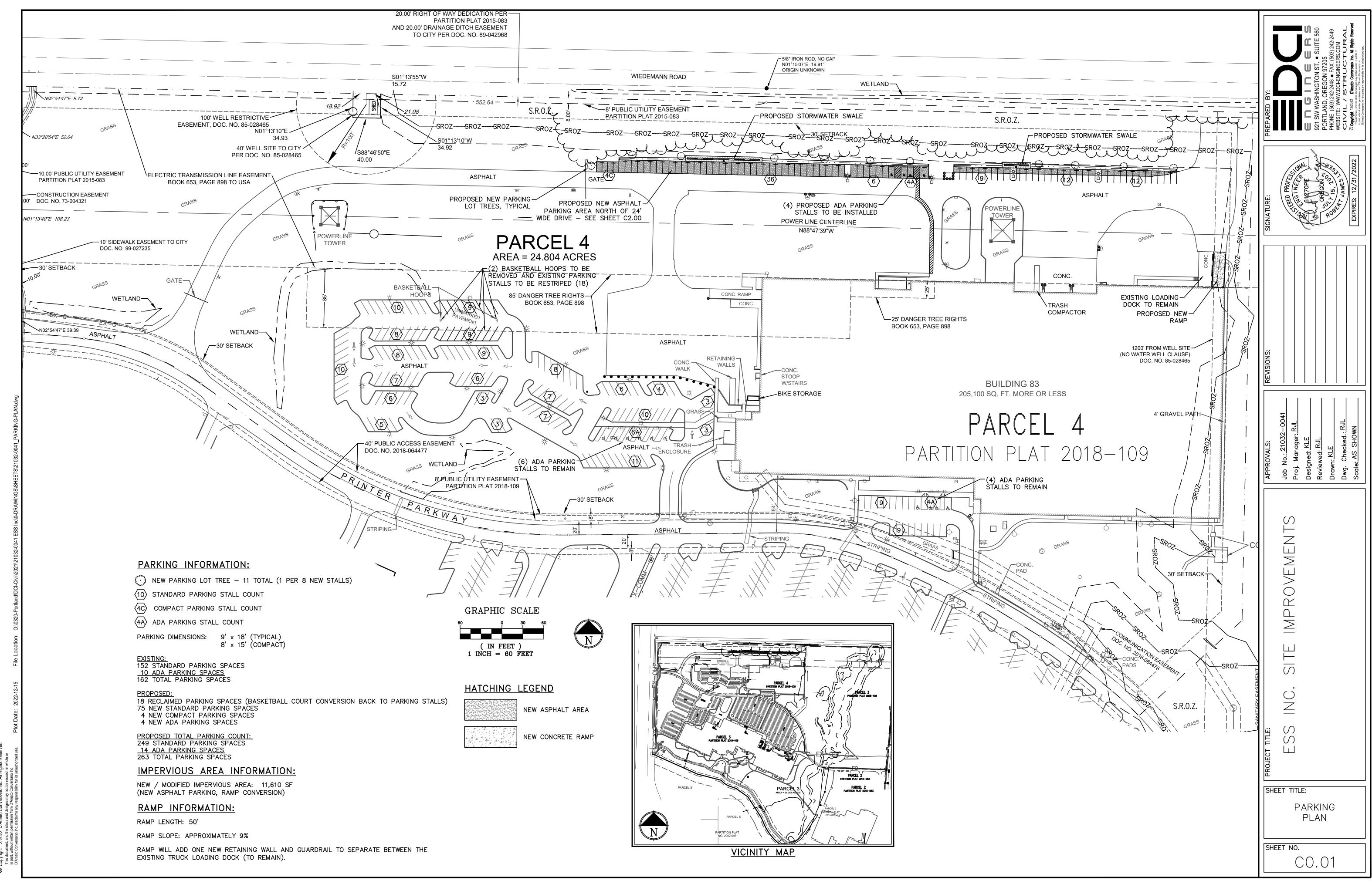
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SHEET TITLE: CIVIL

COVERSHEET

SHEET NO. C0.00

**W** Exhibit B2 DB22-0008



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# DIVISION 1 - GENERAL

- A. These specifications are general in nature and are intended to set minimum standards for construction and materials. Quality of materials and details of installation shall, at a minimum, comply with established industry and product manufacturer's standards. Higher standards, where stated in these specifications, in submitted literature, or on Drawings shall govern. Workmanship shall be maintained at good quality by the General Contractor.
- B. EXAMINATION OF SITE AND CONTRACT DOCUMENTS
- B.1. Bidders shall examine the site where the work is to be performed and ascertain for themselves all of the physical conditions and restrictions before submitting price quotations. They will also make careful examination of the Drawings, Specifications and other Contract Documents and inform themselves as to the quality of materials.
- B.2. Bidders finding discrepancies, omissions or in doubt as to the true meaning of any part of the Drawings, Specifications and other Contract Documents, shall notify the Engineer in sufficient time to receive clarification prior to starting any work.
- B.3. The Owner will not be responsible for any loss, or for any unanticipated costs which may be suffered by the Contractor in regards to conditions pertaining to the work, including conditions that can be seen on the site and/or are described in Drawings, Specifications, geotechnical reports, surveys, etc. That are available to the Contractor.
- B.4. These Specifications may include material and/or performance specifications that may not be part of the Contract, but will be needed to coordinate work
- B.5. Contractor shall coordinate their work with the work by others to provide minimal delays to all parties.
- B.6. The General Contractor is responsible to provide all design and engineering services, for design/build items noted. This includes coordination with other affected disciplines (mechanical, electrical, fire protections, structural, etc.) And all permit requirements (energy code compliance, etc.) necessary for a complete system design.
- C. SHOP DRAWINGS AND SUBMITTALS
- C.1. Submit shop drawings of portions of the work indicated in individual sections of this Specification. Submittals of items not indicated may or may not be reviewed at Engineer's option.
- C.2. For bidder designed items (Deferred Submittals), the drawings and calculations shall bear the stamp of an engineer (product engineer) registered in the state where the project is located. Such drawings shall certify that the drawings have not deviated from the DCI design drawings in any way, or shall call to the attention of DCI that the product engineer has deviated from the DCI design drawings. Such deviation may be cause for rejecting the shop drawings. See Drawings for items classified as Deferred Submittals.
- C.3. Submittals to be provided at least 3 weeks prior to beginning fabrication.
- C.4. General Contractor to review submittals before transmitting to Engineer, and place their review stamp date and marks on all copies.
- C.5. DCl will review and mark—up one pdf format submittal. The contractor will be responsible for distributing mark—ups as required. Submittals will be stamped and returned to General Contractor within two weeks for distribution.
- TEMPORARY FACILITIES D.1. Utilities. The Contractor shall be solely responsible for all other temporary facilities including all sanitation, water, electric, etc. Contractor to pay costs

of all utilities until the time of substantial completion.

- D.2. TEMPORARY BRACING
  - D.2.a. Contractor shall be solely responsible for the design and installation of all temporary bracing, shoring, anchors, etc., including, but not limited to, wall and roof bracing, lifting and handling inserts and devices, trench shoring, forms, etc.
  - D.2.b. Contractor shall consider construction loads whenever such loads are in excess of normal design loads. Particular attention should be given to forklifts, workman, wheel loads, storage of materials, etc. Contractor shall be solely responsible for all shoring, bracing, cribbing, etc. Required to support construction loads.

## PROJECT CLOSEOUT

- E.1. Record Drawings.
  - E.1.a. Maintain a record set on site during all phases of work.
  - E.1.b. Accurately record all field changes as they occur. Show all concealed changes in the work and the final location of all utilities. Underground utility record Drawings (marked up prints) shall be submitted as soon as the work is completed and not later than the request for payment for the work.
- E.1.c. Deliver "record" set of Drawings to the Engineer on day of final
- E.2. Clean up: All areas of the site are to be finished, cleaned and suitable for use. Remove foreign matter, marks, stains, foreign paint, fixtures, equipment,
- E.3. All corrective work and the "closeout" shall occur on a timely basis.

# DIVISION 2 - SITE WORK

# GENERAL

- A.1. Geotechnical Report. Foundation investigations have been completed and are available at the Engineer's office. All bidders shall familiarize themselves with the subsurface and site conditions.
- A.2. Acceptance of site. Bidders shall inspect the site and be familiar with typical conditions in the area and the conditions under which the work is to be performed. The site shall be accepted in its existing condition and no claim shall be made for any visible condition not shown on the Drawings.
- A.3. Construction use Contractor shall:
- A.3.a. Exercise caution in the use of the site, particularly when subgrade materials are moisture sensitive and wet conditions exist in the
- A.3.b. Make special provisions for construction access consistent with the requirements of the project and so that work can proceed under normal weather conditions.
- A.3.c. Be responsible for correcting damage to the subgrade caused by construction activities.
- A.3.d. Be solely responsible (unless otherwise provided for in the Contract) for the methods and cost for construction of access roads, added

- provisions to specified systems to support construction loads and for correction to site conditions and/or installed work that is damaged by construction activities.
- A.3.e. Plan construction activities to prevent and/or mitigate damage to site. B. QUALITY CONTROL
- B.1. Contractor is to be experienced with the type of work and conditions where the work is to be performed. Contractor shall be responsible for the selection of the materials and methods for accomplishing the work. Special attention is directed to the conditions at the time the work is to be performed.
- B.2. Finish subgrade for paving and concrete slab on grade to be within 0.06 foot of arades and contours shown on Drawings. Finish base rock for paving and slab on grade shall be plus or minus 0.04 foot. Verify compliance with Engineer before proceeding with next phase of work. (Failure to do so will place responsibility for correction upon Contractor).
- B.3. Place stakes at all locations of spot grades shown on Drawings. (Failure to do so will place responsibility for correction upon Contractor).
- B.4. Notify Engineer for observation of compliance of subgrade and fill with paragraph B.2 above. Obtain approval prior to placement of subsequent fill and paving.

## C. CLEARING AND STRIPPING

- C.1. Review requirements for protecting existing vegetation (trees, etc.) before start of work.
- C.2. Notify Engineer immediately if unusual conditions are encountered.
- C.3. Site shall be cleared and stripped of all vegetation, topsoil, and organic materials. Remove and dispose off-site unless specifically provided otherwise on the site work Drawings. Stockpile topsoil on site that is needed for later
- C.4. Remove all stumps and roots over 1 inch diameter from all topsoil for landscaping use.

## D. EXCAVATION

- D.1. Excavate for footings, piers and slabs to sizes and levels shown or required. Utilize straight edge bucket to minimize soil disturbance. Clean all footing excavations of loose material.
- D.2. All over-excavation shall be back-filled and compacted as "Engineered fill" or with concrete to same specifications as footing concrete.
- D.3. If over-excavation is required to remove soft spots resulting from conditions beyond the control of the Contractor, the Contractor shall receive additional compensation. Notify Engineer before proceeding.
- D.4. Soft spots created by the construction activities and special requirements for the construction process are the responsibility of the Contractor. (See paragraph "A" above)
- D.5. Do not excavate closer than 2:1 slope below base of footings unless approved by Engineer
- D.6. All excavated material not approved or required for the project to be removed at no additional cost. Grade and cover stockpiled material as required to afford weather protection.

## E. FILL MATERIALS AND INSTALLATION

- E.1. Notify Geotechnical Engineer prior to the start of all "Engineered fill" work so that the subgrade condition and fill material can be inspected. Obtain compaction tests if required.
- E.2. "Engineered fills": If approved by the Geotechnical Engineer, on-site materials, free of organic material, may be used for structural fill (under buildings and paved areas) subject to maintenance of a proper moisture content and obtaining required compaction.
- E.3. "Select Fill" (Unless directed otherwise by the Geotechnical Report):
  - E.3.a. Under building and footings: 1-1/2 inch minus well graded clean crushed rock (less than 5 percent passing 200 sieve).
  - E.3.b. Under paying: Base course of 1-1/2 inch minus or 3/4 inch minus well graded clean crushed rock (less than 5 percent passing 200 sieve) of depth shown on Drawings.
- E.3.c. Trench backfill. Unless otherwise specified, all trench backfill shall be 3/4 inch minus well-graded clean crushed rock. (Less than 8 percent passing 200 sieve).
- E.3.d. Back fill where finish grade is above building floor: With free draining
- granular material, pea-gravel or drain rock. E.3.e. Rip Rap: Class 50 unless otherwise noted on the plans.
- E.4. Top soil: Natural topsoil from on-site or as required by the plans, suitable for growing plants and free of limbs, roots, and rocks over 1 inch diameter. Remove any concrete or debris from planting areas. Cut and remove any paving more than 6 inch behind curb in planting areas.
- E.5. Compaction (Unless directed otherwise by the Geotechnical Report): E.5.a. Selection of compaction equipment and processes shall be the sole
  - responsibility of the Contractor. E.5.b. Prepare areas to receive "Engineered" or "Select" fill by compacting subgrade. If subgrade moisture content is not suitable, confer with
  - Engineer and condition material to near "optimum" and compact. E.5.c. Install material (except topsoil) in lifts not to exceed 8 inches (loose)
  - and compact with suitable equipment.
- E.5.d. Minimum density (per ASTM D-1557) as follows:

## COMPACTION E.5.d.a. APPLICATION (See Note 3 below) - Beneath foundations

<u> </u>	00/0
<ul> <li>Beneath slabs</li> </ul>	95 <u>%</u>
<u>— Beneath pavements (See Note 1 below)</u>	95 <u>%</u>
<ul> <li>Retaining or basement wall backfill (see Note 2 below)</li> </ul>	92%
Wall backfill	0.5%

### — Wall backfill - Utility Trench Backfill:

<ul> <li>Upper 3 ft beneath pavements, slabs or structures</li> </ul>	95 <u>%</u>
<u>— Below 3 ft beneath pavements, slabs or structures</u>	92%
In landscaped areas above pipe zone	90%
Landscape areas	Q0%

# E.5.e. NOTES:

- 1. Special attention to base rock and A.C. Paving placed against concrete at overhead doors to ensure proper compaction is achieved.
- 2. Use lightweight, manually—guided compactors within 3 feet of all walls.
- 3. Where conflicts occur between the above values, the highest percentage shall govern.
- 4. Initial compaction tests will be provided by Owner. Contractor shall be responsible for all re-testing required by tests not meeting Specifications. Contractor shall assist in scheduling all tests.

## GEOTEXTILE

- F.1. Provide geotextile fabric (filtration or separation) and geogrid where indicated on the drawings. Notify engineer prior to placement.
- F.2. Stabilization geotextile fabric shall be woven fabric with minimum mullen burst strength of 300 psi; approved manufacturer/grades: mirafi 500x, fibertex (grade 300), or as approved.
- F.3. Filtration (drainage) geotextile fabric shall be non-woven fabric with minimum values: permittivity — 0.5/s; grab strength — 80 lb; puncture strength — 35 lb; mullen burst strength - 130 psi; apparent opening size - us sieve 70. approved manufacturer/grades: thrace—ling 125ex; wellstone mills this e040, r040, or r042; us fabrics us 90nw; propex geotex 401; or as approved.
- F.4. <u>Separation geotextile fabric</u> shall be woven fabric with minimum values: permittivity - 0.01/s; grab strength - 180 lb; puncture strength - 80 lb; mullen burst strength — 290 psi; apparent opening size — us sieve 30. approved manufacturer/grades: thrace—ling gtf 200s; us fabrics us 200; propex geotex 200st; or as approved.
- F.5. Material for geogrid shall be as noted on the drawings.
- F.6. Area to receive geotextile fabric or geogrid to be graded smooth without abrupt elevation change so product will stretch tight and lay smooth over subgrade. Installation methods, equipment used, staking, repair and layout direction shall be per manufacturers directions. Provide adequate laborers to ensure that products are kept smooth as work progresses.
- G. EROSION AND SEDIMENTATION CONTROL
- G.1. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from drainage.
- G.2. Install erosion—control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- G.3. Materials:
- G.3.a. Gravel—filled sandbags (for gravel bag berms and gravel bag check dams): Burlap sacks filled with  $\frac{3}{4}$ " rock or  $\frac{1}{4}$ " pea gravel, stacked tightly, as shown on drawings.
- G.3.b. Stabilized construction entrance: (A minimum of 6" thick) 1" to 3" coarse aggregate, placed over geo-synthetic fabric for stability.
- G.3.c. Silt fence: Filter fabric material 36" wide with stitched loops over 2"x2"
- G.3.d. Temporary Gravel Construction Entrance/Exit: material shall be at least  $1\frac{1}{2}$ " clean rock with less than 5% passing the #200 sieve. Industrial, commercial, and subdivision sites shall use 2"-6" rock.
- G.4. All erosion control measures shall be inspected after each runoff producing rainfall and regularly during prolonged rainfall.
- G.5. All temporary erosion and sediment control measures shall be removed or stabilized onsite. Disturbed soil areas resulting from removal shall be permanently stabilized.

## H. ASPHALTIC CONCRETE PAVING

- H.1. Proof roll subgrade to verify stability. Notify Engineer to observe rolling. Remove and replace all soft spots encountered with compacted suitable material prior to rocking.
- H.2. Base material to be select fill as specified above.
- H.3. Check finished base rock for slope before starting paving. Notify Engineer before proceeding with paving if any site areas have insufficient slope less than 1 percent).
- H.4. Asphalt paving to be level 3, dense graded, 1/2" hmac mix (ODOT). Contractor to specify thickness shown on drawings. Deliver and place asphalt paving in accordance with current ODOT standard specifications as applicable unless otherwise approved.
- H.5. Slope all asphalt paving minimum one percent (0.01) to drain (unless otherwise shown on Drawings).

- I.1. Cross stripe all paved abrupt slopes exceeding 50 percent slope with safety yellow 3 inch wide stripes at 24 inches on center.
- J. EXTRUDED CONCRETE CURBS
- J.1. Curbs to be no—slump concrete with a minimum compressive strength of 3000 PSI at 28 days.

J.2. Spread epoxy bonding agent such as Concressive #1064 approved equal over

surface to receive curb. Install curb within 20 minutes after applying bonding

- J.3. Provide joints as required.
- J.4. Apply curing compound to all surfaces immediately following placement. J.5. Use caution in starting work that requires traffic on fresh placed asphalt paving. Check condition of paving and verify schedule for start of work with

# K. SITE UTILITIES

- K.1. General.
  - K.1.a. The work to be provided by the Contractor shall consist of furnishing all labor, materials, permits, surveying, supervision, coordination, and equipment necessary for the proper installation of the storm drainage. sewer system, and the water systems that are indicated on these Drawings. The work is to be completed so as to provide properly functioning systems that are acceptable to the governing authorities and as indicated on these Drawings.
  - K.1.b. Approvals: Different jurisdictions may prohibit the use of certain construction materials and/or procedures. Do no work without approval from the proper jurisdiction. Cost of changes incurred when work has proceeded without jurisdictional approval shall be the sole expense of the Contractor.
  - K.1.c. Safety: The safety (as it relates to this construction project) of workers, neighbors, and passers—by is to be the responsibility of the Contractor. Unsafe conditions shall be identified and corrected or, identified and secured. Work methods that may cause an unsafe condition to exist, shall be avoided at all costs.
  - K.1.d. Drawings: Drawings provided are based on reported site conditions and dimensions. Actual site conditions, or dimensions, may vary and any such variation should be reported to the Engineer at the earliest opportunity. Unanticipated conditions may require the revision of a portion of these Drawings. All dimensions shall be verified in the field by the Contractor prior to fabrication or construction of any portion of the proposed work.
  - K.1.e. Permits. The Contractor shall arrange and pay for permits, fees, service charges and inspections and shall present the Owner with a properly executed "Certificate of Inspection", prior to making application for payment for any portion of the work.
  - K.1.f. Codes. All work methods and materials shall conform to all local, state

- and federal requirements, regulations, and laws.
- K.2. MATERIAL: All materials used for the work shall be new unless noted on plans. Trade names denote character and quality of equipment desired and substitutions may be approved, if in the opinion of the Engineer, the proposed substitution is expected to perform properly. All costs associated with the Engineers review and changes in construction costs associated with the proposed substitution shall be the responsibility of the Contractor.

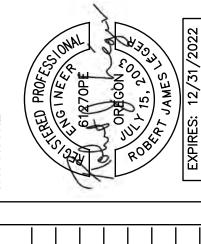
## K.3. WATER:

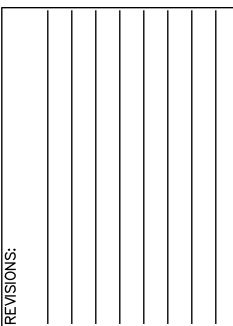
- K.3.a. Copper Pipe: Type K (soft copper 1/2" to 1-1/2", hard copper 2" and larger), underground piping, conforming to ASTM B-88. Fittings shall be wrought copper. Solder all joints and fittings.
- K.3.b. Ductile Iron Pipe (D.I.P.): Shall be cement—mortar lined and shall conform to ANSI A21.51. Class 52. All joints shall use O-ring rubber gaskets. Fittings shall be 125-pound class, meeting the requirements of ANSI C110.
- K.3.c. C-900 Polyvinyl Chloride Pipe (PVC C900 OR C905): Public and private FDC water pipe and fittings shall be Class 200 PVC C900. Private fire pipe and fittings shall be CLASS 150 PVC C900 OR C905 unless otherwise noted on the plans. C900 AND C905 PIPE shall meet the requirements of ASTM D-1784 in accordance with the requirements of AWWA C900. Gaskets at connections shall be used per ASTM F-477 to seal integral bell socket to the spigot of each joint, conforming to the requirements of ASTM D-3139.
- K.3.d. Schedule 40 polyvinyl chloride pipe (SCH 40 PVC): private domestic and irrigation water pipe and fittings shall be schedule 40 PVC (1/2" -4"). Schedule 40 pipe shall be manufactured in compliance with ASTM
- K.3.e. Water Service: Piping, valves, backflow prevention, vaults, meters, hydrants, and connection to main line shall be according to the requirements of the governing agencies.
- K.3.f. Alternate materials may be used if approved by the governing agency and the current State of Oregon Plumbing Specialty Code. K.4. STORM SEWER — All storm sewer pipe shown on the plans shall be Polyvinyl
- Chloride 3034 (PVC) pipe unless specified as other than PVC. Pipe materials other than those specified on the utility plan shall not be used unless authorized by Engineer. Likewise, pipe materials not listed below shall not be used without authorization from the Engineer.
- K.4.a. Polyvinyl Chloride Pipe (PVC): Pipe and fittings shall be PVC and shall meet the requirements of ASTM D-3034 SDR 35 (4"-15", solid wall) and ASTM F679 (18"-36", solid wall). Corrugated PVC Profile pipe (smooth interior) shall meet the requirements of ASTM F794-01 (4"-48")
- K.4.b. C900 Polyvinyl Chloride Pipe (PVC C900 OR C905): Pipe and fittings shall be PVC C900 (4" - 12", dr 25, dr 18 or dr 14) OR C905 (14" - 48", dr 25, dr 21 or dr 18) and shall meet the requirements of ASTM D-1784 in accordance with the requirements of AWWA C900. Gaskets at connections shall be used per ASTM F-477 to seal integral bell socket to the spigot of each joint.
- K.4.c. High density polyethylene pipe (HDPE): pipe and fittings shall be HDPE and shall meet the requirements of AASHTO M-252 (3"-10"), M-294(12" and larger), type S (4"-48" corrugated outside, smooth inside), type D (closed profile with smooth interior, 42"-48") and MP7 (54" and 60" type S and type D). HDPE meeting ASTM f 2648 (2"-60") may be used for private storm systems that do not operate under surcharge/pressure. Pipe can be solid, perforated or slotted. All joints shall be gasketed, lab test certified to 3.5 psi joints: Integral bell/spigot with a rubber gasket meeting ASTM f-477 installed on the spigot end.
- K.4.d. Concrete Pipe: Pipe and fittings shall be concrete bell and spigot pipe with rubber gaskets in confined grooves conforming to ASTM C-14 for Non-reinforced Concrete Pipe (CONC) and ASTM C-76 for Reinforced
- K.4.e. Soil Pipe (Traffic areas where cover is less than 15 inches from finish grade to top of pipe): Pipe shall be hub and spigot cast iron pipe (CIP) or Schedule 52 ductile iron bell and spigot pipe (DIP) with fittings conforming to ASTM A-74, with rubber O-ring gaskets in confined grooves or, with compression type gasket fittings, Or PVC C900 (dr 25. dr 18 or dr 14), OR C905 (dr 25, dr 21 or dr 18 only).
- K.4.f. Corrugated Metal Pipe (CMP): Shall be of the type, diameter, and gauge indicated on the Drawings. Pipe and fittings shall be helical corrugated unless otherwise specified. Pipe and fittings ends shall be annular for a distance of 12 inches. Pipes shall be connected with 12-inch wide annular corrugated coupling bands and 1/2 inch thick by 12—inch wide rubber gaskets.
- K.4.g. Catch Basins: Shall be 24 inch square and minimum 30 inch high (see plan for sump requirements), unless otherwise indicated, with 28 inch square standard cast iron grate and hinged drain access plates for clean—outs, all as manufactured by Gratemaster Ironworks or equal. Catch basins to be constructed of 10 gauge steel and to be asphalt coated after fabrication.
- K.4.h. Downspout Drains: Verify locations and special requirements with building elevation Drawings and with roof plans for downspout location. Adjust location as needed to assure plumb vertical downspout run. Notify Engineer of any discrepancy or other problem. Drains in paved areas to be cast iron soil pipe or Schedule 40 PVC.
- K.4.i. Drains in landscaped areas may be PW storm drain Series 46 with 80 percent compaction and with compaction verification. Provide clean—out at each downspout. Use branch fitting with threaded plug for clean—out.
- K.4.j. Manholes and Cleanouts:
- K.4.j.a. PVC Storm Manhole: Main body and pipe stubs shall conform to ASTM D1784 cell class 12454. Gaskets shall be made from material meeting the requirements of ASTM F477. Ductile iron shall be used to manufacture the castings, and shall conform to ASTM A536 grade 70-50-05.
- K.4.j.b. See SANITARY SEWER below.

## K.5. SANITARY SEWER

- K.5.a. Polyvinyl Chloride (PVC) Pipe: Pipe and fittings shall be PVC and shall meet the requirements of ASTM D-3034 SDR 35 (4"-15") and ASTM F679 (18"-27"); Schedule 40 PVC (or PVC C-900) shall be used in areas where the pipe cover is to be less than 15 inches from finish grade to top of pipe.
- K.5.b. C900 Polyvinyl Chloride Pipe (PVC C900 OR C905): Pipe and fittings shall be PVC C900 OR C905 and shall meet the requirements of ASTM D-1784 in accordance with the requirements of AWWA C900. Gaskets at connections shall be used per ASTM F-477 to seal integral bell socket to the spigot of each joint.







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SHEET TITLE:

CIVIL SPECIFICATIONS

SHEET NO. C0.10

- K.5.c. Concrete Manholes: Shall be fabricated per ASTM C-478 and shall be 48—inch diameter (minimum) with a 3—foot eccentric cone over standard sections. Where manhole depths are not adequate for cones, use 8—inch thick (State Highway) flat top slabs. Use standard cast iron frames and covers for storm and use watertight standard cast iron frames and covers for sanitary sewers.
- K.5.d. Corrugated Manholes: Shall be of the same material, gauge, and coating as the corrugated pipe. Manhole lid and frame shall be constructed as to not directly bear upon the top end of the corrugated manhole.

## K.6. EXECUTION.

- K.6.a. Sewer Clean—Outs: Shall be installed in the storm and sanitary systems where noted on Drawings (CO) and where specifically required by the governing code. Clean—outs in exterior paved areas shall be heavy duty cast iron access box with secured cover, anchoring flanges, and cast iron clean—out with serrated cut—off sections and threaded bronze plug. Provide an 18 inch square by 6 inch thick concrete pad around the clean-out IN UNPAVED AREAS.
- K.6.b. Rim elevations of utility and drainage structures shall be installed so that rims may be adjusted  $\pm 0.5$  to match finish grade.
- K.6.b.a. Rimriser adjustment screws may be used to facilitate installation of rim to be flush with finished grade.
- K.6.c. Bedding: Bed all piping on a minimum 4 inch thick layer of sand or 3/4 inch minus crushed rock. Inspection of the excavated trench by the Engineer may provide for the use of compacted native material for bedding. Provide Owner with deductive alternate for use of native bedding material. Bedding shall be removed to the necessary depth for piping bells and couplings to maintain contact of the pipe on the bedding for its entire length.
- K.6.d. Pre—Cover: Cover the pipe to a minimum depth of 5 inches with compacted sand or 3/4 inch minus crushed rock. Inspection of the excavated trench by the Engineer may provide for the use of compacted native material pre-cover. Provide the Owner with deductive alternate for use of native pre-cover material.
- K.6.e. Back Fill: All back fill for site utilities shall be placed in layers and compacted as required by Division 2, Fill Materials and Installation.
- K.6.f. Grading: Following back filling, grade trenches to the level of surrounding soil. All excess soil shall be disposed of off-site, unless otherwise directed by the Engineer.

## L. ACCESSIBLE (HANDICAP) SIGNAGE

L.1. Signs to be metal panels with permanent contrasting characters and background complying with state and local regulations and ADAAG requirements. (See Division 10, SIGNS, for additional information).

## DIVISION 3 - CONCRETE

## A. GENERAL

- A.1. All work to comply with ACI codes and standards.
- A.2. Inspections/testing.
  - A.2.a. Owner will provide a part—time concrete inspector and will conduct laboratory tests as required to verify compliance with the project Specifications. Contractor shall be solely responsible for compliance with the Specifications.
  - A.2.b. Contractor shall be responsible for any extra concrete sampling or testing such as field cured cylinders for determining strength for lifting panels, etc.

# A.3. Tolerances:

A.3.a. Walls, columns: Maximum deviation from plumb = 1/4 inch.

# B. FORMWORK AND SHORING

- B.1. Contractor shall be solely responsible for providing the necessary formwork and shoring suitable for the conditions involved and compatible with the finished appearances.
- B.2. Ground forms. To the extent practical all isolated footings should be ground formed or partially ground formed. Clean all ground formed footings of loose debris and use caution during concrete placing to avoid cave—ins.
- B.3. Chairs for reinforcing steel shall be adequate to securely support and hold reinforcing steel in place. For concrete slab on grade and tilt wall panels reinforcing shall be supported at not greater than 6'-0" on center for #5 bars or larger. For tilt wall panel reinforcing shown each face on Drawings, the top bar shall adequately be supported using metal chairs.

## C. CONCRETE MIX/MATERIAL

- C.1. Strength: Average 28 day concrete strength determined by job cast lab cured cylinder to be as indicated below plus increase depending on the plant's standard deviation as specified in ACI 318. Provide mix designs to the Engineer for all concrete to be used. Clearly label all mix designs for proposed area of use.
- C.2. Minimum mix requirements:

LOCATION	MIN. COMP.	SLUMP	MIN. CEM	ADMIXTURES
	STRENGTH	(a)	CONTENT	
Miscellaneous	3,000 PSI	0" - 5"	470 LB.	(b)

- (a) Slump exceeding specified limits shall not be incorporated in the project except by written approval from Engineer.
- (b) WRA = water reducing agent.
- C.3. Use Type I Cement, per ASTM C—150 unless otherwise approved.
- C.4. Aggregate ASTM C33. Size to be 3/4 inch maximum size aggregate.
- C.5. Water Reducing Agent (WRA) shall be Polyheed R—1 or Duracem 55 (minimum 6 oz. Per 100 pounds cement). Comply with ASTM C-494.

## D. REINFORCING

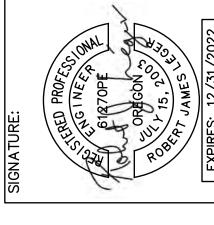
- D.1. All reinforcing to be ASTM A615 Grade 60 unless otherwise noted.
- D.2. Use only A706 weldable rebar if rebar is to be welded. Use only low hydrogen electrodes. All welding to be in compliance with AWS D1.4.
- D.3. Fabricate and install reinforcing steel according to the Manual of Standard
- Practice for Detailing Reinforced Concrete Structures—ACI Standard 315. D.4. Provide  $2'-0" \times 2'-0"$  corner bars to match horizontal reinforcing in poured—in—place walls and footings at all corners and intersections.
- D.5. Splices in wall reinforcing shall be lapped 40 bar diameters (2'-0" minimum) and shall be staggered at least 4 feet at alternate bars.
- D.6. All openings smaller than 30 inches x 30 inches that disrupt reinforcing shall have an amount of reinforcing equal to the amount disrupted placed both sides of opening.
- D.7. Provide the following reinforcing around wall openings larger than 30 inch x

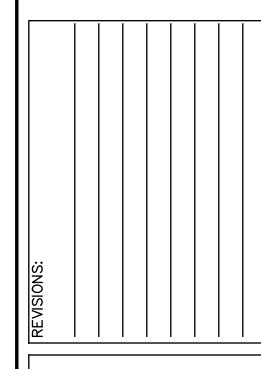
- D.7.a. (2) #5 over opening x opening width plus 2' 0'' each side.
- D.7.b. (2) #5 under opening x opening width plus 2' 0'' each side.
- D.7.c. (2) #5 each side of opening x full story height.
- D.7.d. Provide 90 degree hook for bars at openings if required extension past opening cannot be obtained. D.8. Provide (2) #4 continuous bars at top and bottom and at discontinuous ends
- of all walls.
- D.9. Provide dowels from footings to match all vertical wall, pilaster and column reinforcing. (Poured-in-place columns and walls).
- D.10. Lap all bars in continuous and intersecting footings 2'-0" or 40 bar diameters, whichever is greater. D.11. All vertical wall reinforcing to be placed in center of wall unless shown
- otherwise on Drawings. D.12. Extend reinforcing to within 1 inch of wall and slab edges unless otherwise

## E. CONTROL JOINTS AND EXPANSION JOINTS

- E.1. Provide joints in exterior walks as follows unless otherwise shown: Heavy (3/4 inch) tooled joint at 5 feet on center or a maximum panel aspect ratio of 1.3 to 1.0.
- E.2. Keyed joints: Where keyed joints are required or allowed, follow precisely the key configurations. Use of premolded plastic keys will not be allowed.
- E.3. Doweled joints: Where doweled joints are required or allowed, take precautions to maintain square alignment both horizontal and vertical. All dowel material to be saw cut or ground smooth to maintain cross—section at

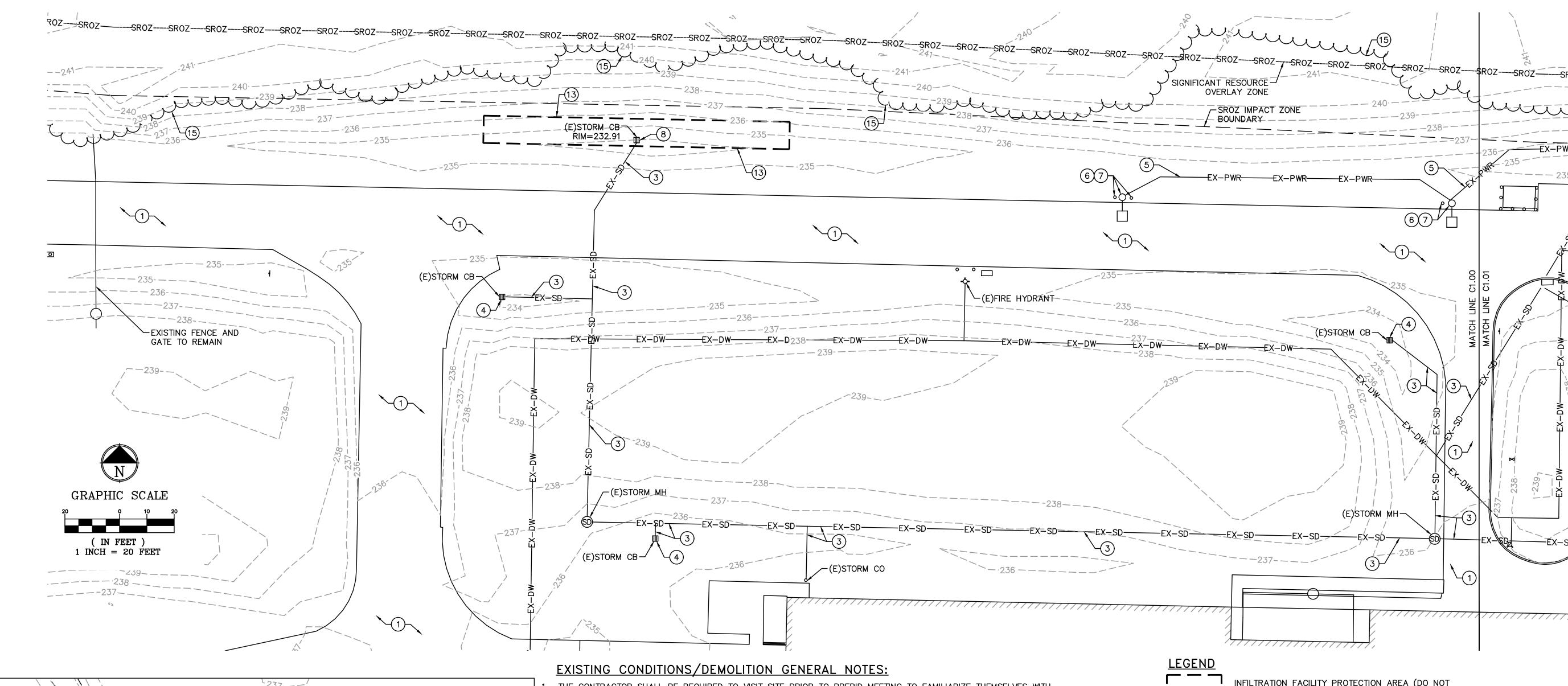


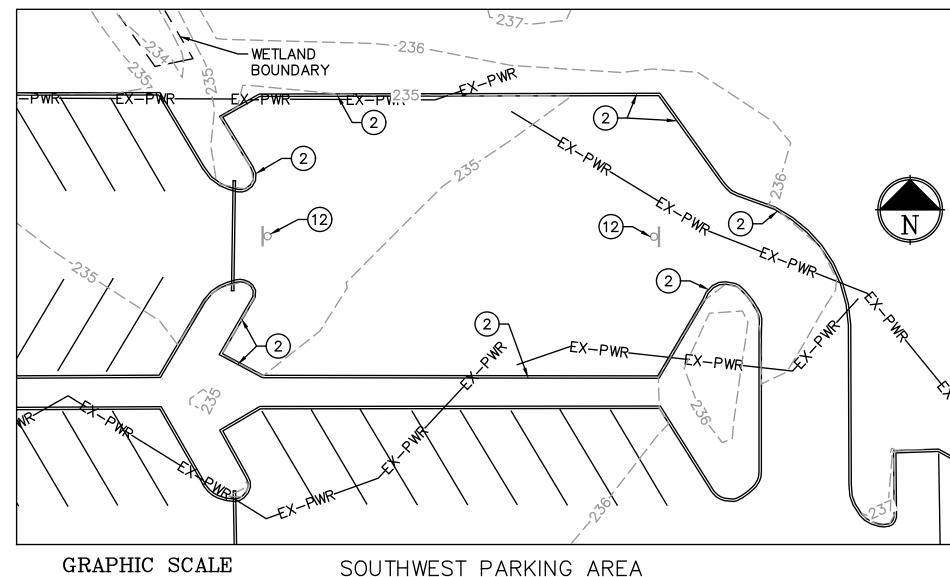




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SPECIFICATIONS



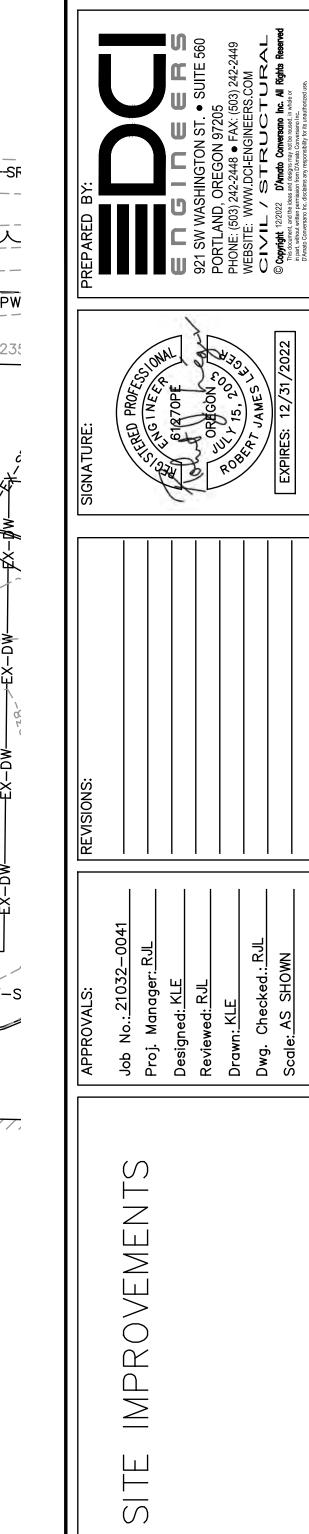


- THE CONTRACTOR SHALL BE REQUIRED TO VISIT SITE PRIOR TO PREBID MEETING TO FAMILIARIZE THEMSELVES WITH DEMOLITION, GRADING, ETC., AND IMPROVEMENTS TO REMAIN.
- 2. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ANY AND ALL ITEMS NOT OTHERWISE LISTED HEREIN THAT CONFLICT WITH THE CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL CONTACT ENGINEER OF RECORD IMMEDIATELY TO DETERMINE IF ANY ITEMS NOT SHOWN ON THE PLANS MUST BE REMOVED. FAILURE TO DO SO DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY AND COST FOR REMOVING ITEMS REQUIRED.
- 3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING (IF APPLICABLE) ALL KNOWN ENVIRONMENTAL INVESTIGATION STUDIES AND REPORTS PRIOR TO BIDDING. REPORTS ARE INCLUDED IN THE PROJECTS SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH THE ENVIRONMENTAL ENGINEER ON EXACT AREAS OF CONTAMINATION, IF ANY.
- THE CONTRACTOR SHALL TAKE EFFECTIVE ACTION TO PREVENT THE FORMATION OF ANY AIRBORNE DUST NUISANCE, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM FAILURE TO FOLLOW THE EROSION & SEDIMENT CONTROL GUIDELINES.
- 5. ALL EXISTING REMAINING UTILITIES AND REMAINING IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE LOCAL AGENCY AND THE ENGINEER AT THE CONTRACTOR'S SOLE EXPENSE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DOCUMENT PRIOR DAMAGES.
- 6. DO NOT CUT ANY ROOTS OVER 3". ROOTS THAT ARE CUT SHALL RESULT IN A FLAT SURFACE WITH ADJACENT BARK FIRMLY ATTACHED. DO NOT TEAR OR CRUSH ROOTS.
- ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- SEDIMENT BARRIERS APPROVED FOR USE INCLUDE <u>SEDIMENT FENCE</u>, <u>BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL</u>, <u>STRAW WATTLES</u>, <u>OR OTHER APPROVED MATERIALS</u>.
- 9. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
- 10. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- 11. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

# INFILTRATION FACILITY PROTECTION AREA (DO NOT COMPACT NATIVE SOILS AT FACILITY SUBGRADE ELEVATION)

# **EXISTING CONDITIONS/DEMOLITION KEYNOTES:**

- 1. PRESERVE AND PROTECT EXISTING ASPHALT CONCRETE PAVEMENT AREA.
- 2. PRESERVE AND PROTECT EXISTING CONCRETE CURB.
- 3. PRESERVE AND PROTECT EXISTING STORMWATER LINE.
- 4. PRESERVE AND PROTECT EXISTING STORMWATER CATCH BASIN.
- 5. PRESERVE AND PROTECT EXISTING UNDERGROUND POWER LINE AND CONDUITS.
- 6. PRESERVE AND PROTECT EXISTING LIGHT POST AND BASE.
- 7. PRESERVE AND PROTECT EXISTING ELECTRICAL STRUCTURE AND BOLLARDS.
- 8. REMOVE EXISTING STORMWATER CATCH BASIN. PRESERVE CONNECTING EXISTING STORMWATER LINE FOR RE-CONNECTION.
- 9. COORDINATE REMOVAL OF EXISTING RETAINING WALL AND GUARDRAIL AT PROPOSED RAMP
- 10. COORDINATE REMOVAL OF EXISTING CONCRETE DOCK AT PROPOSED RAMP LOCATION WITH THE GRADING DETAIL AND LAYOUT PLAN WITHIN THE CIVIL PLAN SET.
- 11. PRESERVE AND PROTECT EXISTING STORMWATER CLEANOUT WITHIN PROPOSED RAMP AREA. CLEANOUT SHALL BE RAISED TO MATCH FINISH GRADE.
- 12. REMOVE EXISTING BASKETBALL HOOP AND POLE. PRESERVE AND RETURN TO OWNER. FILL IN POLE HOLE WITH HMAC OR WMAC PATCH. COLD PATCHING IS NOT ALLOWED.
- 13. PRESERVE AND PROTECT NEW INFILTRATION FACILITY AREA. DO NOT COMPACT SOILS, HANDLE HEAVY MACHINERY, OR USE FOR STORAGE WITHIN THE BOUNDARY OF THE FACILITY.
- 14. SAWCUT 9" MIN., 12" MAX. FROM FACE OF NEW RAMP WALL FOR FOOTING.
- 15. PRESERVE AND PROTECT EXISTING TREES AND SHRUBS AT TREE LINE. SEE EROSION CONTROL PLAN, SHEET ESC9.00 FOR TREE PROTECTION REQUIREMENTS.



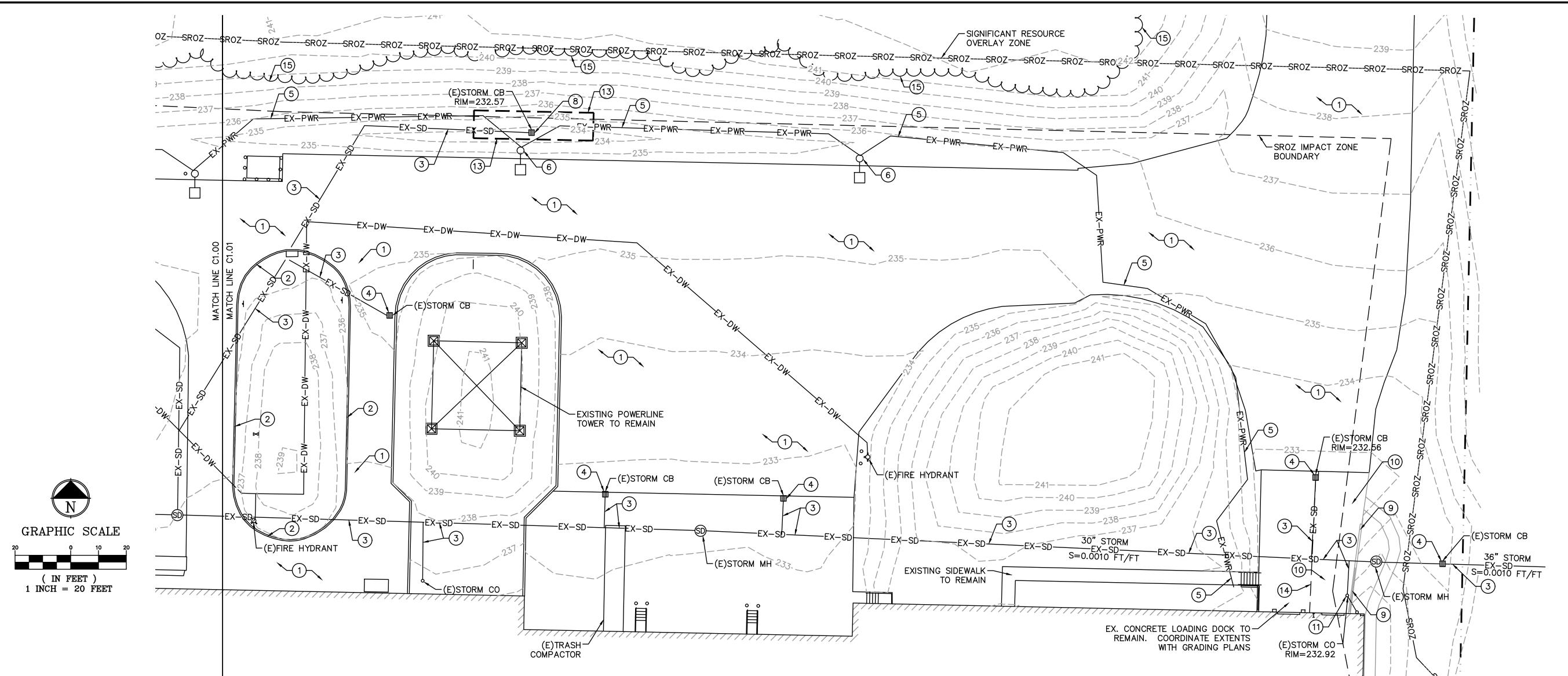
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EXISTING CONDITIONS AND DEMOLITION PLAN WEST

SHEET NO.

( IN FEET )

1 INCH = 20 FEET



# **EXISTING CONDITIONS/DEMOLITION GENERAL NOTES:**

- 1. THE CONTRACTOR SHALL BE REQUIRED TO VISIT SITE PRIOR TO PREBID MEETING TO FAMILIARIZE THEMSELVES WITH DEMOLITION, GRADING, ETC., AND IMPROVEMENTS TO REMAIN.
- 2. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ANY AND ALL ITEMS NOT OTHERWISE LISTED HEREIN THAT CONFLICT WITH THE CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL CONTACT ENGINEER OF RECORD IMMEDIATELY TO DETERMINE IF ANY ITEMS NOT SHOWN ON THE PLANS MUST BE REMOVED. FAILURE TO DO SO DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY AND COST FOR REMOVING ITEMS REQUIRED.
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- 5. ALL EXISTING REMAINING UTILITIES AND REMAINING IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE LOCAL AGENCY AND THE ENGINEER AT THE CONTRACTOR'S SOLE EXPENSE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DOCUMENT PRIOR DAMAGES.
- 6. DO NOT CUT ANY ROOTS OVER 3". ROOTS THAT ARE CUT SHALL RESULT IN A FLAT SURFACE WITH ADJACENT BARK FIRMLY ATTACHED. DO NOT TEAR OR CRUSH ROOTS.
- 7. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- 8. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
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INFILTRATION FACILITY PROTECTION AREA (DO NOT \_\_\_ COMPACT NATIVE SOILS AT FACILITY SUBGRADE ELEVATION)

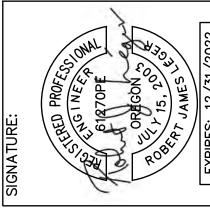
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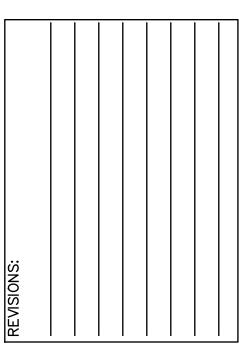
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- CLEANOUT SHALL BE RAISED TO MATCH FINISH GRADE.

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- 12. REMOVE EXISTING BASKETBALL HOOP AND POLE. PRESERVE AND RETURN TO OWNER. FILL IN POLE HOLE WITH HMAC OR WMAC PATCH. COLD PATCHING IS NOT ALLOWED.
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- 15. PRESERVE AND PROTECT EXISTING TREES AND SHRUBS AT TREE LINE. SEE EROSION CONTROL PLAN, SHEET ESC9.00 FOR TREE PROTECTION REQUIREMENTS.

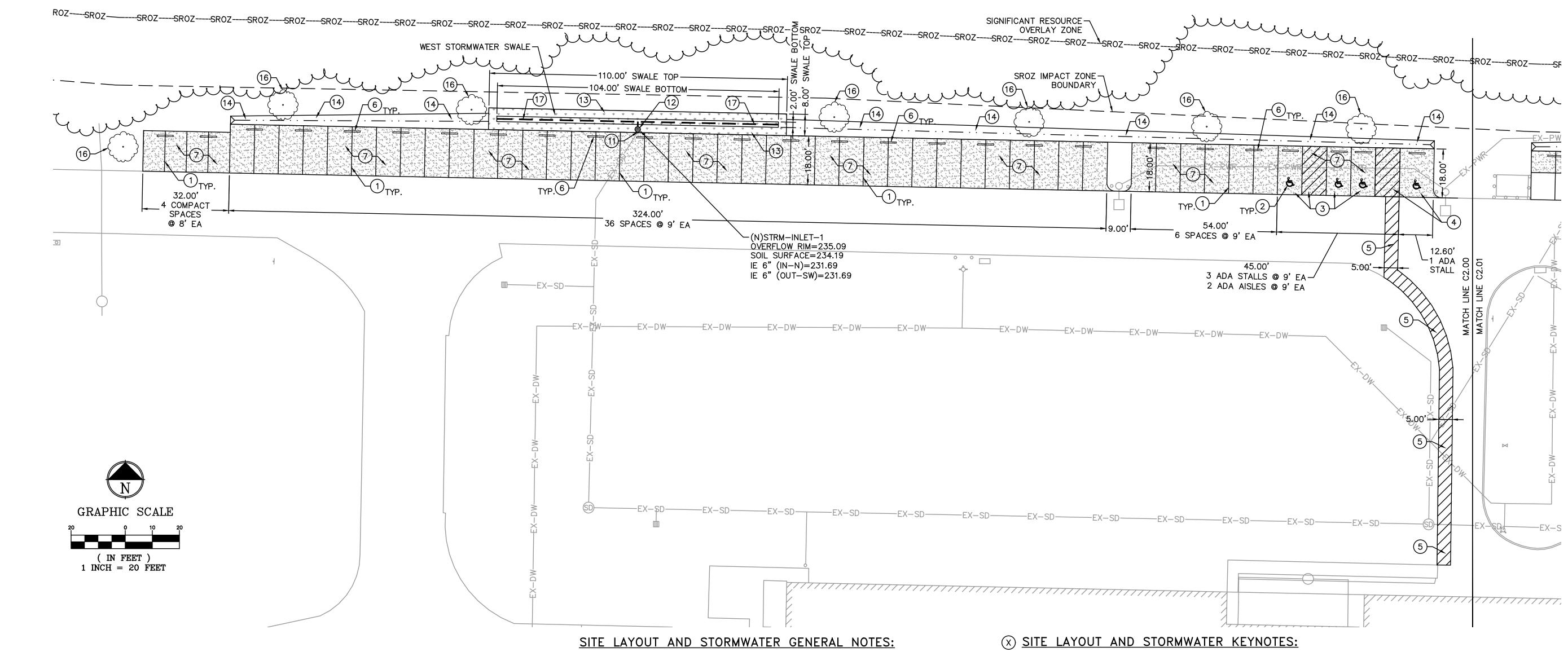


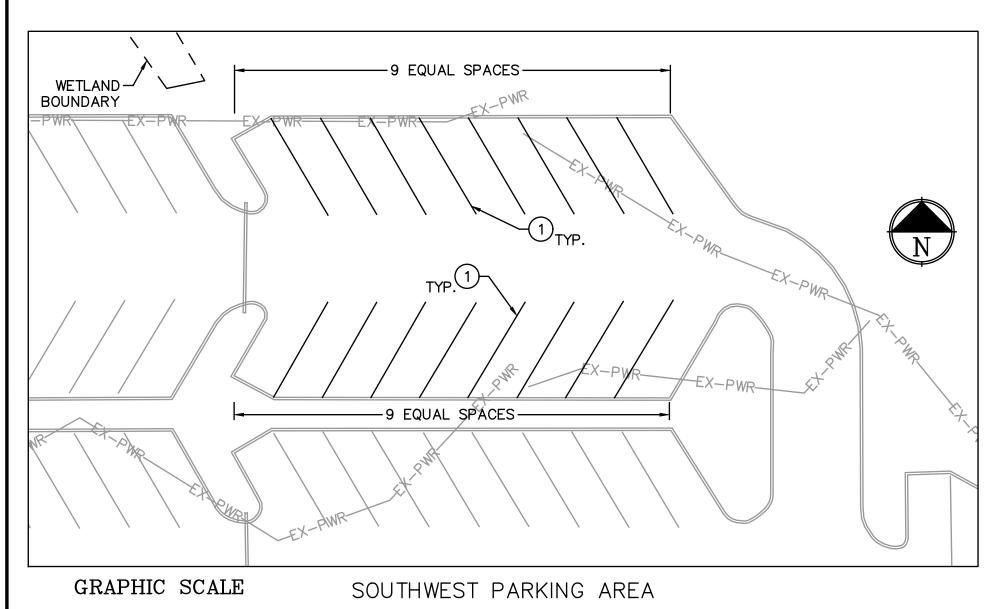




SHEET TITLE:

EXISTING CONDITIONS AND DEMOLITION PLAN EAST





- 1. TRAFFIC CONTROL FOR THE SITE SHALL FOLLOW THE PROVISIONS IN THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 2. SIDEWALK CROSS SLOPES SHALL BE 1.5% MAXIMUM TOWARDS THE PARKING FIELD, WHERE APPLICABLE.
- 3. REFER TO LANDSCAPING NOTES ON SHEET C4.00 FOR LANDSCAPE REQUIREMENTS.
- 4. ALL DRAINAGE AND UTILITY STRUCTURES SHALL BE INSTALLED SO THAT RIM ELEVATIONS CAN BE ADJUSTED TO MATCH FINISHED GRADE.
- 5. SWALE DIMENSIONS SHOWN ARE TO BOTTOM OF SWALE, UNLESS INDICATED OTHERWISE.
- 6. IN AREAS WHERE STORMWATER LINES ARE LESS THAN 36", THE STORMWATER LINE SHALL BE COMPRISED OF DUCTILE IRON, CLASS—51 CEMENT LINED PIPE (DI

# <u>LEGEND</u>

NEW ASPHALT CONCRETE PAVEMENT AREA

A A A

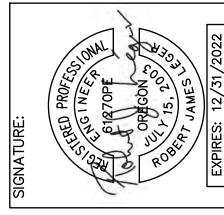
NEW PORTLAND CEMENT CONCRETE AREA

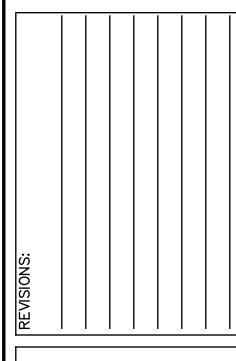
NEW VEGETATED SWALE AREA

- 1. PAINT NEW 4" WIDE, WHITE STRIPE.
- 2. PAINT NEW ADA WHEELCHAIR SYMBOL. SEE DETAIL 1/C5.00.
- 3. CONSTRUCT NEW ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
- 4. CONSTRUCT NEW VAN-ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
- 5. PAINT NEW ACCESSIBLE PATH. STRIPING SHALL BE COMPRISED OF 4" WIDE, WHITE STRIPES AT A 45° ANGLE, SPACED 2' ON CENTER, WITH 4" WIDE, WHITE CONTINUOUS STRIPING ALONG EDGES. PATH SHALL BE 5' WIDE.
- 6. INSTALL CONCRETE WHEELSTOP, 5' LONG, 8" WIDE. CENTER BETWEEN SPACES AND SECURE TO PAVEMENT.
- 7. CONSTRUCT ASPHALT CONCRETE PAVEMENT SECTION. SEE DETAIL 3/C5.00 AND CITY OF WILSONVILLE DRAWING NUMBER RD-1170/C5.00.
- 8. CONSTRUCT NEW THICKENED PORTLAND CEMENT CONCRETE PAVEMENT SECTION. SEE DETAIL 2/C5.00.
- 9. CONSTRUCT NEW RAMP PER GRADING DETAILS ON SHEET C3.10.
- 10. CONSTRUCT NEW STRUCTURAL WALL AND GUARDRAIL ALONG RAMP PER DETAIL 1/C5.01.
- 11. CONNECT EXISTING STORMWATER LINES TO THE NEW CATCH BASIN USING APPROVED PREMANUFACTURED FITTINGS.
- 12. CONSTRUCT NEW 24" DIAMETER NYLOPLAST OVERFLOW INLET WITH GRATE PER CITY OF WILSONVILLE DRAWING NUMBER S-2112/C5.00. 6" UNDERDRAIN PIPES SHALL CONNECT TO THE NEW BASIN WITH REMOVABLE CAPS WITH 1" DRILLED ORIFICES.
- 13. CONSTRUCT UNLINED STORMWATER SWALE PER CITY OF WILSONVILLE DRAWING NUMBER ST-6045/C5.01. SIDE SLOPES SHALL BE 3H:1V, MAXIMUM. AREAS WITHIN SWALE BASINS SHALL BE PROTECTED FROM USE AS CONSTRUCTION STORAGE AREAS AND OVER-COMPACTION BY EQUIPMENT THROUGHOUT THE CONSTRUCTION PERIOD.
- 14. CONSTRUCT STORMWATER CHANNEL FOR RUNOFF PER GRADING PLANS C3.00 AND C3.01. SEE CROSS SECTION DETAIL, SHEET C3.10.
- 15. ADJUST EXISTING STORMWATER CLEANOUT RIM IN NEW RAMP TO FINISH GRADE.
- 16. INSTALL NEW TREE PER CITY OF WILSONVILLE DRAWING NUMBER P-5000/C5.01. TREE SHALL BE 1" CALIPER MINIMUM TILIA CORDATA, LITTLELEAF LINDEN.
- 17. CONSTRUCT NEW 6" PERFORATED PVC UNDERDRAIN LINE BENEATH STORMWATER SWALE. CONNECT TO OVERFLOW INLET USING APPROVED FITTINGS. UNDERDRAIN SHALL BE EMBEDDED IN DRAIN ROCK SECTION, WITH INVERT ELEVATION BEING APPROXIMATELY 2.50' BELOW SOIL SURFACE.
- 18. EXTERIOR DOWNSPOUT LINE TO REMAIN. INSTALL CONCRETE FILLED BOLLARD OR OTHER PROTECTION.

PREPARED BY:

English Control of the Control of the





Proj. Manager: RJL

Designed: KLE

Reviewed: RJL

Drawn: KLE

Dwg. Checked: RJL

Scale: AS SHOWN

ESS INC. SITE IMPROVEMENTS

SHEET TITLE:

SITE LAYOUT AND

STORMWATER PLAN

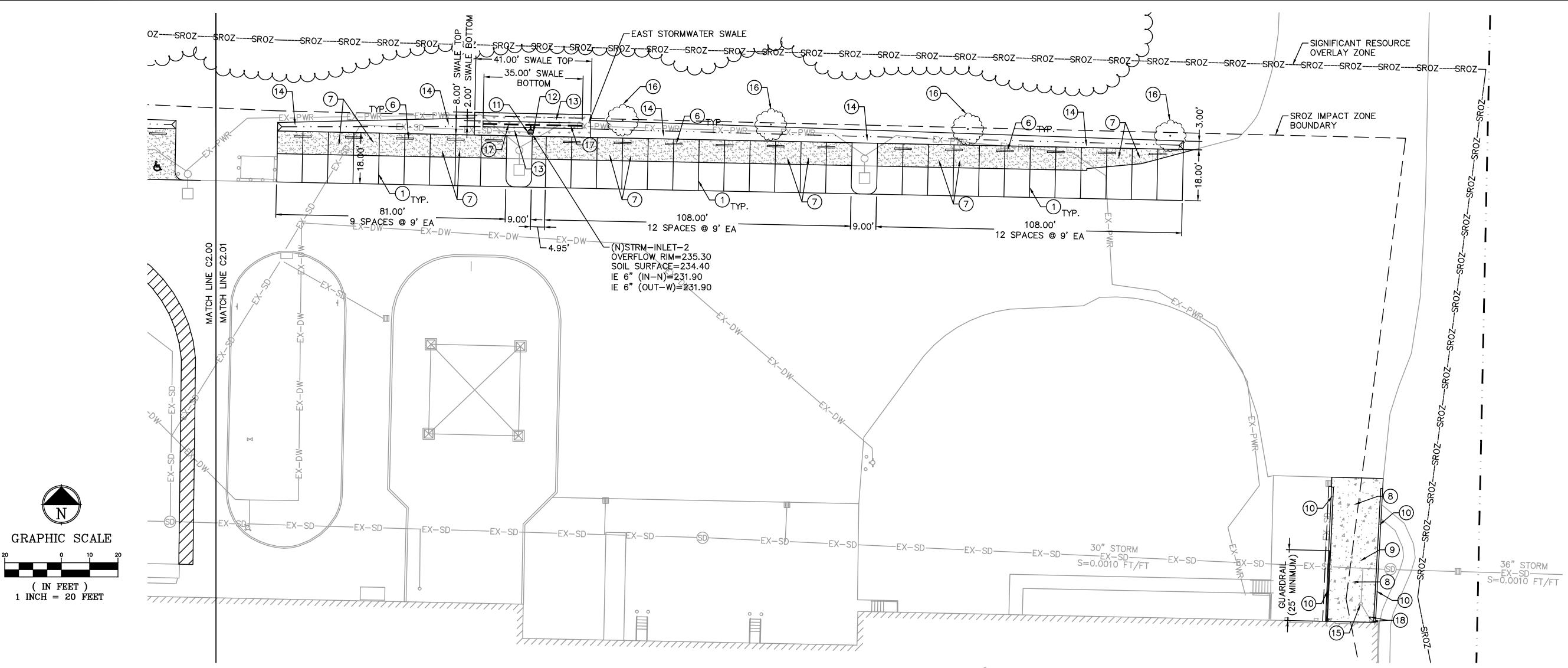
— WEST

SHEET NO. C2.00

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( IN FEET )

1 INCH = 20 FEET



# SITE LAYOUT AND STORMWATER GENERAL NOTES:

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# <u>LEGEND</u>



NEW ASPHALT CONCRETE PAVEMENT AREA



NEW PORTLAND CEMENT CONCRETE AREA

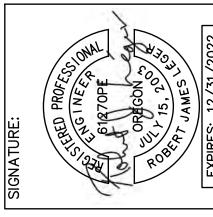


NEW VEGETATED SWALE AREA

# X SITE LAYOUT AND STORMWATER KEYNOTES:

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- 2. PAINT NEW ADA WHEELCHAIR SYMBOL. SEE DETAIL 1/C5.00.
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- 4. CONSTRUCT NEW VAN-ACCESSIBLE PARKING AREA AND LANDING ZONE. AREA SHALL NOT EXCEED 1.8% IN ANY DIRECTION. SEE DETAIL 1/C5.00.
- 5. PAINT NEW ACCESSIBLE PATH. STRIPING SHALL BE COMPRISED OF 4" WIDE, WHITE STRIPES AT A 45° ANGLE, SPACED 2' ON CENTER, WITH 4" WIDE, WHITE CONTINUOUS STRIPING ALONG EDGES. PATH SHALL BE 5' WIDE.
- 6. INSTALL CONCRETE WHEELSTOP, 5' LONG, 8" WIDE. CENTER BETWEEN SPACES AND SECURE TO PAVEMENT.
- 7. CONSTRUCT ASPHALT CONCRETE PAVEMENT SECTION. SEE DETAIL 3/C5.00 AND CITY OF WILSONVILLE DRAWING NUMBER RD-1170/C5.00.
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- 10. CONSTRUCT NEW STRUCTURAL WALL AND GUARDRAIL ALONG RAMP PER DETAIL 1/C5.01.
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- 12. CONSTRUCT NEW 24" DIAMETER NYLOPLAST OVERFLOW INLET WITH GRATE PER CITY OF WILSONVILLE DRAWING NUMBER S-2112/C5.00. 6" UNDERDRAIN PIPES SHALL CONNECT TO THE NEW BASIN WITH REMOVABLE CAPS WITH 1" DRILLED ORIFICES.
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- 18. EXTERIOR DOWNSPOUT LINE TO REMAIN. INSTALL CONCRETE FILLED BOLLARD OR OTHER PROTECTION.





REVISIONS:						
REVISION						
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Job No.: 21032-0041
Proj. Manager: RJL
Designed: KLE
Reviewed: RJL
Drawn: KLE
Dwa. Checked: RJL

ESS INC. SITE IMPROVEMENT

SHEET TITLE:

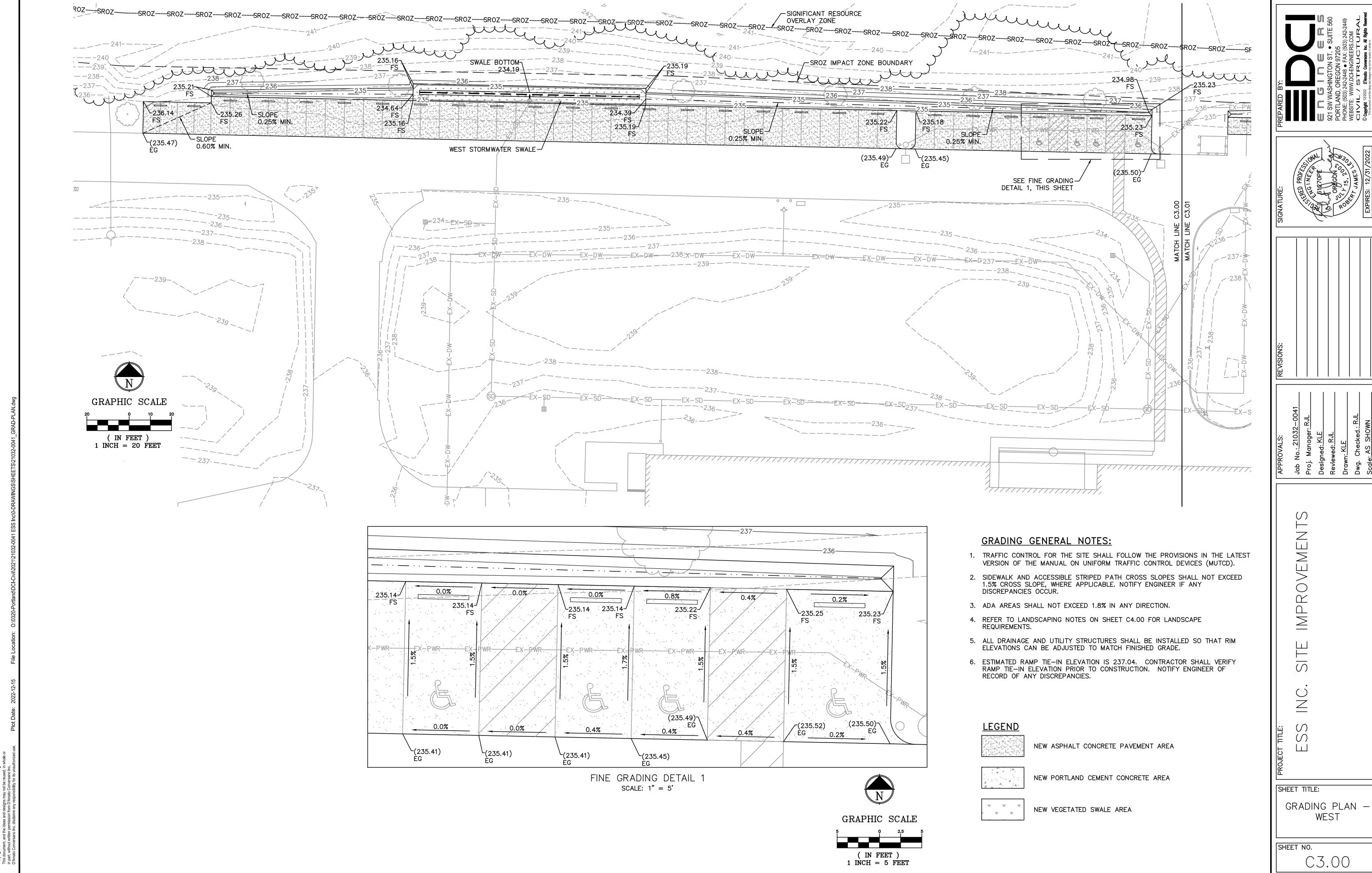
SITE LAYOUT AND

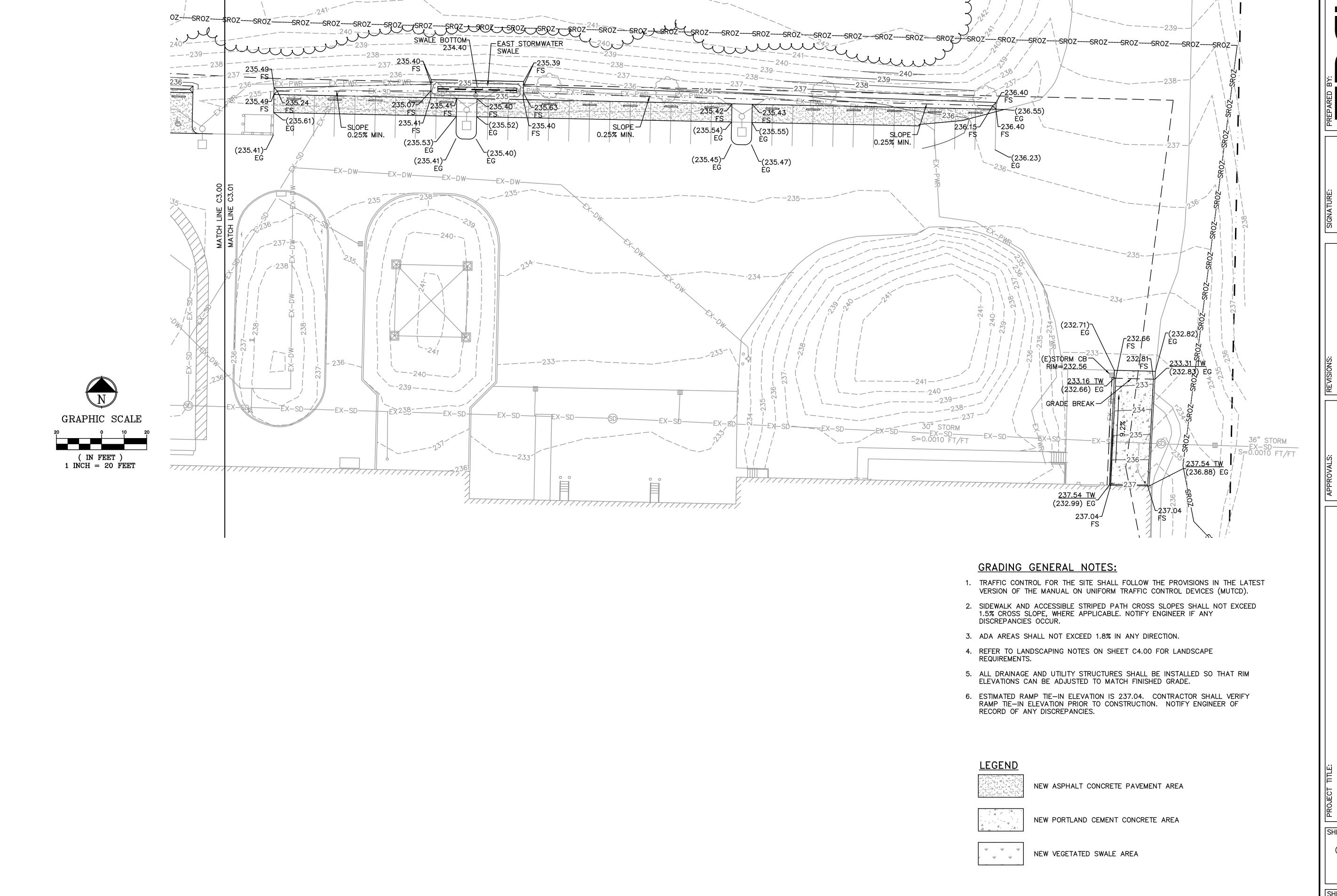
STORMWATER PLAN

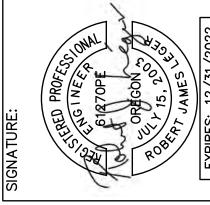
— EAST

SHEET NO.

C2.01







REVISIONS:

Proj. Manager: RJL

Designed: KLE

Reviewed: RJL

Drawn: KLE

Dwg. Checked: RJL

IC. SITE IMPROVEMENTS

EET TITLE:

SHEET TITLE:

GRADING PLAN — EAST

# **SIGNAGE NOTES:**

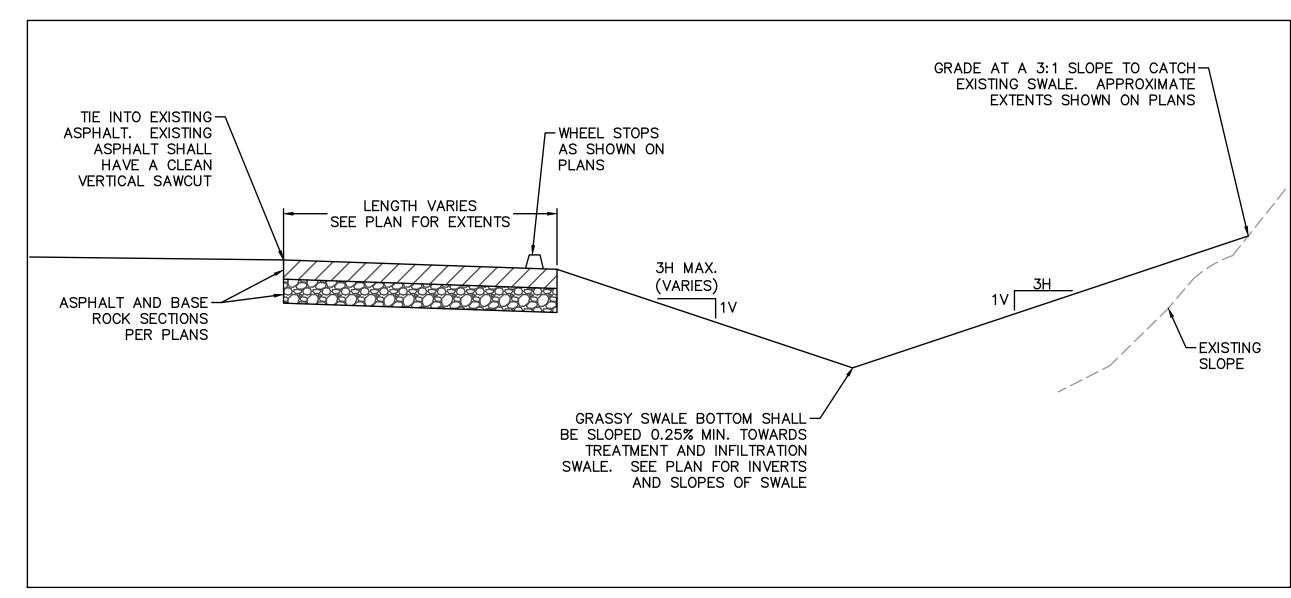
## 301.12.03 SIGNAGE REQUIREMENTS

INFORMATIONAL SIGNAGE IS REQUIRED FOR SOME SITE USES AND ACTIVITIES THAT HAVE THE POTENTIAL TO CONTAMINATE STORMWATER. SIGNAGE ADDRESSES GOOD HOUSEKEEPING RULES AND PROVIDES EMERGENCY RESPONSE MEASURES IN CASE OF AN ACCIDENTAL SPILL.

- a. SIGNS SHALL BE LOCATED AND PLAINLY VISIBLE FROM ALL ACTIVITY AREAS. MORE THAN ONE SIGN MAY BE NEEDED TO ACCOMMODATE LARGER ACTIVITY AREAS. SIGNS SHALL BE WATER—RESISTANT. THEY SHALL INCLUDE THE FOLLOWING INFORMATION:
  - 1. SAFETY PRECAUTIONS
  - 2. IMMEDIATE SPILL RESPONSE PROCEDURES—FOR EXAMPLE: "TURN THE VALVE LOCATED AT..." OR "USE ABSORBENT MATERIALS".
  - 3. EMERGENCY CONTACT(S) AND TELEPHONE NUMBER(S).
- b. SIGNS MAY NEED TO BE IN MORE THAN ONE LANGUAGE IF REQUIRED TO EFFECTIVELY COMMUNICATE WITH EMPLOYEES AND DELIVERY PERSONNEL.
- c. ANY APPLICABLE SPILL RESPONSE SUPPLIES NEED TO BE CLEARLY MARKED AND LOCATED WHERE THE SIGNAGE IS POSTED AND NEAR THE HIGH—RISK ACTIVITY AREA. MORE THAN ONE SPILL RESPONSE KIT MAY BE NECESSARY TO ACCOMMODATE LARGER ACTIVITY AREAS.

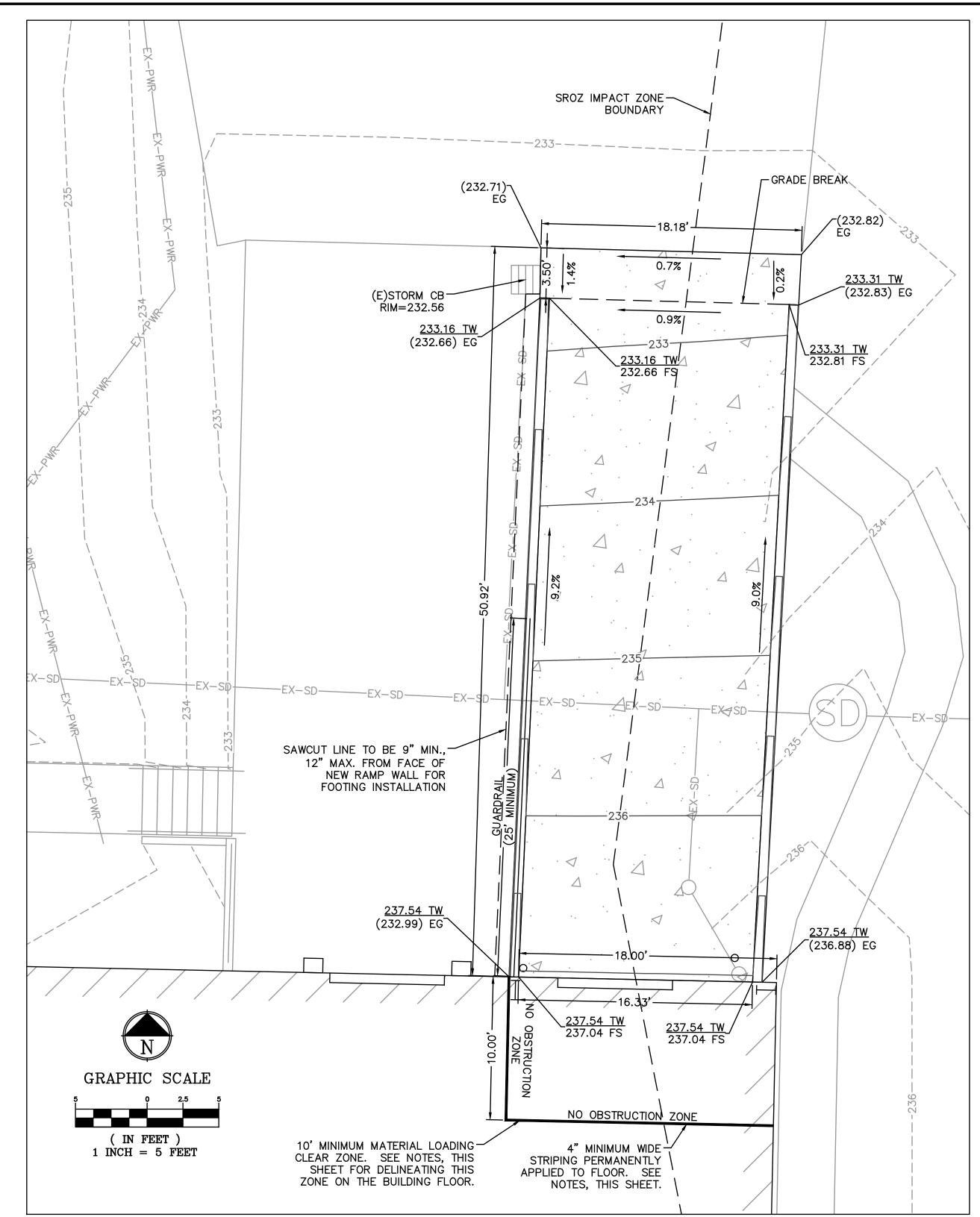
GRADE DOOR WITH RAMP MAY BE USED AS A MATERIAL TRANSFER AREA. ALL MATERIAL TRANSFERS SHALL OCCUR INSIDE THE BUILDING. INTERIOR TRANSFER AREA SHALL COMPLY WITH THE REQUIREMENTS NOTED BELOW:

BAY DOORS AND OTHER INTERIOR TRANSFER AREAS SHALL PROVIDE A 10-FOOT "NO OBSTRUCTION ZONE" BEYOND THE ENTRANCE WITHIN THE BUILDING. THIS WILL ALLOW THE TRANSFER OF MATERIALS TO OCCUR WITH THE TRUCK OR TRAILER END PLACED AT LEAST 5 FEET INSIDE THE BUILDING, WITH AN ADDITIONAL STAGING AREA OF 5 FEET BEYOND THAT. THE "NO OBSTRUCTION" ZONE SHALL BE CLEARLY IDENTIFIED ON THE STORMWATER MANAGEMENT PLAN AT THE TIME OF THE BUILDING PERMIT APPLICATION, AND SHALL BE PAINTED AT THE FACILITY WITH BRIGHT OR FLUORESCENT FLOOR PAINT.



TYPICAL STORMWATER CHANNEL SECTION

SCALE: NTS



RAMP DETAIL

SCALE: 1" = 5'

SHEET TITLE:

С S

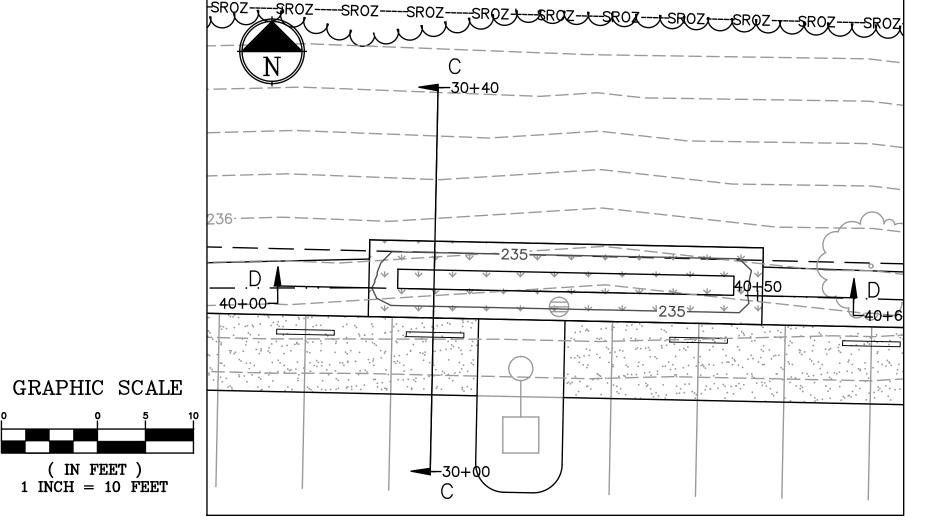
OVEMEN

MPR

GRADING DETAILS

SHEET NO.

C3.10



( IN FEET )

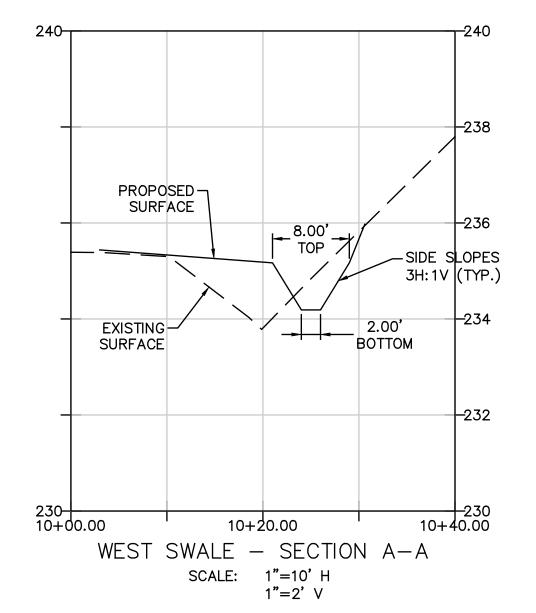
EAST SWALE - PLAN VIEW SCALE: 1"=10'

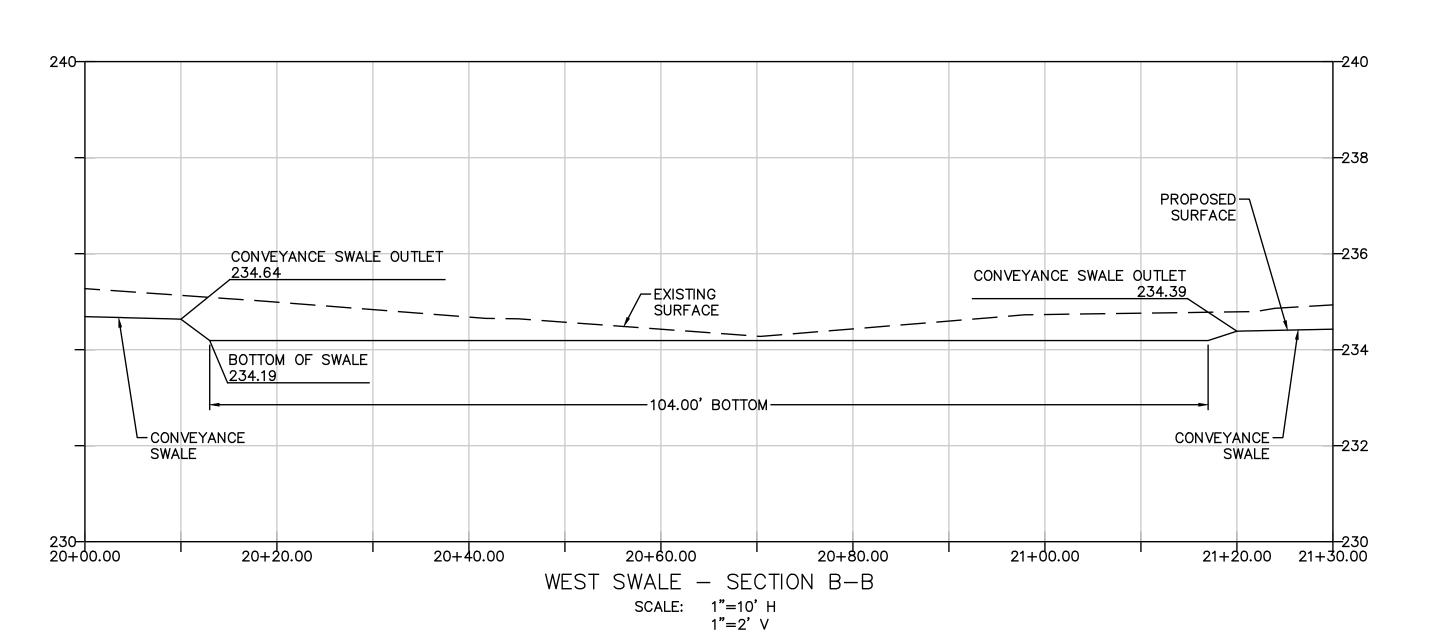
# **LANDSCAPING NOTES:**

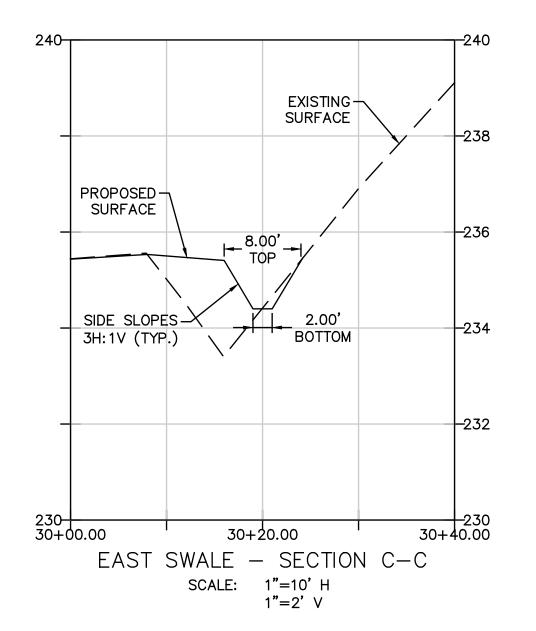
- 1. LANDSCAPING REQUIREMENTS PER CITY OF WILSONVILLE SECTION 3 PUBLIC WORKS STANDARDS: STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS, 2015 ED.
- 2. THE WEST AND EAST SWALES ARE DESIGNATED "VEGETATED SWALE FILTRATION" FACILITY TYPE, PER APPENDIX A OF THE STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS, SECTION A.2.06.
- 2.1. PLANTING ZONES WITHIN THE WEST AND EAST SWALES ARE MOISTURE ZONE (A) ONLY.
- 3. SECTION A.3.00 PLANTING METHODS: PER PART B.3. (b), PLANT QUANTITIES FOR MOISTURE ZONE (A) ARE AS FOLLOWS, PER 100 SF OF FACILITY AREA:
- 3.1. 3 LARGE SHRUBS/SMALL TREES
- 3.2. 4 SMALL SHRUBS 3.3. 115 GROUNDCOVER PLANTS
- 4. PLANTING QUANTIES FOR WEST SWALE (SEE SWALE AREAS BELOW FOR REFERENCE):
- 4.1. 27 LARGE SHRUBS 4.2. 36 SMALL SHRUBS
- 4.3. 1,012 GROUNDCOVER PLANTS
- 5. PLANTING QUANTIES FOR EAST SWALE (SEE SWALE AREAS BELOW FOR REFERENCE):
- 5.1. 10 LARGE SHRUBS 5.2. 14 SMALL SHRUBS
- 5.3. 378 GROUNDCOVER PLANTS
- 6. PLANT SPECIES:
- 6.1. LARGE SHRUBS SHALL BE SPIREA DOUGLASII, DOUGLAS SPIRAEA. 6.2. SMALL SHRUBS SHALL BE PHYSOCARPUS CAPITATUS, PACIFIC NINEBARK.
- 6.3. GROUNDCOVER PLANTS SHALL BE CORNUS SERICEA 'KELSEYI', KELSEY DOGWOOD.
- SPECIES SUBSTITUTIONS ARE ALLOWED AND MUST BE SELECTED FROM APPENDIX A, TABLE A-2, OF THE STORMWATER & SURFACE WATER DESIGN & CONSTRUCTION STANDARDS.
- MINIMUM PLANT SIZES:
- 8.1. LARGE SHRUBS: 30" HEIGHT
- 8.2. SMALL SHRUBS/GROUNDCOVER: #1 CONTAINER 8.3. HERBACEOUS PLANTS: SP #4 CONTAINER
- 9. CONVEYANCE SWALE LANDSCAPING SHALL BE GRASS (SEE OR SOD).

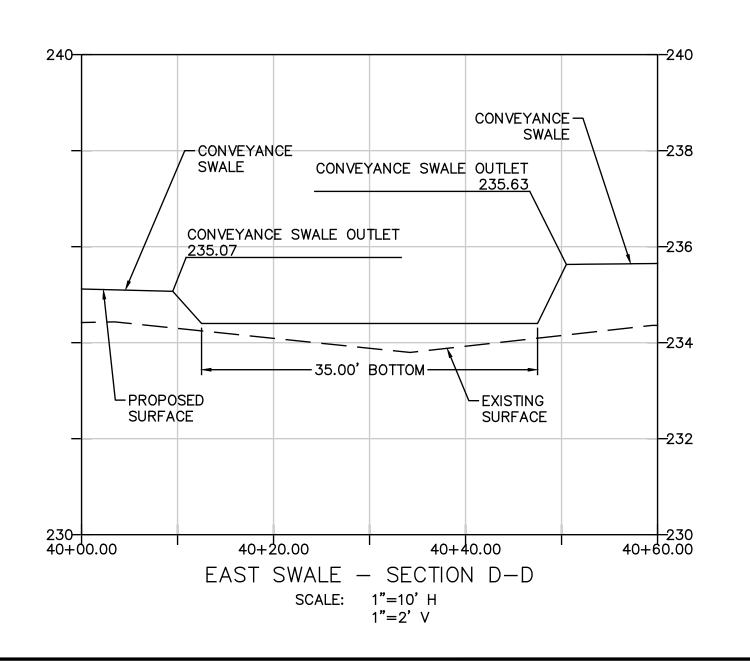
# **SWALE AREAS:**

WEST SWALE: 880 SF EAST SWALE: 328 SF

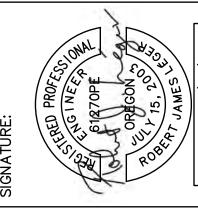


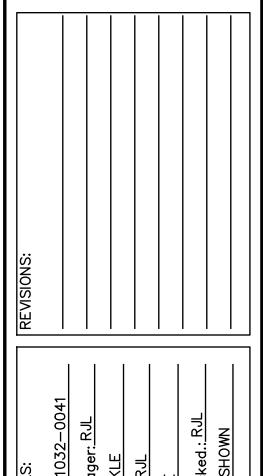














SWALE SECTIONS

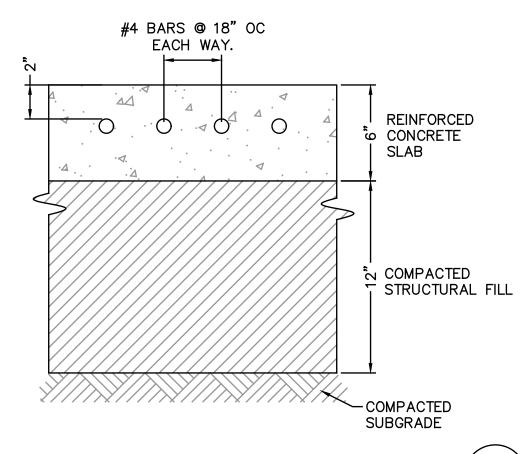
C4.00

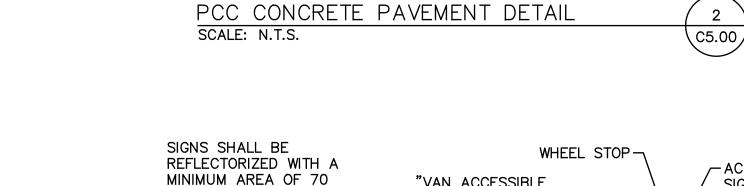
- 1. ASPHALT CONCRETE SHALL BE  $\frac{1}{2}$ " LEVEL 2 WITH PG-64-22 ASPHALT BINDER. THE 6" ASPHALT CONCRETE SECTION SHALL BE PLACED IN (3) 2" LIFTS. THE ASPHALTIC CONCRETE PAVING MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 92% OF THE THEORETICAL MAXIMUM DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D2041 (RICE GRAVITY TEST).
- 2. PAVEMENT BASE COURSE MATERIALS SHOULD CONSIST OF WELL-GRADED ₹"-0 CRUSHED BASE ROCK HAVING LESS THAN 5% FINE MATERIALS PASSING THE NO. 200 SIEVE. THE BASE COURSE AND ASPHALT CONCRETE MATERIALS SHOULD CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE OREGON DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE BASE COURSE MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST).
- 3. IF CONSTRUCTION OF THE IMPROVEMENTS IS PERFORMED DURING WET AND/OR INCLEMENT WEATHER CONDITIONS, THE AGGREGATE BASE ROCK SECTION SHALL BE INCREASED BY AT LEAST 6 INCHES.

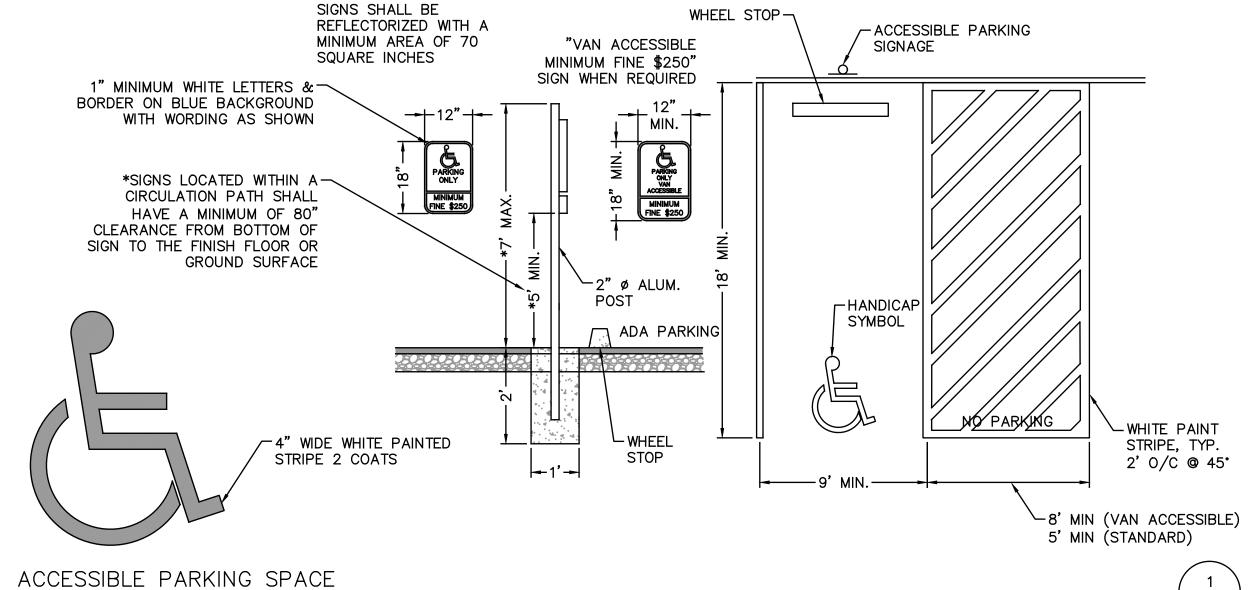
ASPHALT PAVEMENT SECTION DETAIL SCALE: NTS

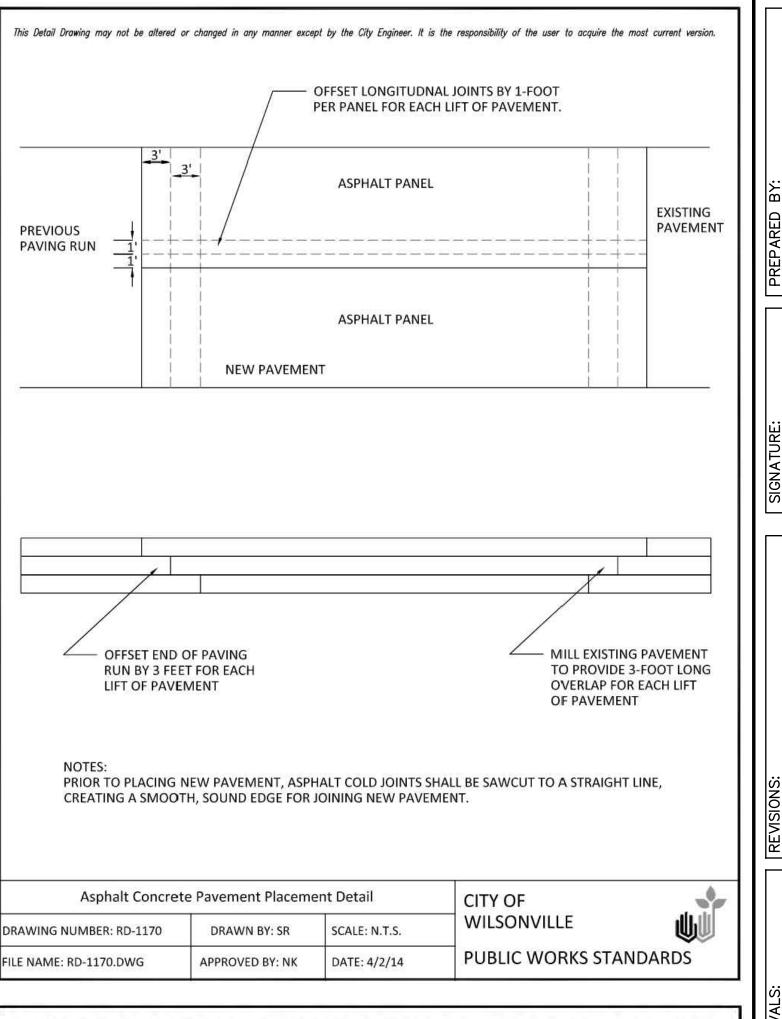
\c5.00

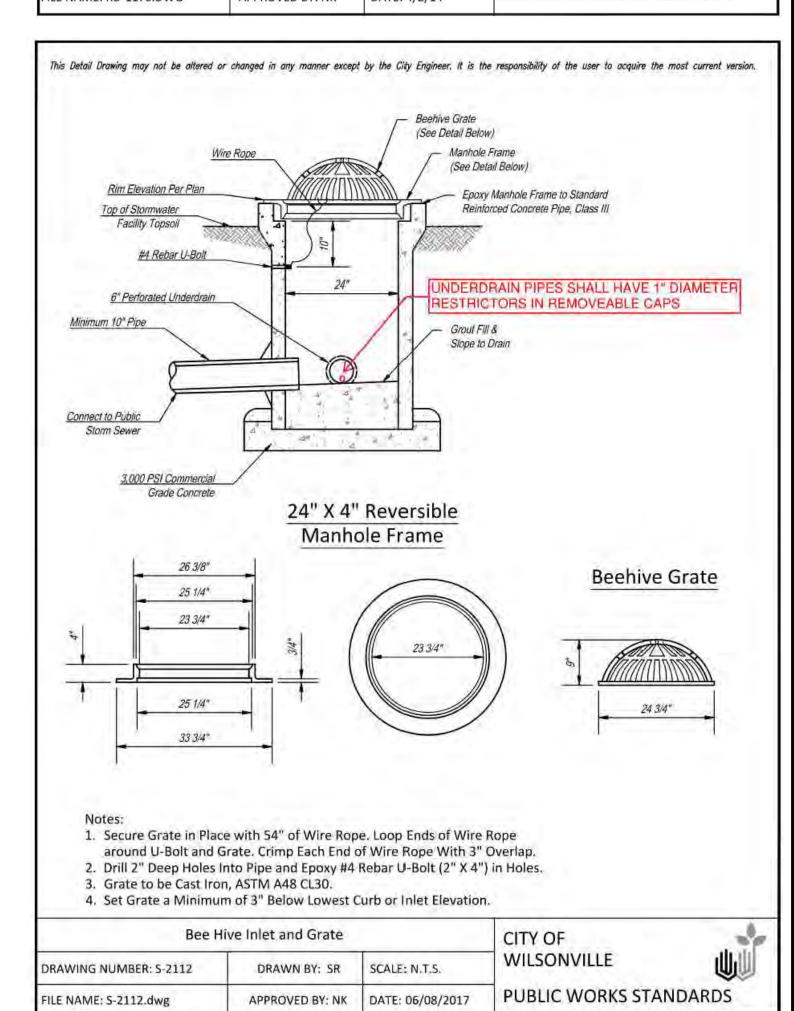
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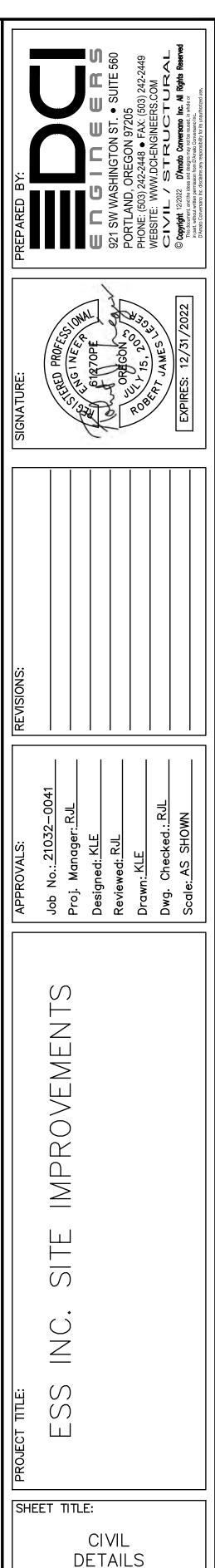








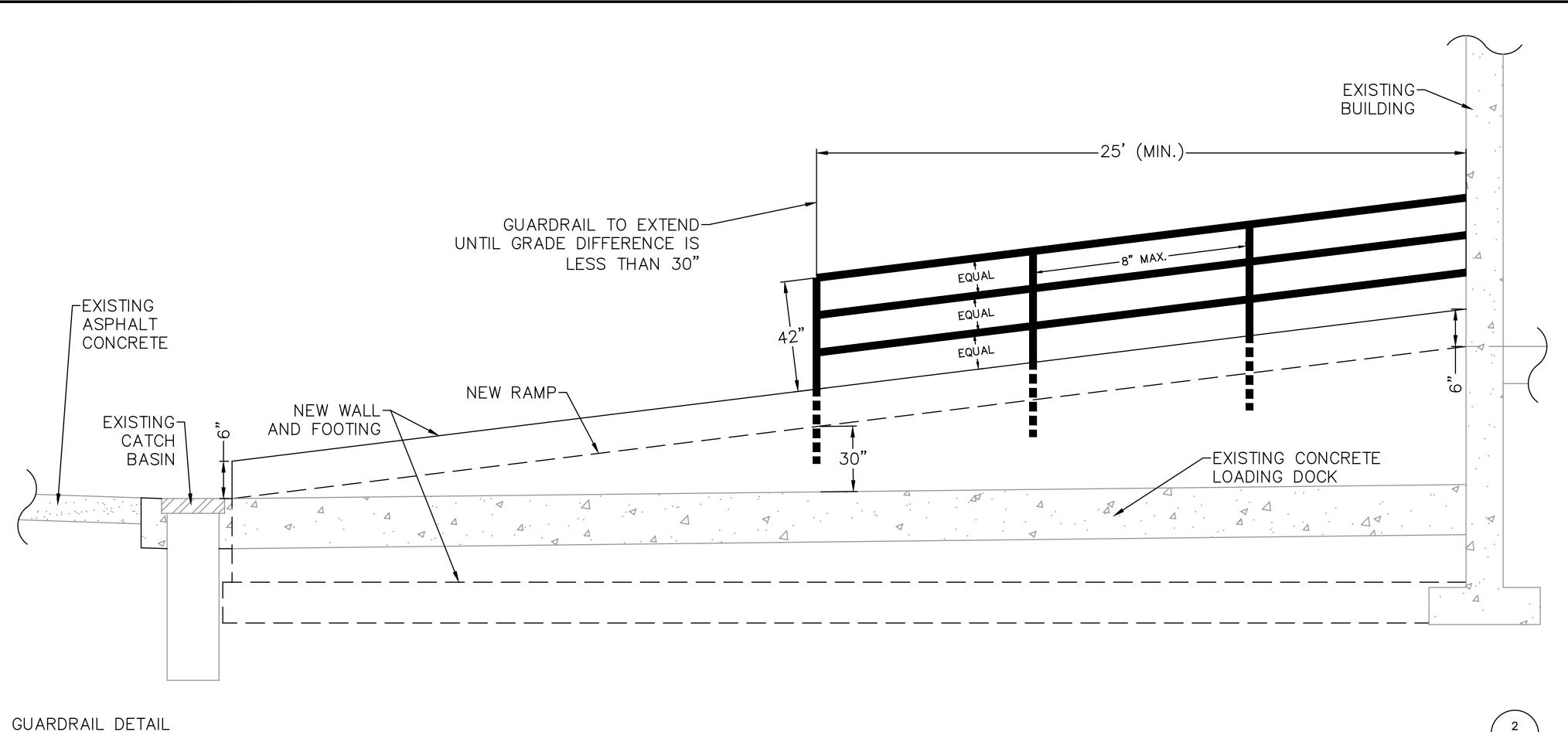


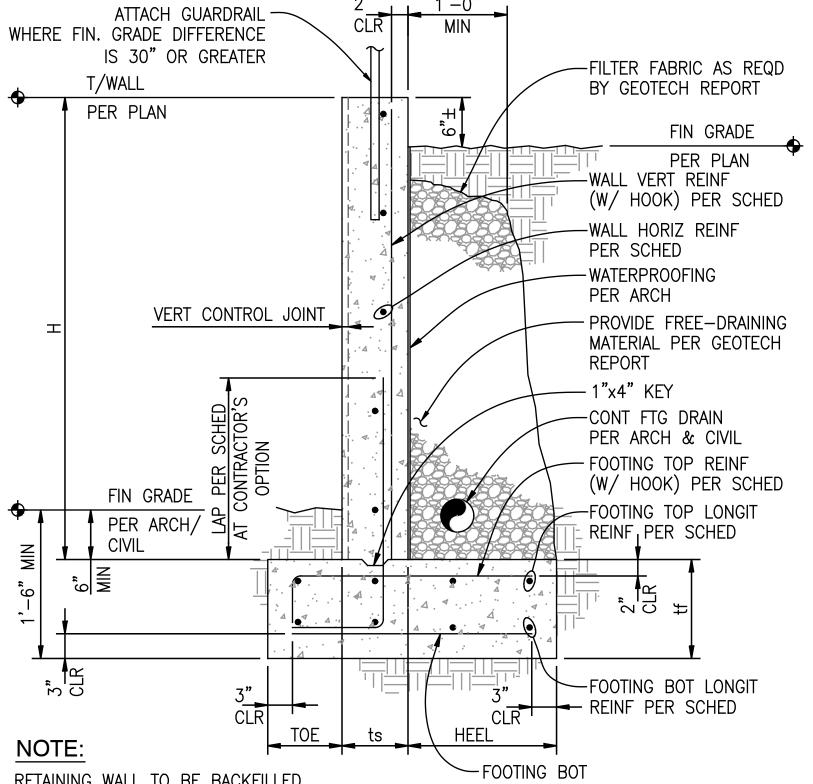


SHEET NO.

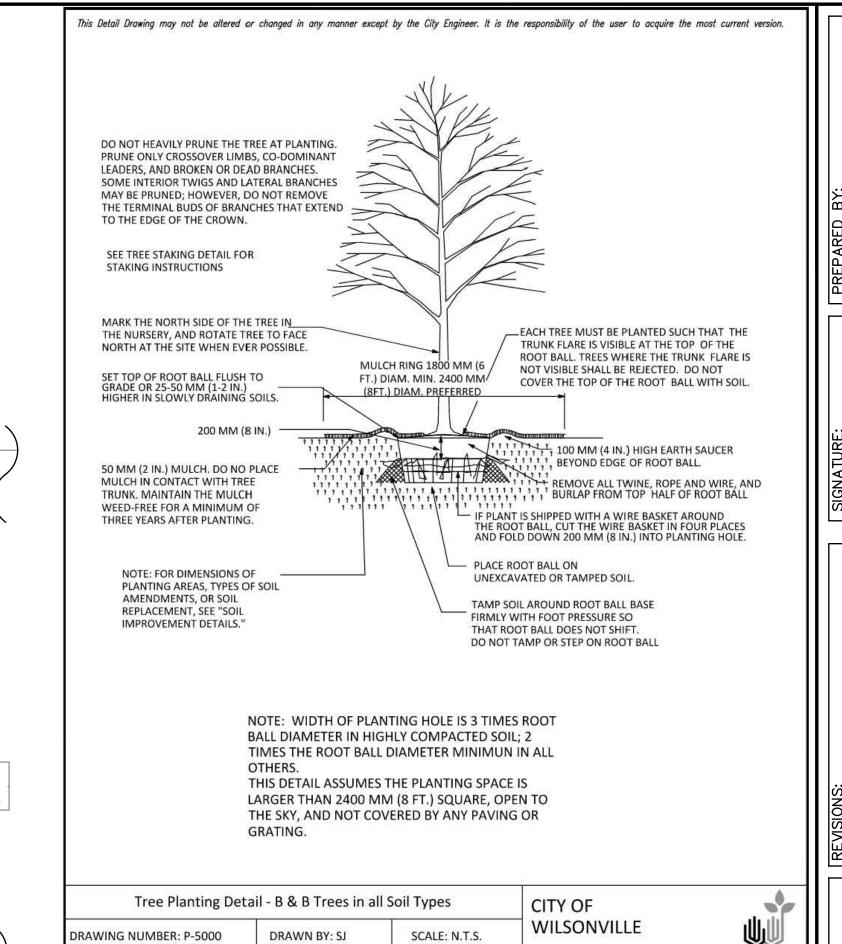
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SCALE: NTS

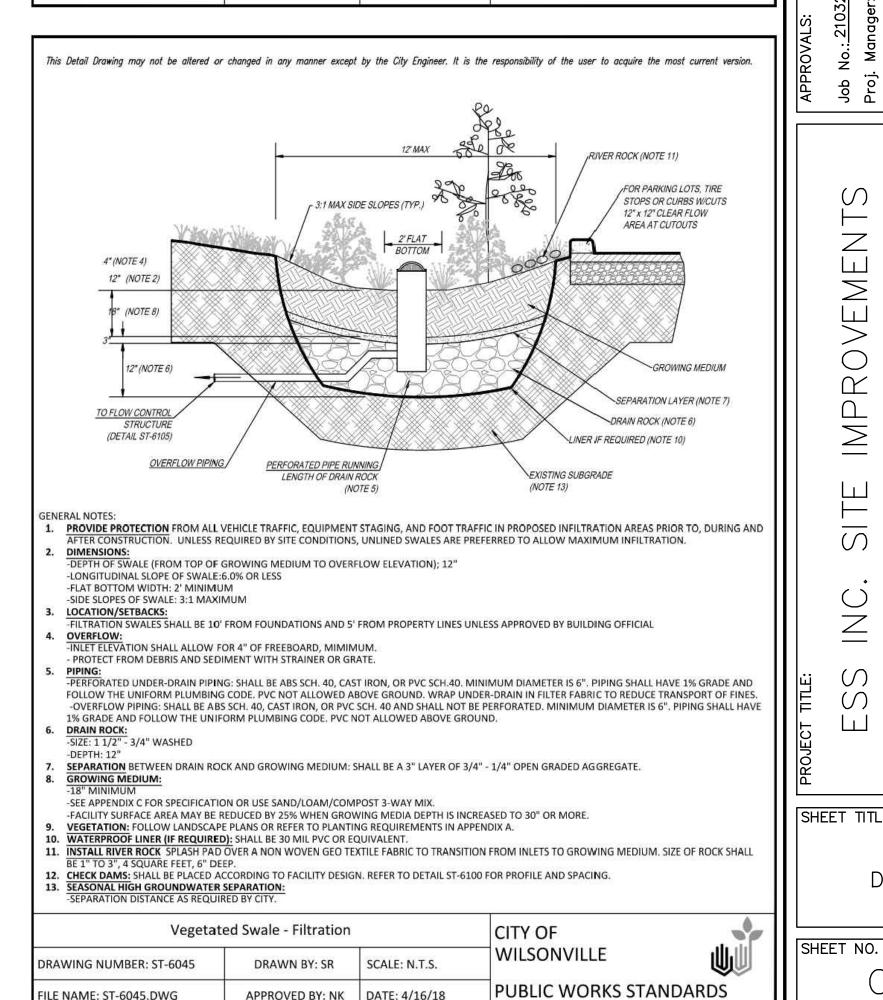




RETAINING WALL/FOOTING SCHEDULE										
ш	WALL/FOOTING SIZES			ZES	WALL REINFORCEMENT		FOOTING REINFORCEMENT			
Н	TOE	ts	HEEL	tf	VERTICAL	HORIZONTAL	TOP	TOP/LONGIT	BOTTOM/LONGIT	воттом
JP TO 5'-0"	9"	8"	1'-3"	12"	#4 @ 16"OC	#5 @ 18"OC	#5 @ 10"OC	(3) #4	(3) #4	#5 @ 10"OC

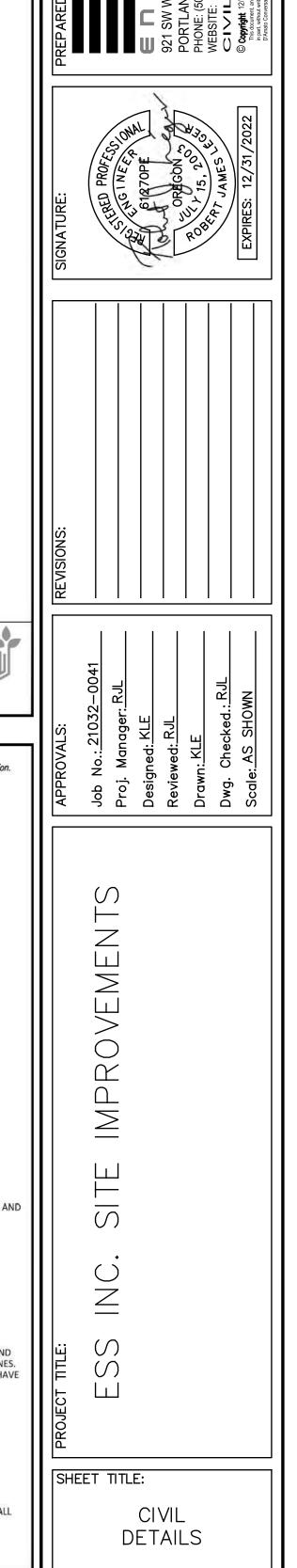


APPROVED BY: SA



DATE: 4/16/18

DATE: 3/22/06



C5.01

PUBLIC WORKS STANDARDS

RETAINING WALL TO BE BACKFILLED REINF PER SCHED PRIOR TO START OF WOOD FRAMING. CANTILEVERED SITE RETAINING WALL AND SCHEDULE SCALE: N.T.S.

SCALE: N.T.S.

√c5.01

FILE NAME: ST-6045.DWG

APPROVED BY: NK

C5.01

FILE NAME: P-5000.dwg

INFILTRATION FACILITY PROTECTION AREA (DO NOT

DEVELOPED CONDITIONS DRAINAGE FLOW DIRECTION

INLET PROTECTION

SEEDING & MULCHING

CONCRETE WASH AREA

EROSION CONTROL MATTING

COMPACT NATIVE SOILS AT FACILITY SUBGRADE ELEVATION)

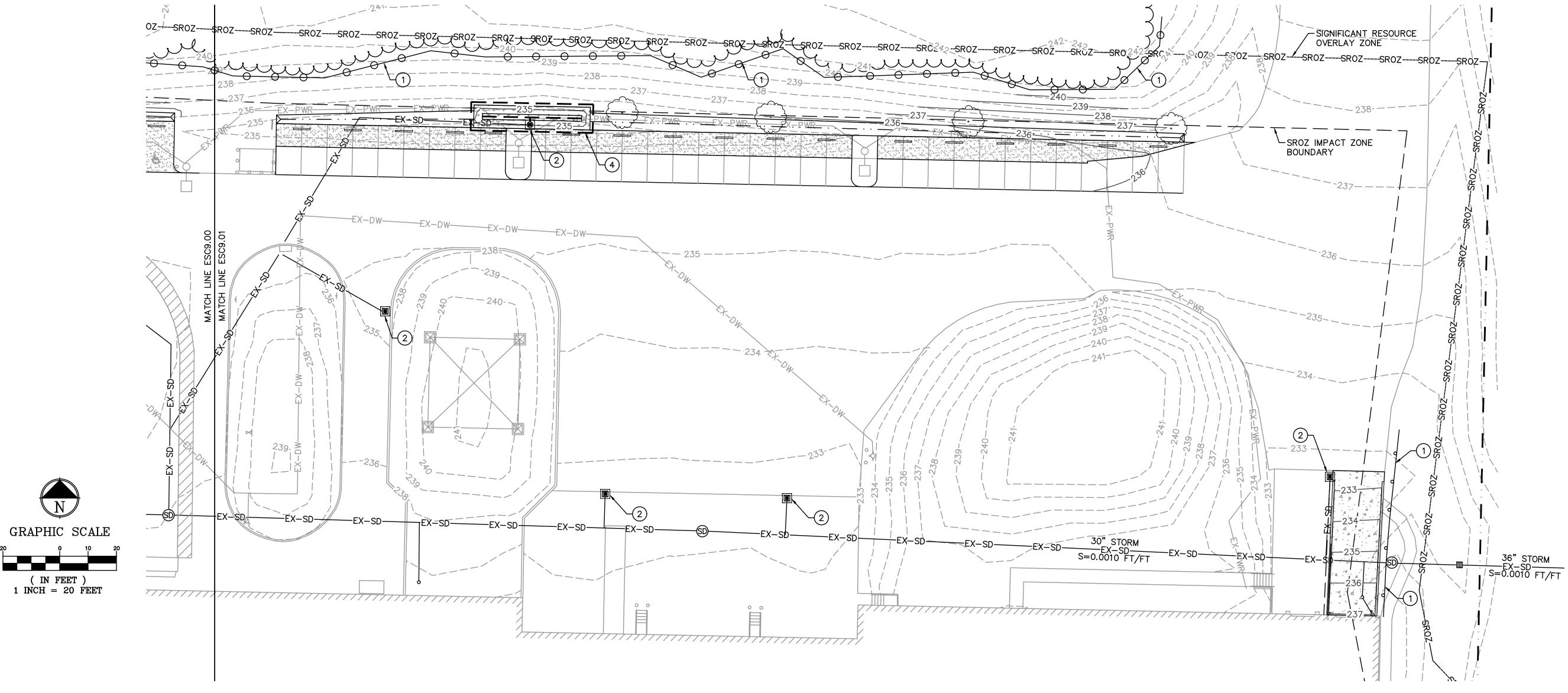
SHEET TITLE:

SHEET NO.

EROSION AND

SEDIMENT CONTROL PLAN - WEST

ESC9.00



# EROSION AND SEDIMENT CONTROL GENERAL NOTES:

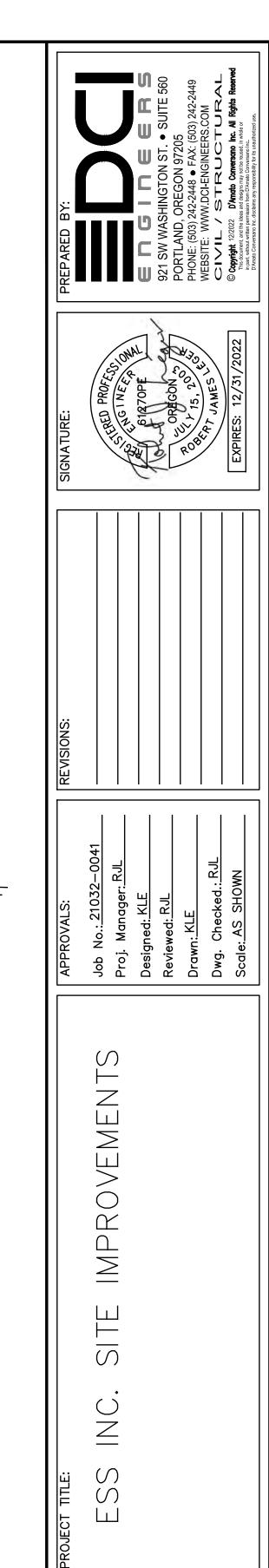
- 1. ALL BASE EROSION CONTROL MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- 2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
- 3. SENSITIVE RESOURCES, INCLUDING BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
- 4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING ON CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, STREET SWEEPING AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- 5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUNOFF CONTROL MEASURES INCLUDE, BUT ARE NOT LIMITED TO, SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.
- 6. THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

# (X) EROSION AND SEDIMENT CONTROL KEYNOTES:

- 1. INSTALL AND MAINTAIN TEMPORARY 6' TALL CHAIN LINK TREE PROTECTION FENCE PER CITY OF WILSONVILLE DRAWING NUMBER RD—1230, SHEET ESC9.10. LOCATION OF FENCE SHALL BE INSTALLED AT THE TREE DRIP LINE. VERIFY TREE DRIP LINE IN THE FIELD PRIOR TO INSTALLING TREE PROTECTION FENCE. NO CONSTRUCTION ACTIVITIES OR MATERIAL STORAGE SHALL OCCUR WITHIN THE TREE PROTECTION ZONE.
- 2. INSTALL STORMWATER INLET PROTECTION PER CLACKAMAS COUNTY DETAIL DRAWING 4-18/ESC9.10.
- 3. INSTALL CONCRETE WASHOUT PER DETAIL 1/ESC9.10.
- 4. PROTECT STORMWATER SWALE FACILITY AREA. DO NOT COMPACT SOILS WITHIN STORMWATER FACILITY AREAS. STORMWATER AREAS SHALL PRESERVE EXISTING SOIL DENSITY BY LIMITING HEAVY MACHINERY AND VEHICLE TRACKING, AND STORAGE SHALL NOT OCCUR WITHIN THESE AREAS.

# EROSION AND SEDIMENT CONTROL LEGEND

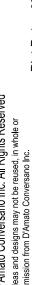
FINISHED GRADE CONTOUR (1 FT INTERVAL)	<del></del> 102 <del></del>
EXISTING GRADE CONTOUR (1 FT INTERVAL)	102
SEDIMENT FENCE	<del> </del>
ORANGE CONSTRUCTION FENCE	$\overline{}$
CONSTRUCTION ENTRANCE	
INFILTRATION FACILITY PROTECTION AREA (DO NOT COMPACT NATIVE SOILS AT FACILITY SUBGRADE ELEVATION)	
INLET PROTECTION	
SEEDING & MULCHING	
CONCRETE WASH AREA	
EROSION CONTROL MATTING	
DEVELOPED CONDITIONS DRAINAGE FLOW DIRECTION	



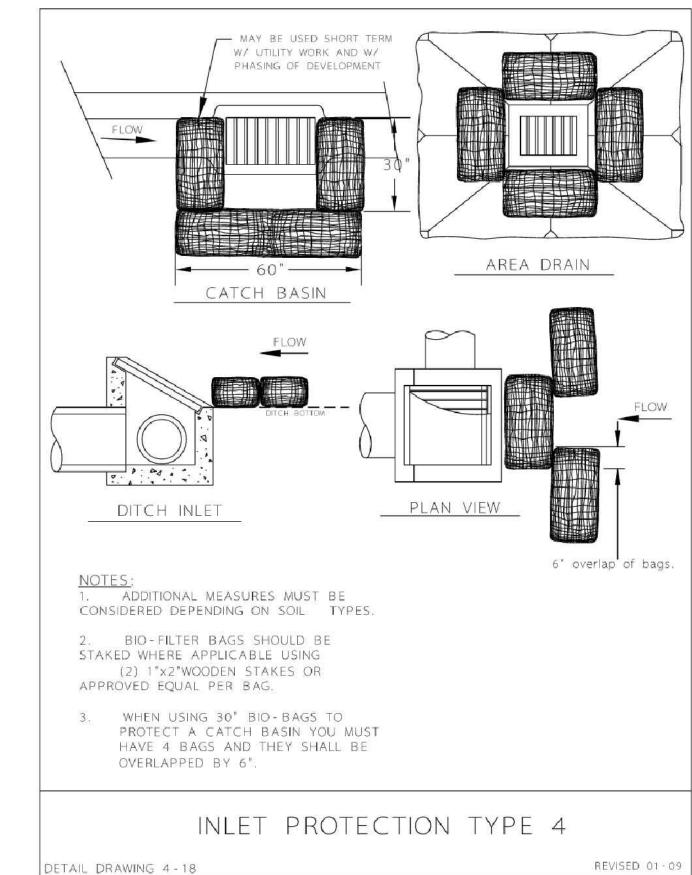
SHEET TITLE:

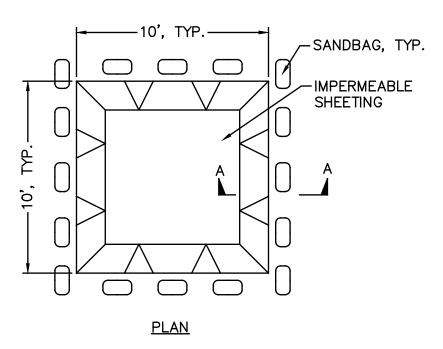
EROSION AND
SEDIMENT CONTROL
PLAN — EAST

SHEET NO. ESC9.01



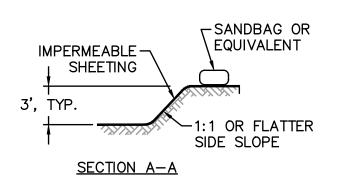
This Detail Drawing may not be altered or changed in any manner except by the City Engineer. It is the responsibility of the user to acquire the most current version. 2' MIN. DEPTH OF BURY 1. FENCE SHALL BE 6' IN HEIGHT AND SET AT TREE DRIP LINE. 2. FENCE MATERIALS SHALL CONSIST OF 2" MESH CHAIN LINKS SECURED TO A MINIMUM 1 1/2" DIA. STEEL OR ALUMINUM LINE POSTS. 3. POSTS SHALL BE SET TO A DEPTH OF NO LESS THAN 2 FEET IN NATIVE SOIL. 4. FENCE SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF CONSTRUCTION ACTIVITIES. MOVEMENT OR REMOVAL OF FENCE REQUIRES APPROVAL BY CITY'S AUTHORIZED REPRESENTATIVE. Tree Protection Fencing CITY OF WILSONVILLE DRAWING NUMBER: RD-1230 DRAWN BY: SR SCALE: N.T.S.





APPROVED BY: NK DATE: 4/2/14

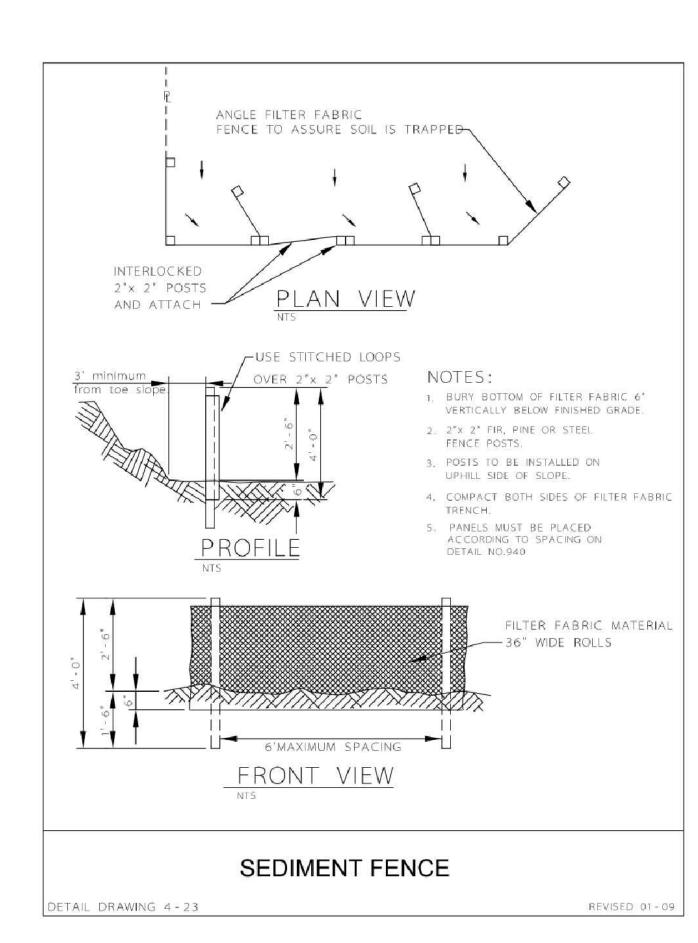
FILE NAME: RD-1230.DWG

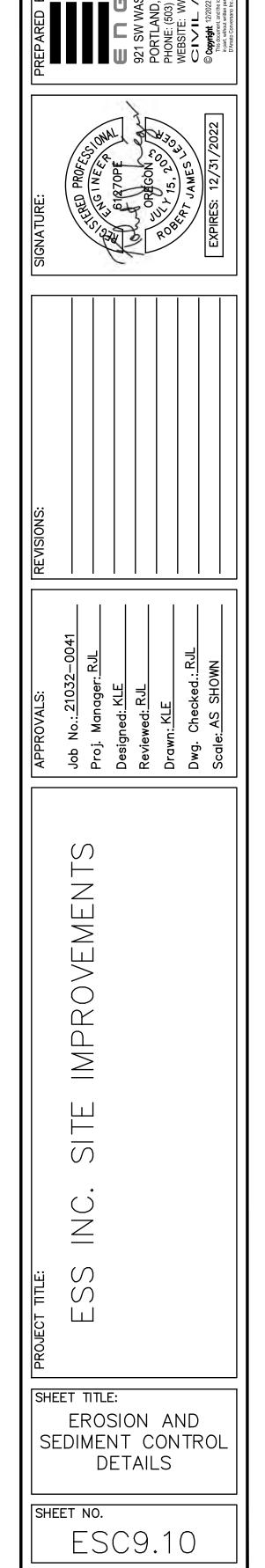


## **CONCRETE WASHOUT NOTES:** 1. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

- 2. ACTUAL LAYOUT WILL BE DETERMINED IN THE FIELD.
- 3. REMOVABLE RAIN COVER REQUIRED DURING WET WEATHER SEASON.

CONCRETE WASHOUT DETAIL SCALE: N.T.S.







PUBLIC WORKS STANDARDS