OMIC RESEARCH & DEVELOPMENT RETROFIT

CONSTRUCTION DOCUMENTS

EDA Award Number: No. 07-01-07446

AKS ENGINEERING & FORESTRY, LLC
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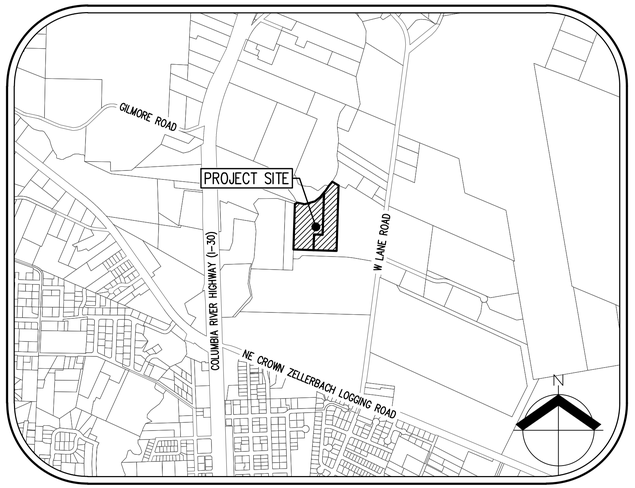
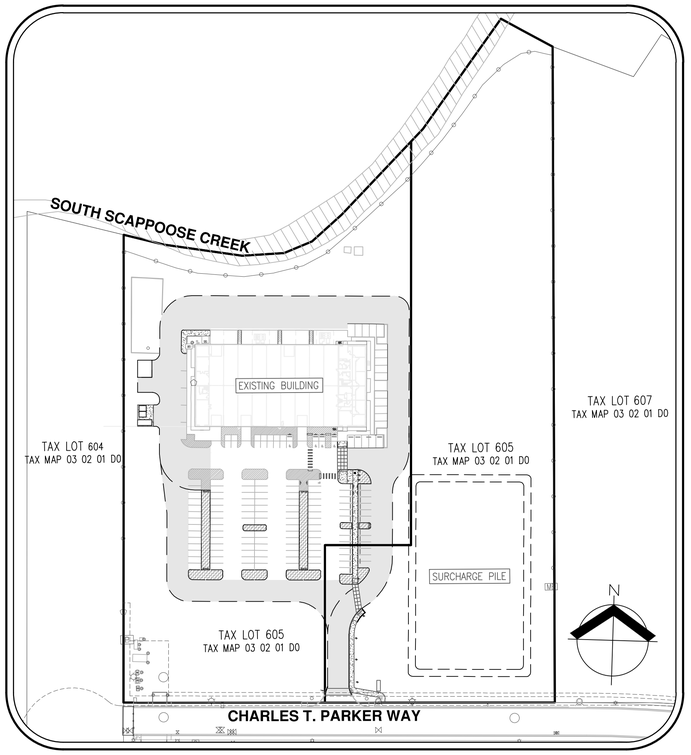
ENGINEERING · SURVEYING · NATURAL RESOURCES
FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE



VICINITY MAP
NOT TO SCALE



SITE MAP
1" = 100'

PROJECT LOCATION: LOCATED IN THE SOUTHEAST QUARTER OF SECTION 01, TOWNSHIP 3 NORTH, RANGE 2 WEST, WILLAMETTE MERIDIAN, COLUMBIA COUNTY, OR. (COLUMBIA COUNTY TAX MAP 03 02 01 D0 TAX LOT 605).

PROJECT PURPOSE: RETROFIT OF THIS EXISTING OMIC RESEARCH CENTER WITH CONSTRUCTION OF A NEW DRIVEWAY ACCESS, PARKING LOT, UTILITIES AND LANDSCAPING.

TOTAL SITE AREA: ±10.2 ACRES
DISTURBED AREA: ±4.7 ACRES

DATUM: VERTICAL DATUM: ELEVATIONS ARE BASED ON NGS BENCHMARK NO. RD0562. LOCATED AT THE SOUTH PART OF SCAPPOOSE, COLUMBIA COUNTY, ABOUT 100 FEET WEST OF THE COLUMBIA RIVER HIGHWAY, AT THE EAST ENTRANCE TO THE SCAPPOOSE HIGH SCHOOL, IN THE NORTH END OF THE LOWEST STEP. ELEVATION = 64.83 FEET (NAVD 88).

ATTENTION EXCAVATORS:

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 THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

811 Know what's **below.** **Call** before you dig.

PROJECT RECORD DRAWING

CONTRACTOR SHALL PROVIDE THE OWNER'S REPRESENTATIVE WITH A REDLINED COPY OF THESE CONSTRUCTION PLANS SHOWING AS-BUILT ELEVATIONS, LOCATIONS, AND PLAN DEVIATIONS. REDLINED AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE ONE WEEK PRIOR TO REQUESTING WALK-THROUGH AND/OR ACCEPTANCE OF SUBSTANTIAL COMPLETION.

I, THE UNDERSIGNED, STATE I HAVE CHECKED AND VERIFIED THAT THESE REDLINED AS-BUILT DRAWINGS ARE ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

SIGNATURE (CONTRACTOR) _____ DATE _____

LEGEND

	EXISTING	PROPOSED
DECIDUOUS TREE		
CONIFEROUS TREE		
FIRE HYDRANT		
WATER BLOWOFF		
WATER METER		
WATER VALVE		
DOUBLE CHECK VALVE		
AIR RELEASE VALVE		
SANITARY SEWER CLEAN OUT		
SANITARY SEWER MANHOLE		
SIGN		
STREET LIGHT		
MAILBOX	MB	MB

	EXISTING	PROPOSED
STORM DRAIN CLEAN OUT		
STORM DRAIN CATCH BASIN		
STORM DRAIN AREA DRAIN		
STORM DRAIN MANHOLE		
GAS METER		
GAS VALVE		
GUY WIRE ANCHOR		
UTILITY POLE		
POWER VAULT	P	P
POWER JUNCTION BOX		
POWER PEDESTAL		
COMMUNICATIONS VAULT	C	C
COMMUNICATIONS JUNCTION BOX		
COMMUNICATIONS RISER		

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
EASEMENT		
FENCE LINE	XXX XXX XXX	
GRAVEL EDGE		
POWER LINE	PWR PWR	PWR PWR
OVERHEAD WIRE	OHW	OHW
COMMUNICATIONS LINE	COM COM	COM COM
FIBER OPTIC LINE	CFO CFO	CFO CFO
GAS LINE	GAS GAS	GAS GAS GAS
STORM DRAIN LINE	STM STM	STM STM
SANITARY SEWER LINE	SAN SAN	SAN SAN
WATER LINE	WAT WAT	WAT WAT

SHEET INDEX

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REGISTERED PROFESSIONAL ENGINEER
OREGON
SEPT. 14, 1982
CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 2021

PROJECT TEAM:

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Portland, OR 97225
P. 503.292.1635

MEP ENGINEER:
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P. 503-447-5030

OWNER:
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Procurement and Contract Services
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Wilsonville, OR 97070

OWNER'S REPRESENTATIVE:
CRAIG CAMPBELL, Executive Director
OMIC R&D
33701 Charles T. Parker Way
Scappoose, Oregon 97056
503-983-0573

OREGON MANUFACTURING INNOVATION CENTER RESEARCH & DEVELOPMENT
33701 Charles T. Parker Way
Scappoose, Oregon 97056

SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:
COVER SHEET WITH SITE AND VICINITY MAPS

SHEET NO:

C000

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL PROCURE, PAY ALL COSTS FOR, AND CONFORM TO ALL CONSTRUCTION PERMITS REQUIRED BY THE CITY OF SCAPPOOSE AND COLUMBIA COUNTY. CONTRACTOR SHALL COORDINATE AND PAY ALL FEES AND COSTS ASSOCIATED WITH CONNECTING TO EXISTING WATER, SANITARY SEWER AND STORM SEWER FACILITIES, INCLUDING SERVICES AND INSPECTIONS BY THE GOVERNING JURISDICTIONS. COSTS SHALL INCLUDE AS APPLICABLE BUT NOT BE LIMITED TO FEES FOR CONNECTION, TAPPING, INSPECTION, TESTING, CHLORINATION, SYSTEM DEVELOPMENT CHARGES, WATER METERS, BACKFLOW CERTIFICATIONS, OR OTHER SIMILAR OR RELATED COSTS.
2. 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. THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (800) 332-2344.
3. CONTRACTOR TO NOTIFY CITY, COUNTY, ODOT AND ALL UTILITY COMPANIES A MINIMUM OF 48 BUSINESS HOURS PRIOR TO START OF CONSTRUCTION, AND COMPLY WITH ALL OTHER NOTIFICATION REQUIREMENTS OF AGENCIES WITH JURISDICTION OVER THE WORK.
4. CONTRACTOR SHALL PROVIDE ALL BONDS AND INSURANCE REQUIRED BY PUBLIC AND/OR PRIVATE AGENCIES HAVING JURISDICTION. WHERE REQUIRED BY PUBLIC AND/OR PRIVATE AGENCIES HAVING JURISDICTION, THE CONTRACTOR SHALL SUBMIT A SUITABLE MAINTENANCE BOND PRIOR TO FINAL PAYMENT.
5. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING ITEMS TO THE OWNER'S REPRESENTATIVE.
   A. LIST OF SUBCONTRACTORS
   B. PROJECT SCHEDULE
   C. TRAFFIC CONTROL PLAN
   D. EMERGENCY CONTACT NAME AND PHONE NUMBER
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DOCUMENTS AND PLANS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS/PLANS RELATIVE TO THE SPECIFICATIONS OR THE APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE OWNER'S REPRESENTATIVE SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DOCUMENTS/PLANS IN FULL COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES.
7. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE APPROVED PLANS AND THE APPLICABLE PROVISIONS OF THE APPROVING AGENCIES' CONSTRUCTION STANDARDS, THE MOST RECENT EDITION OF THE UNIFORM PLUMBING CODE (OPSC), THE MOST RECENT EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), APWA STANDARDS, OREGON HEALTH DIVISION (OHD), AND THE DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) WHEREIN EACH HAS JURISDICTION.
8. CONTRACTOR SHALL AT ALL TIMES ABIDE BY APPLICABLE SAFETY RULES OF OSHA, IN PARTICULAR THOSE REGULATIONS PERTAINING TO ADEQUATE SHORING AND TRENCH PROTECTION FOR WORKMEN.
9. CONSTRUCTION OF ALL PUBLIC FACILITIES SHALL BE DONE WITHIN THE HOURS PERMITTED BY THE GOVERNING JURISDICTION.
10. 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.
11. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL REVIEW AND COORDINATE THE BUILDING LAYOUT BY CAREFUL REVIEW OF THE SITE PLAN AND LATEST ARCHITECTURAL PLANS (INCLUDING, BUT NOT LIMITED TO, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE SUPPRESSION PLAN, WHERE APPLICABLE). CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND ARCHITECT OF ANY DISCREPANCIES.
12. CONTRACTOR SHALL REFER TO ARCHITECTURAL BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF BUILDING ENTRY/EXIT LOCATIONS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT UTILITY CONNECTION LOCATIONS.
13. ANY INSPECTION BY THE CITY, COUNTY, AKS, OWNER'S REPRESENTATIVE, 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.
14. IF THE CONTRACTOR DEVIATES FROM THE APPROVED PLANS, INCLUDING THESE NOTES, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER FOR SUCH DEVIATIONS, CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK DONE WHICH DEVIATES FROM THE PLANS.
15. THE ENGINEER HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND CONSTRUCTION REVIEW SERVICES RELATING TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED FOR THE CONTRACTOR TO PERFORM HIS WORK.
16. CONTRACTOR SHALL MAINTAIN ONE (1) COMPLETE SET OF APPROVED PLANS ON THE CONSTRUCTION SITE AT ALL TIMES WHEREON HE WILL RECORD ALL APPROVED DEVIATIONS IN CONSTRUCTION FROM THE APPROVED DRAWINGS, AS WELL AS 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 CITY OR OWNER'S REPRESENTATIVE UPON REQUEST.
17. 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 OWNER'S REPRESENTATIVE. 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.
18. CONTRACTOR SHALL CONFORM TO DEQ STORMWATER PERMIT NO. 1200C FOR CONSTRUCTION ACTIVITIES WHERE 1 ACRE OR MORE ARE DISTURBED.
19. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH DEQ'S EROSION AND SEDIMENT CONTROL MANUAL, CURRENT EDITION, AND EROSION CONTROL STANDARDS OF THE LOCAL JURISDICTION.
20. VERTICAL DATUM: ELEVATIONS ARE BASED ON NGS BENCHMARK NO. RD0562. LOCATED AT THE SOUTH PART OF SCAPPOOSE, COLUMBIA COUNTY, ABOUT 100 FEET WEST OF THE COLUMBIA RIVER HIGHWAY, AT THE EAST ENTRANCE TO THE SCAPPOOSE HIGH SCHOOL, IN THE NORTH END OF THE LOWEST STEP. ELEVATION = 64.83 FEET (NAVD 88).
21. THE CONTRACTOR SHALL COORDINATE WITH THE SURVEYOR RETAINED BY THE OWNER OR 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 CONSTRUCTION STAKING OF THESE IMPROVEMENTS IS PROHIBITED.
22. SEE ARCHITECTURAL & M.E.P. DRAWINGS FOR SITE LIGHTING, AND CONTINUATION OF ALL UTILITIES.
23. PRIOR TO ANY WORK IN THE EXISTING PUBLIC RIGHT-OF-WAY, CONTRACTOR SHALL SUBMIT FINAL TRAFFIC CONTROL PLAN TO THE CITY, COUNTY AND/OR ODOT FOR REVIEW AND ISSUANCE OF A LANE CLOSURE OR WORK IN RIGHT-OF-WAY PERMIT.
24. CONTRACTOR SHALL CONDUCT CONSTRUCTION ACTIVITIES IN SUCH A MANNER AS TO INSURE MINIMUM INTERFERENCE WITH THE CONTINUED USE OF THE FACILITY BY EMPLOYEES, SUPPLIERS, AND CUSTOMERS. CONTRACTOR SHALL CONTACT AND DISCUSS PLANNED CONSTRUCTION ACTIVITIES AND TIMING WITH THE OWNER AT LEAST 48 HOURS PRIOR TO STARTING WORK. CONTRACTOR SHALL COOPERATE AND ACCOMMODATE OWNER'S REQUESTS TO THE MAXIMUM EXTENT POSSIBLE.
25. CONSTRUCTION ACTIVITIES, EQUIPMENT, VEHICLES, AND MATERIALS SHALL BE PLACED IN AREAS MINIMIZING INCONVENIENCE TO THE FACILITIES NORMAL BUSINESS OPERATIONS AND SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO THE START OF WORK.
26. PRIOR TO FINAL ACCEPTANCE AND PAYMENT, THE CONTRACTOR SHALL CLEAN THE PROJECT SITE AND ADJACENT AREAS OF ANY DEBRIS, DISCARDED MATERIAL, OR OTHER ITEMS DEPOSITED BY THE CONTRACTOR'S PERSONNEL DURING THE PERFORMANCE OF THE WORK.
27. 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 ARISING FROM UNINSPECTED WORK.
28. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY INSPECTIONS OR NECESSARY OBSERVATIONS FOR ALL WORK PERFORMED INCLUDING ANY RE-TESTING THAT MAY BE REQUIRED TO MEET SPECIFICATION. THE CONTRACTOR SHALL PERFORM PRE-TESTS PRIOR TO SCHEDULING TESTS THAT MUST BE WITNESSED. TESTING MUST BE PERFORMED BY AN APPROVED THIRD PARTY INDEPENDENT TESTING LABORATORY RETAINED BY THE CONTRACTOR. CONTRACTOR IS SOLELY RESPONSIBLE FOR SCHEDULING TESTING. ALL TESTING MUST BE COMPLETED PRIOR TO PERFORMING SUBSEQUENT WORK. A COPY OF ALL TESTING RESULTS MUST BE PROVIDED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY UPON COMPLETION OF THE TEST.
29. THE FOLLOWING TESTING IS THE MINIMUM REQUIRED FOR THE PROJECT.

SUBGRADE	1 TEST/4000 S.F./LIFT (4 TESTS MINIMUM)
ENGINEERED FILLS	1 TEST/4000 S.F./LIFT (4 TESTS MINIMUM)
BASEROCK	1 TEST/4000 S.F./LIFT (4 TESTS MINIMUM)
ASPHALT	1 TEST/6000 S.F./LIFT (4 TESTS MINIMUM)
TRENCH BACKFILL	1 TEST/200 FOOT TRENCH/LIFT (4 TESTS MINIMUM)
TRENCH AC RESTORATION	1 TEST/200 FOOT TRENCH/LIFT (4 TESTS MINIMUM)
WATER PRESSURE	WITNESSED BY CITY OR OWNER'S REP.
WATER BACTERIAL	PER OREGON HEALTH DIVISION REQUIREMENTS
WATER CHLORINE	RESIDUAL TEST PER CITY REQUIREMENTS
SEWER AIR TEST	PER CITY/APWA REQUIREMENTS. WITNESSED BY OWNER'S REP.
SEWER MANDREL	95% OF ACTUAL PIPE DIAMETER. WITNESSED BY OWNER'S REP.
SEWER MANHOLE	1 VACUUM TEST PER MANHOLE (CITY/APWA STANDARDS). WITNESSED BY OWNER'S REP.
STORM MANDREL	95% OF ACTUAL PIPE DIAMETER. WITNESSED BY OWNER'S REP.
CONCRETE SLUMP	1 SET OF CYLINDERS/100 C.Y. OF CONCRETE POURED PER DAY. SLUMP AND AIR TESTS REQUIRED ON SAME LOAD AS CYLINDERS.

30. IN ADDITION TO IN-PLACE DENSITY TESTING, THE SUBGRADE AND BASEROCK SHALL BE PROOF-ROLLED WITH A LOADED 10-YARD DUMP TRUCK PROVIDED BY THE CONTRACTOR. BASEROCK PROOF-ROLL SHALL TAKE PLACE IMMEDIATELY PRIOR TO (WITHIN 24 HOURS OF) PAVING, AND SHALL BE WITNESSED BY THE OWNER'S REPRESENTATIVE. LOCATION AND PATTERN OF PROOF-ROLL TO BE AS DIRECTED BY OWNER'S REPRESENTATIVE OR APPROVING AGENCY.
31. ALL ENGINEERED FILLS REQUIRE AN APPROVED INDEPENDENT TESTING LABORATORY RETAINED BY THE CONTRACTOR, TO PROVIDE WRITTEN CERTIFICATION STAMPED BY AN OREGON REGISTERED PROFESSIONAL ENGINEER STATING THAT THE SUBGRADE WAS PREPARED AND ALL ENGINEERED FILLS WERE PLACED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AND CONTRACT DOCUMENTS.
32. THE LOCATION AND DESCRIPTIONS OF EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE COMPILED FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS. WE DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF SUCH RECORDS. ADDITIONAL UTILITIES MAY EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
33. ANY UTILITIES LOCATED IN THE FIELD THAT THE CONTRACTOR DISRUPTS OR DAMAGES SHALL BE PROMPTLY REPAIRED TO NEW CONDITION. IF REQUIRED, CONTRACTOR SHALL INSTALL SUITABLE TEMPORARY SERVICE UNTIL REPAIR CAN BE COMPLETED. THE COST OF THE REPAIR OR TEMPORARY SERVICE SHALL BE BORNE BY THE CONTRACTOR.
34. NOTIFY THE OWNER AND OWNER'S REPRESENTATIVE IMMEDIATELY OF ALL UTILITIES EXPOSED. UNIDENTIFIED UTILITIES SHALL NOT BE DISRUPTED OR CUT UNTIL OWNER OR OWNER'S REPRESENTATIVE HAS APPROVED THE CUT OR DISRUPTION.
35. 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. 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 PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT. THE MONUMENTS SHALL BE REPLACED WITHIN A MAXIMUM OF 90 DAYS, AND THE COUNTY SURVEYOR SHALL BE NOTIFIED IN WRITING AS REQUIRED BY PER ORS 209.150.
36. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES WHERE NEW FACILITIES CROSS. ALL UTILITY CROSSINGS 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 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 ENGINEER, AND THE ENGINEER OR THE OWNER'S REPRESENTATIVE SHALL OBTAIN APPROVAL FROM THE CITY PRIOR TO CONSTRUCTION.
37. 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.
38. UTILITIES OR INTERFERING PORTIONS OF UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL HAVE ALL OPENINGS CLOSED WITH CONCRETE PLUGS WITH A MINIMUM LENGTH EQUAL TO 2 TIMES THE DIAMETER OF THE ABANDONED PIPE.
39. 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.
40. IF SPRINGS OR GROUNDWATER ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF THE CONDITIONS FOUND AND COORDINATE THE ACTIVITIES IN A MANNER THAT WILL ALLOW TIME TO REVIEW THE SITUATION AND PREPARE A PLAN TO PROPERLY MITIGATE THE WATER ENCOUNTERED.
41. ANY SEPTIC TANKS ENCOUNTERED IN CONFLICT WITH PLANS DURING CONSTRUCTION SHALL BE PUMPED OUT AND ABANDONED OR REMOVED IN ACCORDANCE WITH COUNTY SANITARIAN REQUIREMENTS.
42. ANY WELLS ENCOUNTERED SHALL BE ABANDONED PER STATE OF OREGON WATER RESOURCES DEPARTMENT REQUIREMENTS.
43. ANY FUEL TANKS ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF PER STATE OF OREGON DEQ REQUIREMENTS. BACKFILL WITH COMPACTED GRANULAR MATERIAL.
44. CONTRACTOR SHALL COORDINATE AND PAY ALL COSTS ASSOCIATED WITH REMOVING OR ABANDONING ANY SEPTIC TANKS, WELLS (INCLUDING BOREHOLE PIEZOMETERS), AND FUEL TANKS ENCOUNTERED AS PER REGULATING AGENCY REQUIREMENTS. WHEN SHOWN ON THE DRAWINGS, THESE STRUCTURES SHALL BE REMOVED OR ABANDONED AT THE CONTRACTOR'S EXPENSE. WHEN NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY UPON DISCOVERY OF ANY SEPTIC TANKS, WELLS, OR FUEL TANKS, AND OBTAIN APPROVAL FROM THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A DETAILED COST BREAKDOWN OF ALL WORK RELATED TO REMOVING OR ABANDONING SAID STRUCTURES. THE CONTRACTOR WILL BE REIMBURSED ON A TIME & MATERIALS BASIS OR AT A NEGOTIATED PRICE AS AGREED.
45. 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.
46. PRIVATE GRADING, ROCKING AND PAVING TO CONFORM TO OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION (OSSC/ODOT/APWA) AND IBC, CURRENT EDITIONS.
47. CLEAR AND GRUB WITHIN WORK LIMITS ALL SURFACE VEGETATION, TREES, STUMPS, BRUSH, ROOTS, ETC. DO NOT DAMAGE OR REMOVE TREES EXCEPT AS APPROVED BY THE OWNER'S REPRESENTATIVE OR AS SHOWN ON THE DRAWINGS. PROTECT ALL ROOTS TWO INCHES IN DIAMETER OR LARGER.
48. STRIP WORK LIMITS, REMOVING ALL ORGANIC MATTER, WHICH CANNOT BE COMPACTED INTO A STABLE MASS. ALL TREES, BRUSH, AND DEBRIS ASSOCIATED WITH CLEARING, STRIPPING OR GRADING SHALL BE REMOVED AND DISPOSED OF OFF-SITE.
49. 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 AND WRITTEN COMPACTION TEST RESULTS FROM AN INDEPENDENT TESTING LABORATORY MUST BE RECEIVED BEFORE PLACING EMBANKMENTS, ENGINEERED FILLS OR FINE GRADING FOR BASE ROCK.
50. ALL FILLS SHALL BE ENGINEERED EXCEPT FOR FILLS LESS THAN 18-INCHES IN DEPTH WHICH ARE LOCATED OUTSIDE THE PUBLIC RIGHT-OF-WAY, BUILDING PADS, PARKING LOTS OR OTHER AREAS TO BE IMPROVED. ENGINEERED FILLS SHALL BE CONSTRUCTED WITH MAXIMUM 8" LIFTS (LOOSE MEASURE) OVER APPROVED SUBGRADE. EACH LIFT SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR).
51. AREAS TO RECEIVE ENGINEERED OR STRUCTURAL FILL SHALL BE PREPARED BY REMOVING ALL ORGANIC AND UNSUITABLE MATERIALS AND PROOF ROLLING. MATERIAL IN SOFT SPOTS WITHIN AREAS TO BE IMPROVED SHALL BE REMOVED TO THE DEPTH REQUIRED (AS DIRECTED BY THE OWNER'S REPRESENTATIVE) TO PROVIDE A FIRM FOUNDATION AND SHALL BE REPLACED WITH SUITABLE COMPACTED BACKFILL.
52. GRANULAR BASEROCK SHALL CONFORM TO THE REQUIREMENTS OF OSSC (ODOT/APWA) 02630.10 (DENSE GRADED BASE AGGREGATE). COMPACT 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.
53. A.C. PAVEMENT SHALL BE 1/2" DENSE GRADED MIX CONFORMING TO OSSC (ODOT/APWA) 00744 HOT MIXED ASPHALT CONCRETE (HMAC) PAVEMENT. A.C. PAVEMENT SHALL BE LEVEL 2 HMAC PER OSSC (ODOT/APWA) 00744.13. A.C. PAVEMENT SHALL BE COMPACTED TO A MINIMUM OF 91% OF MAXIMUM DENSITY AS DETERMINED BY THE RICE STANDARD METHOD. WRITTEN AC PAVEMENT COMPACTION TEST RESULTS FROM AN INDEPENDENT TESTING LABORATORY MUST BE RECEIVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE BEFORE FINAL PAYMENT.
54. FOR PARKING LOTS OR PRIVATE ACCESS DRIVES, THE FINAL LIFT OF AC PAVEMENT SHALL NOT BE PLACED UNTIL AFTER THE BUILDING IS FULLY ENCLOSED AND WEATHERPROOF, UNLESS OTHERWISE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
55. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, STRAIGHT GRADES SHALL BE RUN BETWEEN ALL FINISH GRADE ELEVATIONS AND/OR FINISH CONTOUR LINES SHOWN.
56. 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.
57. 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.
58. FINISHED RIM ELEVATIONS OF MANHOLES SHOWN WITHIN PAVEMENT ARE APPROXIMATE AND SHALL MATCH FINAL FINISHED PAVEMENT GRADES. RIM ELEVATIONS OUTSIDE OF PAVEMENT SHALL BE SET 3"ABOVE FINISHED GRADE, UNLESS OTHERWISE DIRECTED OR SHOWN ON THE DRAWINGS.
59. NO CUT OR FILL SLOPES SHALL BE CONSTRUCTED STEEPER THAN 2 FT. HORIZONTAL TO 1 FT. VERTICAL (2H:1V) UNLESS OTHERWISE SHOWN ON THE DRAWINGS AND APPROVED BY THE GEOTECHNICAL ENGINEER FOR THE PROJECT.
60. ALL PLANTER AREAS AND OPEN SPACE SHALL BE BACKFILLED WITH APPROVED TOPSOIL IN CONFORMANCE WITH THE LANDSCAPE PLAN FOR THE PROJECT. STRIPPING MATERIALS SHALL NOT BE USED FOR BACKFILL, UNLESS APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.
61. CONTRACTOR SHALL SEED AND MULCH ALL EXPOSED SLOPES AND DISTURBED AREAS, WHICH ARE NOT SCHEDULED TO BE LANDSCAPED.
62. THE CONTRACTOR IS RESPONSIBLE TO ENSURE 1.0% MINIMUM SLOPE ON ALL NEW CONCRETE AND ASPHALT SURFACES TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT ADA COMPLIANCE, PUBLIC SAFETY, OR PROJECT COST MUST BE IDENTIFIED IN WRITING TO THE OWNER'S REPRESENTATIVE IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT OWNER'S REPRESENTATIVE AUTHORIZATION AND REVIEW OF THE DISCREPANCY IS AT THE CONTRACTOR'S OWN COST RISK.
63. 6-INCHES NOMINAL CURB EXPOSURE USED FOR DESIGN OF ALL PARKING LOT GRADES, UNLESS OTHERWISE SHOWN OR INDICATED ON THE DRAWINGS.
64. 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 AND THROUGH ANY TRANSITIONS. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY GRADE DISCREPANCIES OR PROBLEMS PRIOR TO CURB PLACEMENT.
65. CONTRACTOR SHALL CONSTRUCT HANDICAP ACCESS RAMPS WHERE SHOWN IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
66. SIDEWALKS SHALL BE A MINIMUM OF 4-INCHES THICK AND STANDARD DRIVEWAYS SHALL BE A MINIMUM OF 6-INCHES THICK. COMMERCIAL USE DRIVEWAYS SHALL BE MINIMUM 8-INCHES THICK. 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.
67. PRIOR TO INSTALLATION OF CURB, GUTTER, ADA RAMPS, OR SIDEWALK THE OWNER'S REPRESENTATIVE AND/OR CITY INSPECTOR SHALL BE CONTACTED TO INSPECT STRING LINE, BASEROCK, AND FORMWORK.
68. 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 THE CITY OR OWNER'S REPRESENTATIVE. THE SAWCUT LINES SHOWN ON THE DRAWINGS ARE SCHEMATIC AND NOT INTENDED TO SHOW THE EXACT ALIGNMENT OF SUCH CUTS.
69. ALL TAPPING OF EXISTING MUNICIPAL SANITARY SEWER, STORM DRAIN MAINS, AND MANHOLES MUST BE DONE BY CITY/CONTRACTOR FORCES.
70. 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 SMOOTH, FREE OF LOOSE MATERIALS OR TOOTH GROOVES FOR THE ENTIRE WIDTH OF THE TRENCH PRIOR TO PLACING THE GRANULAR BEDDING MATERIAL.
71. 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). CRUSHED ROCK TRENCH BACKFILL SHALL BE USED UNDER ALL AREAS TO BE IMPROVED, INCLUDING PAVEMENT, SIDEWALKS, FOUNDATION SLABS, BUILDINGS, ETC.
72. GRANULAR TRENCH BEDDING AND BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF OSSC (ODOT/APWA) 02630.10 (DENSE GRADED BASE AGGREGATE), 3/4"-0. COMPACT GRANULAR BACKFILL TO 92% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR).
73. CONTRACTOR SHALL ARRANGE TO ABANDON EXISTING SANITARY AND WATER SERVICES NOT SCHEDULED TO REMAIN IN SERVICE IN ACCORDANCE WITH APPROVING AGENCY REQUIREMENTS.
74. THE END OF ALL UTILITY SERVICE LINES SHALL BE MARKED WITH A 2-X-4 PAINTED WHITE AND WIRED TO PIPE STUB. THE PIPE DEPTH SHALL BE WRITTEN ON THE POST IN 2" BLOCK LETTERS.
75. ALL NON-METALLIC WATER, SANITARY AND STORM SEWER PIPING SHALL HAVE AN ELECTRICALLY CONDUCTIVE INSULATED 12 GAUGE 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.
76. 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.
77. CITY FORCES TO OPERATE ALL VALVES, INCLUDING FIRE HYDRANTS, ON EXISTING PUBLIC MAINS.
78. NO CONNECTION TO EXISTING WATER LINES SHALL BE MADE WITHOUT AUTHORIZATION FROM THE CITY.
79. ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH AWWA STANDARDS, OREGON ADMINISTRATIVE RULES (OAR), THE OREGON PLUMBING SPECIALTY CODE (OPSC), AND LOCAL APPROVING JURISDICTION STANDARDS.
80. ALL WATER MAINS SHALL BE CLASS 52 DUCTILE IRON OR C-900 PVC (DR 18). ALL FITTINGS 4-INCHES THROUGH 24-INCHES IN DIAMETER SHALL BE DUCTILE IRON FITTINGS IN CONFORMANCE WITH AWWA C-153 OR AWWA C-110. THE MINIMUM WORKING PRESSURE FOR ALL MJ CAST IRON OR DUCTILE IRON FITTINGS 4-INCHES THROUGH 24-INCH IN DIAMETER SHALL BE 350 PSI FOR MJ FITTINGS AND 250 PSI FOR FLANGED FITTINGS.
81. ALL WATER MAINS TO BE INSTALLED WITH A MINIMUM 36 INCH COVER TO FINISH GRADE UNLESS OTHERWISE NOTED OR DIRECTED. WATER SERVICE LINES SHALL BE INSTALLED WITH A MINIMUM 30-INCH COVER. DEEPER DEPTHS MAY BE REQUIRED AS SHOWN ON THE DRAWINGS OR TO AVOID OBSTRUCTIONS AND CONFLICTS.
82. THRUST RESTRAINT SHALL BE PROVIDED ON ALL BENDS, TEES AND OTHER DIRECTION CHANGES PER LOCAL JURISDICTION REQUIREMENTS AND AS SPECIFIED OR SHOWN ON THE DRAWINGS. ALL RESTRAINED MECHANICAL JOINT FITTINGS SHALL INCLUDE THE REQUIRED NUMBER OF PUSH-ON PIPE JOINT RESTRAINTS TO OBTAIN THE NECESSARY PIPE RESTRAINED LENGTH.
83. ALL VALVES SHALL BE FLANGE CONNECTED TO ADJACENT TEES OR CROSSES, UNLESS OTHERWISE SHOWN OR APPROVED BY THE ENGINEER.
84. WATER SERVICE PIPE ON THE PUBLIC SIDE OF THE METER SHALL CONFORM TO APPROVING AGENCY CONSTRUCTION STANDARDS.
85. WATER SERVICE PIPE 3-INCH AND SMALLER ON THE PRIVATE SIDE OF THE METER SHALL BE SCHEDULE 80 PVC. WATER SERVICE PIPE 4-INCHES AND LARGER ON THE PRIVATE SIDE OF THE METER SHALL BE ASTM D2241 DR 21 (200 PSI) OR AWWA C900 PVC PIPE (DR 18), WITH RUBBER GASKETS CONFORMING TO ASTM F477. PRIVATE WATER SERVICE PIPING SHALL BE HYDROSTATICALLY PRESSURE TESTED TO A MINIMUM OF 150% OF THE MAXIMUM STATIC PRESSURE AT THE SITE. ALL MATERIALS AND WORKMANSHIP FOR PRIVATE WATER LINES SHALL BE INSTALLED IN CONFORMANCE WITH OPSC REQUIREMENTS BY A LICENSED PLUMBER.
86. DOMESTIC, IRRIGATION AND FIRE BACKFLOW PREVENTION DEVICES AND VAULTS SHALL CONFORM TO REQUIREMENTS OF PUBLIC AND/OR PRIVATE AGENCIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING BACKFLOW DEVICES TESTED AND CERTIFIED PRIOR TO FINAL ACCEPTANCE OF THE WORK.
87. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT AND MATERIALS (INCLUDING PLUGS, BLOWOFFS, VALVES, SERVICE TAPS, ETC.) REQUIRED TO FLUSH, TEST AND DISINFECT WATERLINES PER PUBLIC AGENCY REQUIREMENTS PRIOR TO PLACING INTO SERVICE.
88. THE WORK SHALL BE PERFORMED IN A MANNER DESIGNATED TO MAINTAIN WATER SERVICE TO BUILDINGS SUPPLIED FROM THE EXISTING WATERLINES. IN NO CASE SHALL SERVICE TO ANY MAIN LINE OR BUILDING BE INTERRUPTED FOR MORE THAN FOUR (4) HOURS IN ANY ONE-DAY. CONTRACTOR SHALL NOTIFY THE CITY AND ALL AFFECTED RESIDENTS AND BUSINESSES A MINIMUM OF 24 BUSINESS HOURS (1 BUSINESS DAY) BEFORE ANY INTERRUPTION OF SERVICE.
89. PRIVATE WATER LINES SHALL HAVE A MINIMUM OF 12-INCHES CLEAR ABOVE THE TOP OF PRIVATE SANITARY SEWER LINES AND A MINIMUM OF 12-INCHES OF HORIZONTAL SEPARATION IN ACCORDANCE WITH CURRENT OREGON PLUMBING SPECIALTY CODE (OPSC).
90. SANITARY SEWER PIPE SHALL BE SOLID WALL PVC IN CONFORMANCE WITH ASTM D3034, SDR 35. MINIMUM STIFFNESS SHALL BE 46 PSI PER ASTM D-2412 AND JOINT TYPE SHALL BE ELASTOMERIC GASKET CONFORMING TO ASTM D-3212. ALL OTHER APPURTENANCES AND INSTALLATION TO CONFORM TO THE CITY SPECIFICATIONS. ALL MATERIALS AND WORKMANSHIP FOR PRIVATE SANITARY SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH OPSC REQUIREMENTS.
91. ALL PRECAST MANHOLES SHALL BE PROVIDED WITH INTEGRAL RUBBER BOOTS. WHERE MANHOLES WITHOUT INTEGRAL RUBBER BOOTS ARE APPROVED BY THE OWNER'S REPRESENTATIVE AND AGENCY WITH JURISDICTION, A PIPE JOINT SHALL BE PROVIDED ON ALL MAINLINES WITHIN 1.5 FEET OF THE OUTSIDE FACE OF THE MANHOLE.
92. SANITARY SEWER MANHOLES SHALL BE WATER-TIGHT WITH O-RING OR MASTIC KEYLOCK JOINTS. ALL INTERIOR AND EXTERIOR JOINTS AND PIPE OPENINGS ARE TO BE GROUTED WITH NON-SHRINK GROUT. PIPE PENETRATIONS SHALL HAVE NEOPRENE RUBBER BOOTS.
93. OPENINGS FOR CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY CORE-DRILLING THE EXISTING MANHOLE STRUCTURE AND INSTALLING A RUBBER BOOT. CONNECTIONS SHALL BE WATERTIGHT AND SHALL PROVIDE A SMOOTH FLOW INTO AND THROUGH THE MANHOLE WITH NO PONDING. SMALL CHIPPING HAMMERS OR SIMILAR LIGHT TOOLS WHICH WILL NOT DAMAGE OR CRACK THE MANHOLE BASE MAY BE USED TO SHAPE CHANNELS, BUT MAY BE USED TO ENLARGE EXISTING OPENINGS ONLY IF AUTHORIZED IN WRITING BY THE OWNER'S REPRESENTATIVE. USE OF PNEUMATIC JACKHAMMERS SHALL BE PROHIBITED.
94. SITE CONTRACTOR SHALL COORDINATE WITH THE PROJECT PLUMBER TO INSTALL BACKFLOW PROTECTION FOR THE SANITARY SEWER SYSTEM IN ACCORDANCE WITH CHAPTER 7 OF THE OREGON PLUMBING SPECIALTY CODE, IF REQUIRED.
95. CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIALS, EQUIPMENT AND FACILITIES TO TEST SANITARY SEWER PIPE AND APPURTENANCES FOR LEAKAGE IN ACCORDANCE WITH TESTING SCHEDULE STATED ABOVE OR THE CITY'S CONSTRUCTION STANDARDS, WHICHEVER ARE MORE STRINGENT. SANITARY SEWER PIPE AND APPURTENANCES SHALL BE TESTED FOR LEAKAGE. LEAKAGE TESTS SHALL INCLUDE AN AIR TEST OF ALL SEWER MAINS AND LATERALS AND VACUUM TESTING OF THE MANHOLES. MANHOLE TESTING SHALL BE PERFORMED AFTER COMPLETION OF AC PAVEMENT AND FINAL SURFACE RESTORATION.
96. MANHOLES CONSTRUCTED OVER EXISTING SANITARY SEWERS SHALL CONFORM TO THE REQUIREMENTS OF OSSC (ODOT/APWA) 490.41, MANHOLES OVER EXISTING SEWERS. THE EXISTING PIPE SHALL NOT BE BROKEN OUT UNTIL AFTER THE COMPLETION OF THE MANHOLE TEST.
97. BEFORE MANDREL TESTING AND/OR TV INSPECTION, FLUSH AND CLEAN ALL SEWERS, AND REMOVE ALL FOREIGN MATERIAL FROM THE MAINLINES AND MANHOLES.
98. CONTRACTOR SHALL CONDUCT DEFLECTION TEST OF FLEXIBLE SANITARY 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 LESS THAN 30 DAYS AFTER THE TRENCH BACKFILLING AND COMPACTION HAS BEEN COMPLETED, UNLESS OTHERWISE APPROVED BY THE CITY AND OWNER'S REPRESENTATIVE.

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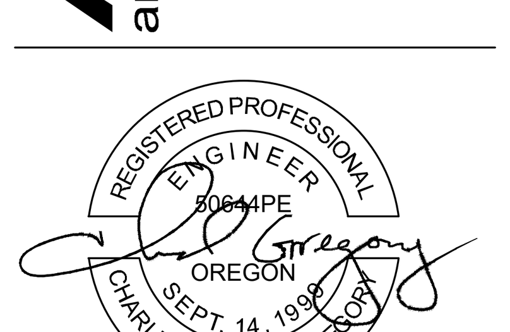

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CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS: **GENERAL CONSTRUCTION NOTES**

SHEET NO:

C001

102. STORM SEWER PIPE MATERIALS TO CONFORM TO THE CONSTRUCTION DRAWINGS AND CITY REQUIREMENTS. STORM SEWER PIPE MUST BE INSTALLED WITH WATERTIGHT JOINTS. 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 SHALL BE INSTALLED IN CONFORMANCE WITH OPSC (MUST BE CHANGED IF WORKING IN ANOTHER STATE) REQUIREMENTS.

STORM PIPE COVER DEPTH (MEASURED FROM FINISH GRADE TO TOP OF PIPE)	STORM PIPE MATERIAL
LESS THAN 2 FEET	CLASS 52 DUCTILE IRON PIPE (4"); CLASS 50 DUCTILE IRON PIPE (6" TO 12"); CLASS 51 DUCTILE IRON PIPE (14" TO 18") WITH BELL AND SPIGOT JOINTS AND RUBBER GASKETS.
2 FEET OR MORE	CLASS 3, ASTM C-14 NON-REINFORCED CONCRETE PIPE ASTM 150 TYPE II CEMENT; OR PVC PIPE CONFORMING TO AWWA C900 DR 18 (4" TO 12") OR AWWA C-905 (14" TO 18") WITH BELL AND SPIGOT JOINTS AND RUBBER GASKETS. 21" TO 30" PIPE SHALL BE CLASS IV, ASTM C-76 REINFORCED CONCRETE PIPE WITH BELL AND SPIGOT JOINTS AND RUBBER GASKETS WITH ASTM 150 TYPE II CEMENT.
2.5 FEET OR MORE	PVC PIPE CONFORMING TO ASTM D-3034 SOLID WALL PVC SDR 35 WITH BELL AND SPIGOT JOINTS AND RUBBER GASKETS (4" TO 18"); OR HDPE ADS N-12 IB WT, HANCOR BLUE SEAL PIPE. HDPE PIPE IF USED SHALL CONFORM TO AASHTO M-252 (8" TO 10") OR AASHTO M-294 (12" TO 30").

103. CONTRACTOR SHALL DESIGNATE THE PIPE MATERIAL ACTUALLY INSTALLED ON THE FIELD RECORD DRAWINGS AND PROVIDE THIS INFORMATION FOR INCLUSION ON THE AS-BUILT DRAWINGS.

104. STORM DRAIN INLETS 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.

105. UNLESS OTHERWISE APPROVED BY THE ENGINEER, ALL STORM DRAIN CONNECTIONS SHALL BE BY MANUFACTURED TEES, WYES OR SADDLES.

106. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, ALL STORM PIPE INLETS & OUTFALLS SHALL BE BEVELED FLUSH TO MATCH THE SLOPE WHEREIN THEY LIE.

107. DEFLECT STORM SEWER PIPE INTO CATCH BASINS AND MANHOLES AS REQUIRED. MAXIMUM JOINT DEFLECTION SHALL NOT EXCEED 5 DEGREES OR MANUFACTURER'S RECOMMENDATIONS, WHICHEVER IS LESS.

108. UNLESS OTHERWISE SHOWN OR DIRECTED, INSTALL STORM SEWER PIPE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION GUIDELINES.

109. BEFORE MANDREL TESTING OR FINAL ACCEPTANCE, FLUSH AND CLEAN ALL STORM DRAINS, AND REMOVE ALL FOREIGN MATERIAL FROM THE PIPES, MANHOLES AND CATCH BASINS.

110. 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.

111. STREET LIGHTS SHALL BE INSTALLED AFTER ALL OTHER EARTHWORK AND PUBLIC UTILITY INSTALLATIONS ARE COMPLETED AND AFTER ROUGH GRADING IS ACCOMPLISHED TO PREVENT DAMAGE TO THE POLES.

112. STREET LIGHT POLES SHALL BE SET TO A DEPTH AS SPECIFIED BY THE MANUFACTURER, BUT NOT LESS THAN 5 FEET.

113. STREET LIGHT POLES SHALL BE INSTALLED WITHIN ONE DEGREE (1°) OF PLUMB.

114. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AND PAY ALL COSTS FOR PROCUREMENT, INSTALLATION, WIRING, HOOK UP AND ACTIVATION OF STREET LIGHTS.

115. ALL NEW FRANCHISE AND PRIVATE UTILITIES (POWER, CABLE TV, TELEPHONE, GAS, DATA, COMMUNICATION, ALARMS, ETC.) SHALL BE INSTALLED UNDERGROUND IN CONFORMANCE WITH UTILITY SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS. INSTALLATION OF SUCH UTILITIES OR ASSOCIATED CONDUITS IN A COMMON TRENCH WITH WATER, SANITARY SEWER, OR STORM SEWER IS PROHIBITED.

116. CONTRACTOR SHALL COORDINATE WITH POWER, TELEPHONE AND CABLE TV COMPANIES FOR LOCATION OR RELOCATION OF VAULTS, PEDESTALS, ETC. ALL ABOVE-GRADE FACILITIES SHALL BE PLACED IN A LOCATION OUTSIDE THE PROPOSED SIDEWALK LOCATION.

117. POWER, TELEPHONE AND TV TRENCHING AND CONDUITS SHALL BE INSTALLED PER UTILITY COMPANY REQUIREMENTS WITH PULL WIRE. CONTRACTOR SHALL VERIFY WITH UTILITY COMPANY FOR SIZE, LOCATION AND TYPE OF CONDUIT BEFORE CONSTRUCTION, AND SHALL ENSURE THAT TRENCHES ARE ADEQUATELY PREPARED FOR INSTALLATION PER UTILITY COMPANY REQUIREMENTS. ALL CHANGES IN DIRECTION OF UTILITY CONDUIT RUNS SHALL HAVE LONG RADIUS STEEL BENDS.

118. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH FRANCHISE UTILITIES FOR REMOVAL OR RELOCATION OF POWER POLES, VAULTS, PEDESTALS, MANHOLES, ETC. TO AVOID CONFLICT WITH CITY UTILITY STRUCTURES, FIRE HYDRANTS, METERS, SEWER OR STORM LATERALS, ETC.

119. ALL FRANCHISE UTILITY STRUCTURES (VAULTS, PEDESTALS, LIGHT POLES, ETC.) SHALL BE SET A MINIMUM OF 1 FOOT FROM ANY PROPERTY CORNER OR SURVEY MONUMENT.

AMERICANS WITH DISABILITIES ACT (ADA) NOTES

120. CONTRACTORS SHALL EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA ACCESSIBLE COMPONENTS ON THE PROJECT, THE ADA COMPONENTS MUST COMPLY WITH ALL LOCAL, STATE, AND FEDERAL ACCESSIBILITY RULES, CODES, AND REGULATIONS.

121. FINISHED SURFACES ALONG THE ACCESSIBLE PATH OF TRAVEL FROM PARKING STALLS, PUBLIC TRANSPORTATION, AND PEDESTRIAN ACCESSWAYS TO THE POINT(S) OF ACCESSIBLE BUILDING INGRESS AND EGRESS SHALL COMPLY WITH ADA CODE REQUIREMENTS.

122. PARKING SPACE AND AISLE SLOPE SHALL NOT EXCEED 1:48 (1/4"PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

123. CURB RAMP SLOPE SHALL NOT EXCEED 1:12 (8.3%) FOR A MAXIMUM OF SIX (6) FEET.

124. LANDINGS SHALL BE PROVIDED AT EACH END OF RAMPS, SHALL HAVE POSITIVE DRAINAGE, AND SHALL NOT EXCEED 1:48 (1/4"PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.

125. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE SHALL PROVIDE A MINIMUM OF 36 INCH UNOBSTRUCTED WIDTH OF TRAVEL. THE SLOPE SHALL BE NO GREATER THAN 1:20 (5.0% OR 5/8" PER FOOT) IN THE DIRECTION OF TRAVEL, AND SHALL NOT EXCEED 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) IN CROSS SLOPE. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), AN ACCESSIBLE RAMP WITH A MAXIMUM SLOPE OF 1:12 (8.3%) FOR A MAXIMUM DISTANCE OF 30 FEET SHALL BE PROVIDED INCLUDING HANDRAILS. THE RAMP SHALL HAVE ACCESSIBLE HAND RAILS AND LANDINGS ON EACH END WITH A SLOPE IN ANY DIRECTION NOT EXCEEDING 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%).

126. DOORWAYS SHALL HAVE A LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED NO MORE THAN 1:48 (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA SHALL BE NO LESS THAN 60 INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE PERMITTED BY ACCESSIBILITY STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS AND APPROVED BY THE OWNER'S REPRESENTATIVE.

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OREGON MANUFACTURING INNOVATION CENTER RESEARCH & DEVELOPMENT
33701 Charles T. Parker Way
Scappoose, Oregon 97056

SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

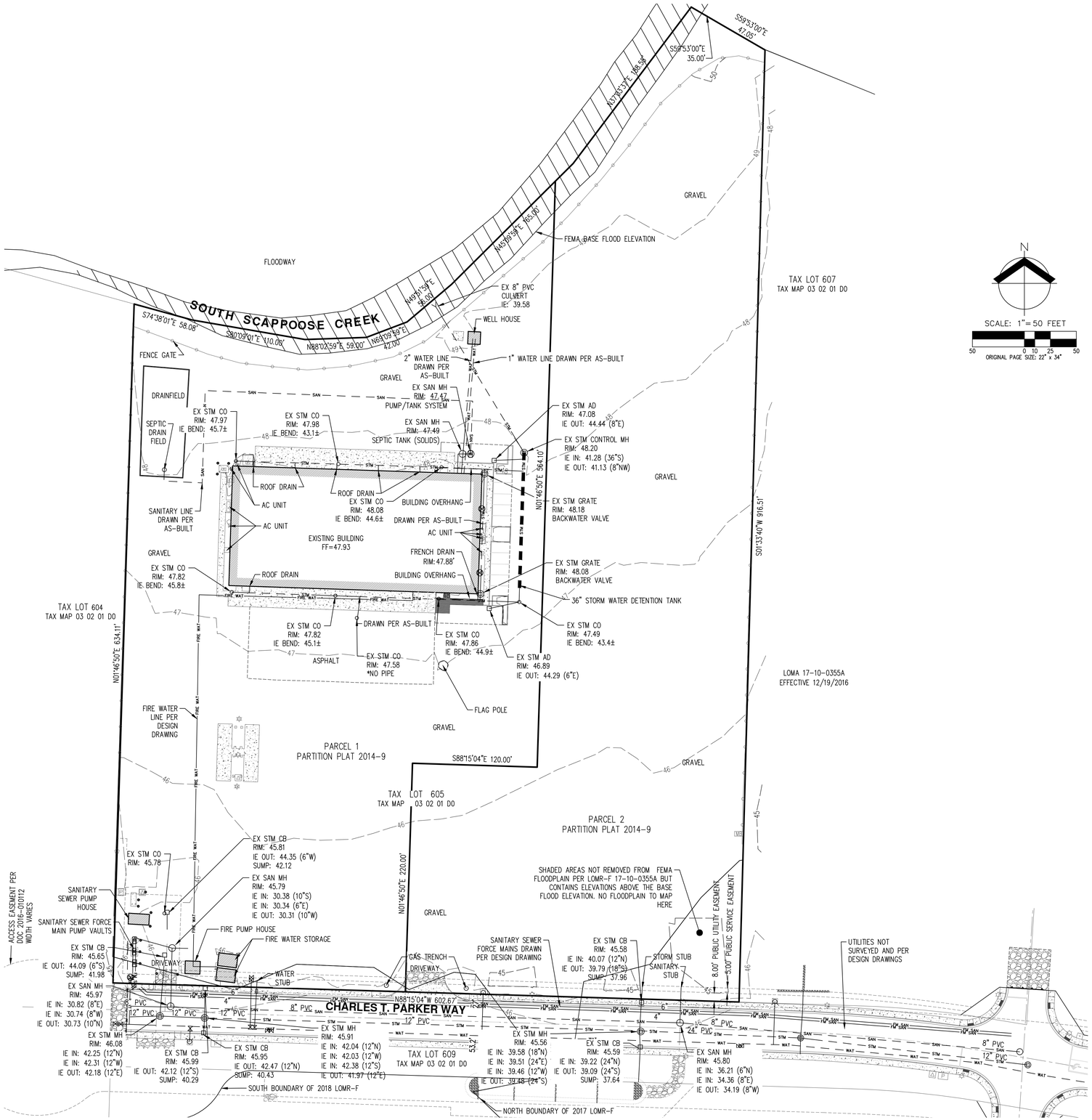
REVISIONS

△	DATE	DESCRIPTION

CONTENTS: **GENERAL CONSTRUCTION NOTES**

SHEET NO:

C002



AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151
WWW.AKS-ENG.COM

ENGINEERING · SURVEYING · NATURAL RESOURCES
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NOTES:

1. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PROVIDED PER UTILITY LOCATE TICKET NUMBERS 19116603, 19116606, 19116608, 1911612. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
2. FIELD WORK WAS CONDUCTED APRIL 15 – MAY 10, 2019.
3. VERTICAL DATUM: ELEVATIONS ARE BASED ON NGS BENCHMARK NO. RD0562. LOCATED AT THE SOUTH PART OF SCAPPOOSE, COLUMBIA COUNTY, ABOUT 100 FEET WEST OF THE COLUMBIA RIVER HIGHWAY, AT THE EAST ENTRANCE TO THE SCAPPOOSE HIGH SCHOOL, IN THE NORTH END OF THE LOWEST STEP. ELEVATION = 64.83 FEET (NAVD 88).
4. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
5. BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
6. CONTOUR INTERVAL IS 1 FOOT.
7. TREES WITH DIAMETER OF 6" AND GREATER ARE SHOWN. TREE DIAMETERS WERE MEASURED UTILIZING A DIAMETER TAPE AT BREAST HEIGHT. TREE INFORMATION IS SUBJECT TO CHANGE UPON ARBORIST INSPECTION.
8. SITE IS SUBJECT TO FEMA FLOOD INSURANCE RATE MAP NUMBER 41009C0463D, REVISED NOVEMBER 26, 2010 WITH ADDITIONAL LOMR-F REVISIONS AS DEPICTED AND REFERENCED PER CASE NUMBER 17-10-0355A AND 18-10-0509A. THE FLOODWAY IS MAPPED PER OVERLAY OF SAID FEMA FIRM. THE BASE FLOOD ELEVATION IS BELOW GRADES THAT WERE NOT REMOVED THROUGH THE LOMR-F'S. IT'S UNKNOWN WHY THESE AREAS WERE DRAWN THEY WAY THEY WERE. THESE HAVE BEEN DEPICTED BUT BECUASE THE GRADES ARE HIGHER, THERE IS NO FLOODPLAIN WITHIN THEM.
9. A TITLE REPORT WAS NOT RECEIVED AS A PART OF THIS WORK. THERE MAY EXIST EASEMENTS NOT MAPPED.
10. THE BOUNDARIES ARE ORIENTED PER PARTITION PLAT 2014-9 BUT SOME OF THE MONUMENTS WERE DESTROYED IN ROAD CONSTRUCTION. UNTIL A BOUNDARY SURVEY IS PERFORMED TO RESET THESE CORNERS, THE BOUNDARIES SHOULD BE CONSIDERED APPROXIMATE. CONTACT AKS SURVEYOR WITH REGARDS TO BOUNDARY PRECISION.
11. ADDITIONAL UTILITY LOCATIONS ARE SHOWN PER RECORD DRAWINGS RECEIVED. SEE AKS SURVEYOR WITH REGARDS TO SOURCES AND POTENTIAL ACCURACY OF THESE REFERENCED DOCUMENTS.

LEGEND

	EXISTING
DECIDUOUS TREE	
CONIFEROUS TREE	
FIRE HYDRANT	
WATER BLOWOFF	
WATER METER	
WATER VALVE	
DOUBLE CHECK VALVE	
AIR RELEASE VALVE	
SANITARY SEWER CLEAN OUT	
SANITARY SEWER MANHOLE	
SIGN	
STREET LIGHT	
MAILBOX	MB

	EXISTING
STORM DRAIN CLEAN OUT	
STORM DRAIN CATCH BASIN	
STORM DRAIN AREA DRAIN	
STORM DRAIN MANHOLE	
GAS METER	
GAS VALVE	
GUY WIRE ANCHOR	
UTILITY POLE	
POWER VAULT	P
POWER JUNCTION BOX	
POWER PEDESTAL	
COMMUNICATIONS VAULT	C
COMMUNICATIONS JUNCTION BOX	
COMMUNICATIONS RISER	
SEWER FORCE MAIN VAULT	

	EXISTING
RIGHT-OF-WAY LINE	
BOUNDARY LINE	
PROPERTY LINE	
CENTERLINE	
DITCH	
CURB	
EDGE OF PAVEMENT	
EASEMENT	
FENCE LINE	
GRAVEL EDGE	
POWER LINE	PWR
OVERHEAD WIRE	OHW
COMMUNICATIONS LINE	COM
FIBER OPTIC LINE	OFO
GAS LINE	GAS
STORM DRAIN LINE	STM
SANITARY SEWER LINE	SAN
WATER LINE	WAT

AKAAN
architecture + design llc
101 ST HELENS ST
ST HELENS, OR 97051
T: 503 366 3050 F: 503 366 3055

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 11, 2005
ROBERT D. RETTIG
60124LS
RENEWS: 12/31/20

PROJECT TEAM:

CIVIL ENGINEER:
AKS ENGINEERING & FORESTRY
12965 SW Herman Road, Suite 100
Tualatin, OR 97062
P: 503.563.6151
F: 503.563.6152

STRUCTURAL ENGINEER:
PETERSON STRUCTURAL ENGINEERS
9400 SW Barnes Road, Suite 100
Portland, OR 97225
P. 503.292.1635

MEP ENGINEER:
PETERSON STRUCTURAL ENGINEERS
Fluent Engineering, Inc.
2110 State Street
Salem, Oregon 97301
P. 503-447-5030

OWNER:
OMIC R&D / OREGON TECH.
Procurement and Contract Services
27500 SW Parkway Avenue
Wilsonville, OR 97070

OWNER'S REPRESENTATIVE:
CRAIG CAMPBELL
OMIC R&D Executive Director
503-983-0573

OREGON MANUFACTURING INNOVATION CENTER RESEARCH & DEVELOPMENT
33701 Charles T. Parker Way
Scappoose, Oregon 97056

SCALE:	AS NOTED
DRAWN BY:	CH
CHECKED BY:	SG
CAD FILE:	N/A
DATE	MAY. 13, 2019

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:
EXISTING CONDITIONS PLAN

SHEET NO:
C003

OMIC RESEARCH & DEVELOPMENT RETROFIT

1200C EROSION AND SEDIMENT CONTROL PLAN

AKS ENGINEERING & FORESTRY, LLC
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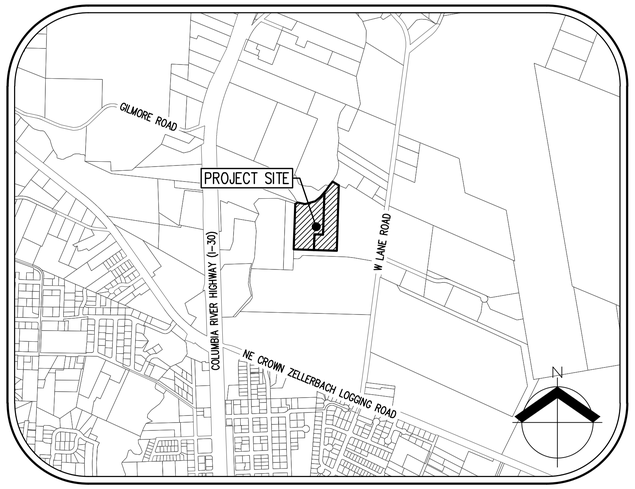
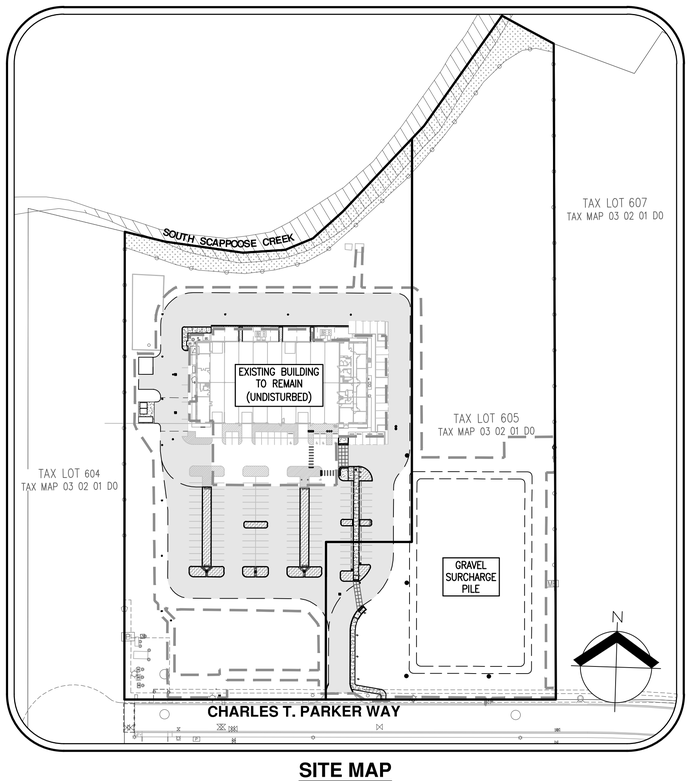


VICINITY MAP

NOT TO SCALE



SITE MAP

1" = 100'

OWNER

COMPANY: OMIC R&D/OREGON TECH
CONTACT: CRAIG CAMPBELL
ADDRESS: 27500 SW PARKWAY AVENUE
WILSONVILLE, OR 97070
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ARCHITECT

COMPANY: AKAAN ARCHITECTURE + DESIGN
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CIVIL ENGINEERING /SURVEYING

COMPANY: AKS ENGINEERING & FORESTRY
CONTACT: CHUCK GREGORY, P.E.
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TUALATIN, OR 97062
PHONE: 503.563.6151
FAX: 503.563.6152

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS

THE SITE IS CURRENTLY PARTIALLY DEVELOPED WITH AN EXISTING OMIC RESEARCH AND DEVELOPMENT BUILDING WITH SIDEWALK WRAPPING THE BUILDING AND A SMALL ASPHALT CONCRETE PARKING AREA ON A GRAVEL LOT

DEVELOPED CONDITIONS

THE PROPOSED DEVELOPMENT CONSISTS OF RETROFITTED BUILDING WITH A NEW PARKING LOT, UTILITIES, WALKWAYS, AND LANDSCAPING. A SURCHARGE PILE WILL BE PLACED AT FUTURE BUILDING LOCATION

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

* CLEARING AND GRADING	(03/2020 – 05/2020)
* UTILITY INSTALLATION	(04/2020 – 08/2020)
* PAVING CONSTRUCTION	(08/2020 – 09/2020)
* FINAL STABILIZATION/LANDSCAPING	(09/2020 – 10/2020)

TOTAL ON–SITE AREA = ±10.2 ACRES
TOTAL DISTURBED AREA = ±4.7 ACRES

SITE SOIL CLASSIFICATION:

13 – CLOQUATO SILT LOAM, HYDROLOGICAL SOIL GROUP B

51 – SIFTON LOAM, HYDROLOGICAL SOIL GROUP B

RECEIVING WATER BODIES:

THE SURFACE RUNOFF FROM THE SITE WILL FLOW FROM THE NEW CATCH BASINS INTO THE NEW STORM MAIN, THEN ENTERS THE EXISTING CITY STORM DRAINAGE SYSTEM. THIS WILL EVENTUALLY ENTER A LAKE ON THE ROCK QUARRY SITE

PROJECT LOCATION:

33701 CHARLES T PARKER WAY
SCAPPOOSE, OR 97056

LATITUDE = 45°46'01"N, LONGITUDE = 122°52'21"W

PROPERTY DESCRIPTION:

TAX LOT 605 (COLUMBIA COUNTY TAX MAP 03N02W04D0) LOCATED IN THE SOUTHEAST ONE–QUARTER OF SECTION 1, TOWNSHIP 2 NORTH, RANGE 2 WEST, WILLAMETTE MERIDIAN, CITY OF SCAPPOOSE, COLUMBIA COUNTY, OREGON.

ATTENTION EXCAVATORS:

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 THESE RULES FROM THE CENTER BY CALLING 503–232–1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503–246–6699.

811
Know what's **below.**
Call before you dig.

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES:

1. HOLD A PRE–CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.I.(3))
2. ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200–C PERMIT REQUIREMENTS. (SCHEDULE A.12.B AND SCHEDULE B.1)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200–C PERMIT REQUIREMENTS. (SCHEDULE B.1.C AND B.2)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, THE ABOVE RECORDS MUST BE RETAINED BY THE PERMIT REGISTRANT BUT DO NOT NEED TO BE AT THE CONSTRUCTION SITE. (SCHEDULE B.2.C)
5. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A 8.A)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SCHEDULE A.12.C.I)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT WITHIN 10 DAYS. (SCHEDULE A.12.C.IV. AND V)
8. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A.7.A.III)
9. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SCHEDULE A.8.C.I.(1) AND (2))
10. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE–VEGETATE OPEN AREAS. RE–VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.A.V)
11. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50–FEET OF WATERS OF THE STATE. (SCHEDULE A.7.B.I.AND (2(A)(B))
12. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SCHEDULE A.8.C.I.(5))
13. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SCHEDULE A.7.C)
14. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SCHEDULE A.7.D.I)
15. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
16. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS.(SCHEDULE A.8.C.II.(3))
17. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON–STORMWATER CONTROLS. (SCHEDULE A.8.C.I.(7))
18. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND DISTURBING ACTIVITIES. (SCHEDULE A 7.D.II AND A.8.C.I(4)) REV. 12/15/15 BY: KRISTA RATLIFF P. 7 OF 7
19. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER–TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II.(5))
20. CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH–OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SCHEDULE A.6)
21. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2))
22. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SCHEDULE A. 7.E.III.)
23. USE WATER, SOIL–BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND–BLOWN SOIL. (SCHEDULE A 7.A.IV)
24. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME–RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.III)
25. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO–COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D)
26. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A 7.B)
27. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SCHEDULE A 7.E.II.(2))
28. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND BARE GROUND ACTIVITIES DURING WET WEATHER. (SCHEDULE A.7.A.I)
29. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
30. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.I)
31. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.III & IV)
32. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN–STREAM CLEAN–UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.I)
33. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
34. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
35. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.II)
36. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. (SCHEDULE A.8.C.III(1) AND D.3.C.II AND III)

SHEET INDEX

1200C EROSION AND SEDIMENT CONTROL PLANS

BMP MATRIX FOR CONSTRUCTION PHASES

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

	CLEARING AND GRADING	UTILITY INSTALLATION	PAVING CONSTRUCTION	FINAL STABILIZATION	WET WEATHER (OCT. 1 – MAY 31ST)
EROSION PREVENTION					
PRESERVE NATURAL VEGETATION	X	X	X	X	X
GROUND COVER				X	X
HYDRAULIC APPLICATIONS					
PLASTIC SHEETING	X	X	X		X
MATTING					
DUST CONTROL	X	X	X		
TEMPORARY/ PERMANENT SEEDING				X	
BUFFER ZONE					
OTHER:					
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)	** X	X	X	X	X
SEDIMENT FENCE (INTERIOR)					
STRAW WATTLES	X	X	X		X
FILTER BERM					
INLET PROTECTION	X	X	X	X	X
DEWATERING					
SEDIMENT TRAP					
OTHER:					
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	** X	X	X		X
PIPE SLOPE DRAIN					
OUTLET PROTECTION					
SURFACE ROUGHENING	X				
CHECK DAMS					
OTHER:					
POLLUTION PREVENTION					
PROPER SIGNAGE	** X	X	X	X	X
HAZ WASTE MGMT	X	X	X	X	X
SPILL KIT ON–SITE	X	X	X	X	X
CONCRETE WASHOUT AREA		X	X		X
OTHER:					

**SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

NOTE:
THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200–C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200–C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200–C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

INSPECTION FREQUENCY		
	SITE CONDITION	MINIMUM FREQUENCY
1.	ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING. AT LEAST ONCE EVERY (14) DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2.	PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.
3.	INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS.	ONCE EVERY MONTH.
4.	PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.
5.	PERIODS DURING WHICH DISCHARGE IS UNLIKELY DUE TO FROZEN CONDITIONS.	MONTHLY. RESUME MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

* HOLD A PRE–CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS.
* ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200–C PERMIT REQUIREMENTS.
* INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200–C PERMIT REQUIREMENTS.
* RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION.

RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP's 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 ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL

PERMITTEE'S SITE INSPECTOR: BRENT WHITTAKER

COMPANY/AGENCY: AKS ENGINEERING & FORESTRY
PHONE: 503.964.0245
FAX: 503.563.6152
E–MAIL: WHITTAKERB@AKS–ENG.COM
DESCRIPTION OF EXPERIENCE:
CESCL ID# ECO–3–12111903 – EXP 12/11/2020

AKAAN
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OREGON
JULY 12, 1994
CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 2021

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SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

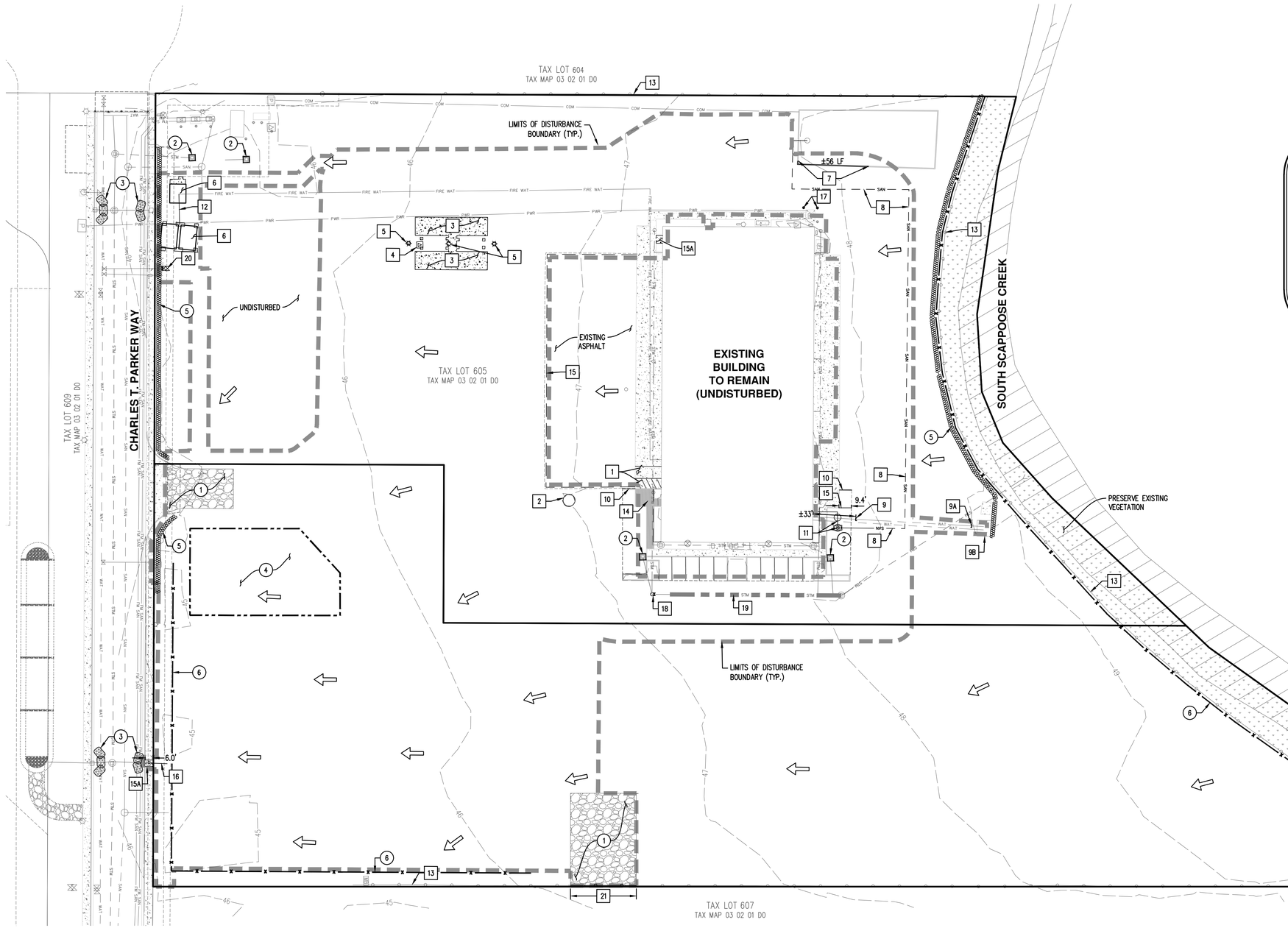
△	DATE	DESCRIPTION
1	02/17/2020	AGENCY COMMENTS

CONTENTS:

EROSION AND SEDIMENT CONTROL COVER SHEET

SHEET NO:

C050



SCALE: 1" = 40 FEET

ORIGINAL PAGE SIZE: 22" x 34"

KEYED DEMOLITION NOTES:

1. SANDBLAST OR PRESSURE WASH TO REMOVE EXISTING STRIPING
2. REMOVE EXISTING FLAG POLE AND CONCRETE CMU WALL
3. REMOVE EXISTING CONCRETE
4. REMOVE EXISTING POWER STRUCTURE. COORDINATE WITH ELECTRICAL CONTRACTOR FOR UNDERGROUND POWER DECOMMISSION OR REMOVAL
5. REMOVE EXISTING LIGHT POLE AND POWER LINES
6. REMOVE FIRE PUMP BUILDING, WATER TANKS, AND CONCRETE AFTER CONNECTION TO CITY'S WATER SYSTEM
7. DECOMMISSION AND PARTIALLY REMOVE SEPTIC DRAINAGE FIELD PER DEQ AND CITY STANDARDS. REMOVE RAILROAD TIES AS NECESSARY
8. REMOVE EXISTING SANITARY LINE AS NECESSARY OR PUMP WITH GROUT FILL. CONTRACTOR TO VERIFY PIPE LOCATION AND NETWORK LAYOUT PRIOR TO CONSTRUCTION
9. CUT "TEE" INTO EXISTING 2" WATER LINE ±33' FROM EXISTING BUILDING FOR NEW DOMESTIC WATER CONNECTION. SEE SHEET C300 – COMPOSITE UTILITY PLAN. CONTRACTOR TO VERIFY PIPE LOCATION AND NETWORK LAYOUT PRIOR TO CONSTRUCTION. PROTECT EXISTING 1" WATER LINE TO REMAIN
9A. CUT "TEE" INTO EXISTING 2" WATER LINE FOR NEW IRRIGATION POINT OF CONNECTION. SEE IRRIGATION AND COMPOSITE UTILITY PLANS FOR DETAILS
9B. PROTECT EXISTING WELL AT ALL TIMES DURING CONSTRUCTION
10. REMOVE EXISTING CURB
11. DECOMMISSION UNDERGROUND SEPTIC TANKS PER DEQ REGULATIONS. ALL SEPTAGE MUST BE REMOVED AND PROPERLY DISPOSED BY A LICENSED SEWAGE DISPOSAL SERVICE. REMOVE AND PROPERLY DISPOSE TANKS PER DEQ STANDARDS
12. REMOVE PORTION OF FIRE WATER SERVICE AS NEEDED FOR CONNECTION. CONTRACTOR TO POTHOLE AND CONFIRM LOCATION OF FIRE WATER SERVICE. SEE SHEET C300 – COMPOSITE UTILITY PLAN
13. PROTECT EXISTING FENCE DURING CONSTRUCTION
14. PROTECT EXISTING STAMPED TEXTURE CONCRETE SIDEWALK TO REMAIN DURING CONSTRUCTION
15. SAWCUT BETWEEN 6" – 12" AS NEEDED FROM THE EDGE OF EXISTING PAVEMENT FOR A CLEAN STRAIGHT EDGE, SAND SEAL JOINTS
15A. SAWCUT AT NEAREST SCORE JOINT AND REMOVE CONCRETE SIDEWALK PANEL
16. REMOVE EXISTING 12" STORM LINE TO CURB INLET
17. REMOVE AND SALVAGE EXISTING BOLLARDS
18. CUT EXISTING STORM LINE AT CONNECTION TO CLEANOUT. REINSTALL CLEANOUT ON STORM PIPE LEADING TO DETENTION TANK. SEE SHEET C200 – STORMWATER DRAINAGE PLAN FOR NEW PIPE CONNECTION. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING PIPE FROM CATCH BASIN AND BUILDING DOWNSPOUTS. CONTACT ENGINEER IF IN CONFLICT
19. PROTECT EXISTING DETENTION PIPE AT ALL TIMES DURING CONSTRUCTION
20. CONTRACTOR SHALL VERIFY EXISTING VALVE AND BLOWOFF LOCATIONS AND DIMENSIONS. REMOVE EXISTING 2" GATE VALVE AND 2" BLOWOFF
21. CONTRACTOR TO REMOVE EXISTING FENCE AS NEEDED AND REPLACE/REINSTALL TO ORIGINAL CONDITION

KEYED EROSION AND SEDIMENT CONTROL NOTES:

1. USE EXISTING GRAVEL AS CONSTRUCTION ENTRANCE. IF TRACKING BECOMES AN ISSUE, INSTALL GRAVEL CONSTRUCTION ENTRANCE PER DETAIL 1/C053
2. INSTALL SILT SACK INLET PROTECTION PER DETAIL 2/C053
3. INSTALL BIO-FILTER BAG INLET PROTECTION PER DETAIL 3/C053
4. APPROXIMATE SOIL STOCKPILING AND STAGING AREA. CONTRACTOR SHALL ADJUST LOCATION AS NEEDED DURING CONSTRUCTION. COVER STOCKPILE WITH PLASTIC SHEETING PER DETAIL 6/C053.
5. INSTALL STRAW WATTLES PER DETAIL 5/C053
6. INSTALL SEDIMENT FENCE PER DETAIL 7/C053

EROSION CONTROL LEGEND

- 46 — EXISTING GRADE CONTOUR (1 FT)
- 45 — EXISTING GRADE CONTOUR (5 FT)
- LIMITS OF DISTURBANCE BOUNDARY
- STRAW WATTLES
- SEDIMENT FENCE
- SAWCUT LIMITS
- DIRECTION OF PRE-DEVELOPMENT RUNOFF
- INLET PROTECTION
- BIO-FILTER BAG
- CONSTRUCTION ENTRANCE

TOTAL DISTURBED AREA: ±4.7 AC

PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:

1. 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.
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 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.
5. 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.

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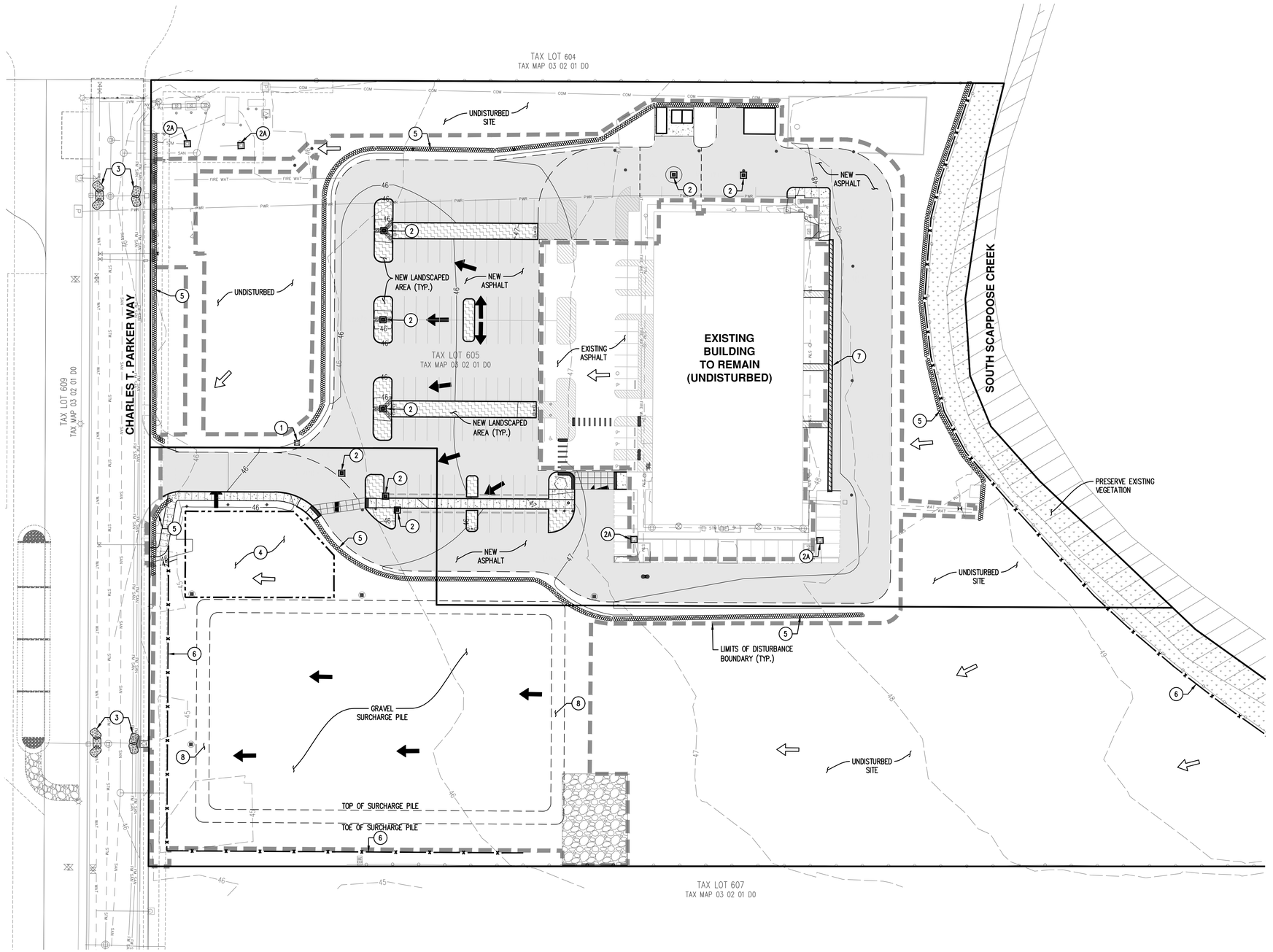
CLEARING, DEMOLITION, EROSION AND SEDIMENT CONTROL PLAN

SHEET NO:

C051



KEYED EROSION AND SEDIMENT CONTROL NOTES:

1. INSTALL CONCRETE TRUCK WASHOUT PER DETAIL 4/C053
2. INSTALL SILT SACK INLET PROTECTION PER DETAIL 2/C053
2A. MAINTAIN SILT SACK INLET PROTECTION PER DETAIL 2/C053
3. MAINTAIN BIO-FILTER BAG INLET PROTECTION PER DETAIL 3/C053
4. APPROXIMATE SOIL STOCKPILING AND STAGING AREA. CONTRACTOR SHALL ADJUST LOCATION AS NEEDED DURING CONSTRUCTION. COVER STOCKPILE WITH PLASTIC SHEETING PER DETAIL 6/C053
5. MAINTAIN STRAW WATTLES PER DETAIL 5/C053
6. MAINTAIN SEDIMENT FENCE PER DETAIL 7/C053
7. INSTALL FILTER FABRIC PROTECTION OVER TRENCH DRAIN
8. DOZER TRACK SLOPES OF SURCHARGE PILE

N

SCALE: 1" = 40 FEET

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ORIGINAL PAGE SIZE: 22" x 34"

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EROSION CONTROL LEGEND

- 46 — EXISTING GRADE CONTOUR (1 FT)
- 45 — EXISTING GRADE CONTOUR (5 FT)
- 46 — FINISH GRADE CONTOUR (1 FT)
- 45 — FINISH GRADE CONTOUR (5 FT)
- LIMITS OF DISTURBANCE BOUNDARY
- STRAW WATTLES
- SEDIMENT FENCE
- DIRECTION OF PRE-DEVELOPMENT RUNOFF
- DIRECTION OF POST-DEVELOPMENT RUNOFF
- EXISTING AND NEW INLET PROTECTION
- CONCRETE WASHOUT
- BIO-FILTER BAG
- CONSTRUCTION ENTRANCE

TOTAL DISTURBED AREA: ±4.7 AC

EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION

1. 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.
2. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.
3. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.
4. THE STORMWATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORMWATER SYSTEM FUNCTIONING AND SITE PAVING.
5. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

GRADING, BUILDING/SITE AND UTILITY EROSION AND SEDIMENT CONSTRUCTION NOTES:

1. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
   - A. VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
   - B. DWARF GRASS MIX (MIN. 100 LB./AC.)
     1. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
     2. CREEPING RED FESCUE (20% BY WEIGHT)
   - C. STANDARD HEIGHT GRASS MIX (MIN. 100LB./AC.)
     1. ANNUAL RYEGRASS (40% BY WEIGHT)
     2. TURF-TYPE FESCUE (60% BY WEIGHT)
2. SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
3. LONG TERM STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
4. TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
5. STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.
6. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
7. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
8. 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, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
9. ACTIVE INLETS TO STORMWATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
10. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
11. AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.
12. SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORMWATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
13. AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORMWATER SYSTEM.
14. USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
15. COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORMWATER SYSTEM.

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GRADING, CONSTRUCTION, EROSION AND SEDIMENT CONTROL PLAN

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C052

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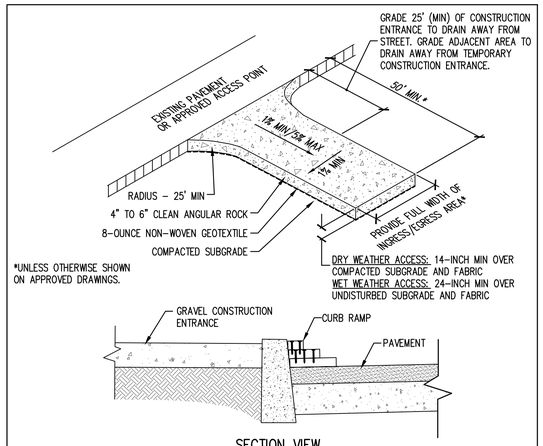
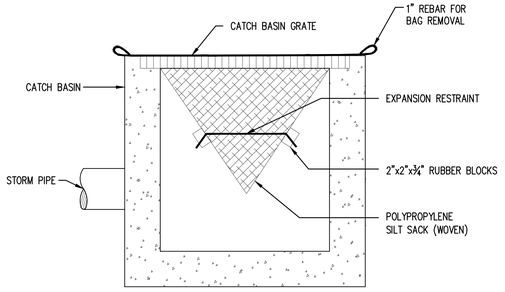


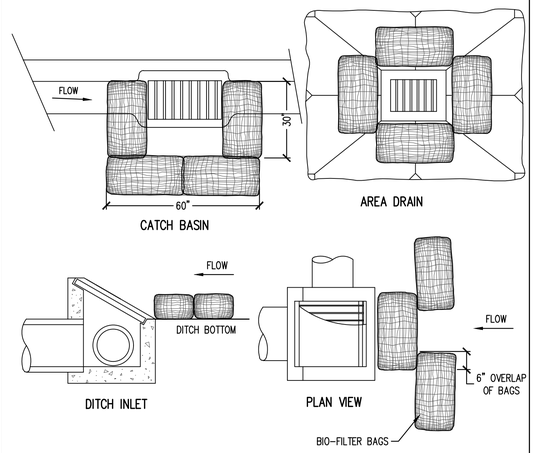
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS OR ADJACENT PROPERTIES. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
6. ALL TRUCKS TRANSPORTING SATURATED SOILS SHALL BE WELL SEALED. WATER DRIPPAGE FROM TRUCKS MUST BE REDUCED TO ONE GALLON PER HOUR PRIOR TO LEAVING SITE.
7. THE AREA OF THE CONSTRUCTION ENTRANCE SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROOTS, AND OTHER NON-COMPACTABLE MATERIAL.
8. SUBGRADE SHALL BE COMPACTED AND PROOFROLLED PRIOR TO PLACEMENT OF GRANULAR MATERIAL. FAILURE TO PASS PROOFROLL WILL REQUIRE USE OF WET WEATHER SECTION.
9. FAILURE OR PUMPING OF THE DRY WEATHER SECTION WILL REQUIRE REMOVAL OF THE GRANULAR MATERIAL AND INSTALLATION OF THE WET WEATHER SECTION.

GRAVEL CONSTRUCTION ENTRANCE
NTS
1



NOTES:
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS.
2. SIZE OF FILTER FABRIC INLET SACKS TO MATCH CATCH BASIN AS DETERMINED BY MANUFACTURER.
3. SILT SACK SHALL BE EMPTIED AS NECESSARY.
4. CONTRACTOR SHALL REMOVE AND HAUL OFF SITE FOR DISPOSAL UPON PROJECT COMPLETION.

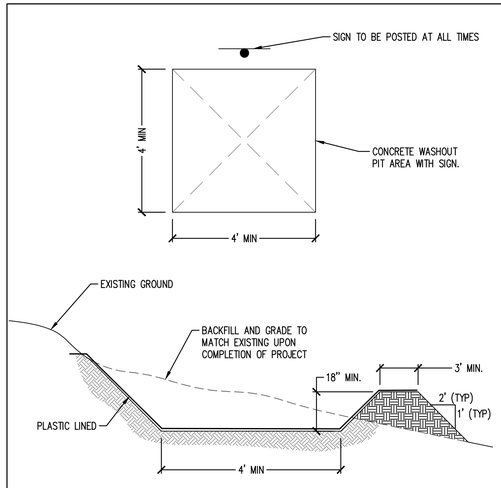
INLET PROTECTION (SILT SACK)
NTS
2



NOTES:
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2"x3' WOOD STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN, 4 BAGS SHALL BE USED AND OVERLAPPED BY 6" MINIMUM.
4. BIO-FILTER BAGS MUST BE REMOVED AND HAULED OFF-SITE FOR DISPOSAL BY THE CONTRACTOR UPON PROJECT STABILIZATION.
5. BIO-FILTER BAGS MAY BE USED SHORT TERM WITH UTILITY WORK AND WITH PHASING OF DEVELOPMENT.

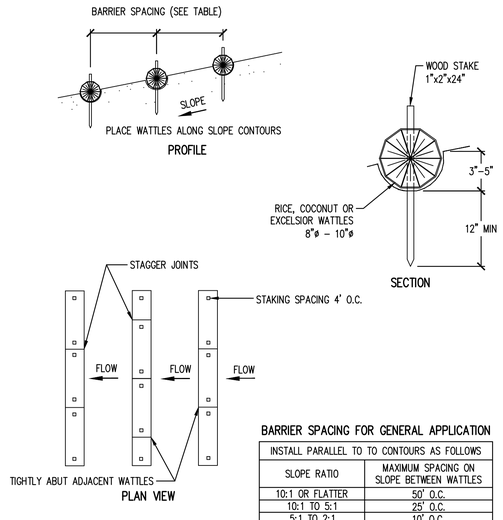
MAINTENANCE NOTES:
1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UPHILL AREA AS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN 2-INCHES OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND BIO-FILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

INLET PROTECTION (BIO-FILTER BAG)
NTS
3



NOTES:
1. REMOVE AND LEGALLY DISPOSE OF WASTE MATERIAL WHEN IT ACCUMULATES TO 2/3 OF WET STORAGE CAPACITY OF PIT.
2. CONCRETE WASHOUT AREA TO BE REPAIRED AND/OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE.
3. UPON COMPLETION OF CONSTRUCTION ACTIVITIES REQUIRING CONCRETE WASHOUT, THE WASHOUT SHALL BE REMOVED AND THE AREA RESTORED TO FINISH GRADE AND EXISTING CONDITION.
4. CONTRACTOR SHALL TAKE PRECAUTIONS SO AS TO NOT OVERFLOW PIT.
5. CONTRACTOR MAY SUBSTITUTE WASHOUT WITH EQUIVALENT ECO-PAN

CONCRETE TRUCK WASHOUT
NTS
4

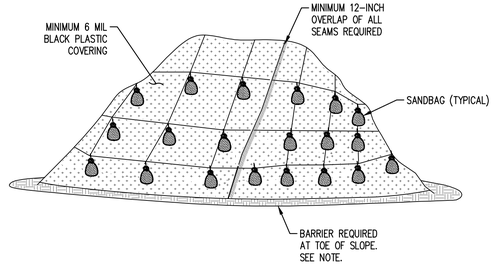


BARRIER SPACING FOR GENERAL APPLICATION

INSTALL PARALLEL TO TO CONTOURS AS FOLLOWS	
SLOPE RATIO	MAXIMUM SPACING ON SLOPE BETWEEN WATTLES
10:1 OR FLATTER	50' O.C.
10:1 TO 5:1	25' O.C.
5:1 TO 2:1	10' O.C.
2:1 OR STEEPER	5' O.C.

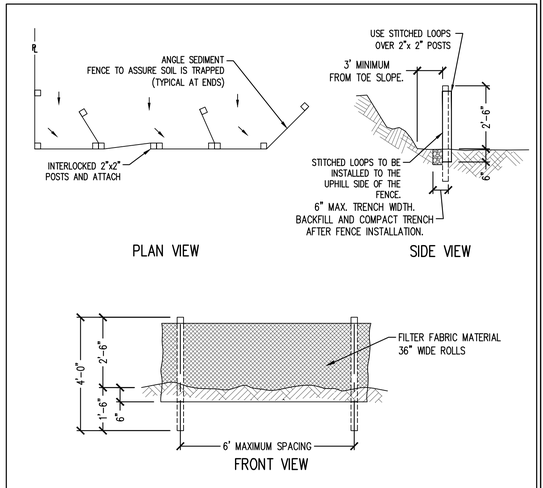
NOTES:
1. ALL MATERIAL SHALL CONFORM TO OSSC, CURRENT EDITION.
2. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP-HILL AREA IS PERMANENTLY STABILIZED.
3. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE ABOVE THE TOP OF THE STRAW WATTLE.
4. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.
5. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES DUE TO STEEP SLOPES OR HIGHLY EROSIVE SOILS.
6. CONTRACTOR SHALL REMOVE AND HAUL OFF SITE FOR DISPOSAL UPON PROJECT COMPLETION.

STRAW WATTLES
NTS
5



NOTES:
1. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.
2. BARRIER SHALL CONSIST OF SOIL BERM, SILT FENCE, STRAW WATTLE, GRASS LINED DITCH, SANDBAGS, OR OTHER APPROVED MATERIAL.
3. STOCKPILE(S) MUST BE LOCATED IN AREAS THAT WILL NOT IMPOUND OR BLOCK STORMWATER RUNOFF.
4. ALL SEAMS SHALL BE TAPED OR WEIGHTED DOWN FOR FULL LENGTH.
5. PLASTIC SHEETING REQUIRED FOR ALL TEMPORARY STOCKPILED MATERIAL.

PLASTIC SHEETING
NTS
6



NOTES:
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2" x 2" FIR, PINE OR STEEL FENCE POSTS. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
3. SEDIMENT FENCE SHALL BE CONSTRUCTED OF CONTINUOUS FILTER FABRIC TO MINIMIZE USE OF JOINTS.
4. WHEN A JOINT IS REQUIRED, FABRIC SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO A POST.

MAINTENANCE NOTES:
1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UPHILL AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN 10 INCHES OF SEDIMENT BE ALLOWED TO ACCUMULATE UPHILL OF SEDIMENT FENCES.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.
4. SEDIMENT FENCE MUST BE ADEQUATELY SUPPORTED AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.
5. FENCE SHALL NOT BE STAPLED TO EXISTING TREES.
6. CONTRACTOR SHALL REMOVE AND HAUL OFF SITE FOR DISPOSAL UPON PROJECT COMPLETION.

SEDIMENT FENCE
NTS
7

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SEPT. 14, 1993
CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 2021

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SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:

EROSION AND SEDIMENT CONTROL DETAILS

SHEET NO:

C053

GRADING LEGEND

EXISTING GROUND CONTOUR (1 FT)	46
EXISTING GROUND CONTOUR (5 FT)	45
FINISHED GRADE CONTOUR (1 FT)	46
FINISHED GRADE CONTOUR (5 FT)	45
DOWNWARD DIRECTION FLOW ARROW	X.X%
MATCH EXISTING ELEVATION	(XX: XXX.XX)
FINISHED GRADE	FG: XXX.XX
ASPHALT ELEVATION	AC: XXX.XX
CONCRETE ELEVATION	EC: XXX.XX
TOP OF CURB ELEVATION	TC: XXX.XX
FINISHED FLOOR ELEVATION	FFE: ±XXX.X
RIM ELEVATION	RIM: ±XXX.X

SCALE: 1"= 20 FEET

20 0 4 10 20

ORIGINAL PAGE SIZE: 22" x 34"

NOTES:

- ALL CURBS TO HAVE 6-INCH EXPOSURE UNLESS OTHERWISE SHOWN.
- SLOPES ARE APPROXIMATE. IF DISCREPANCIES EXIST, SPOT ELEVATIONS CONTROL.

EXISTING BUILDING FFE = 47.93

REGRADE AS NEEDED TO MATCH EXISTING. BLEND AS NECESSARY TO PROVIDE SMOOTH TRANSITION

EDGE OF PAVEMENT (TYP.)

USE SALVAGED GRAVEL AND REGRADE AS NEEDED TO MATCH EXISTING. BLEND AS NECESSARY TO PROVIDE SMOOTH TRANSITION

CONTRACTOR SHALL VERIFY THAT EXISTING PAVEMENT MEETS ADA REQUIREMENTS

GRADE AS NEEDED TO MATCH EXISTING

GRADE TO DRAIN

CURB TAPER

DRAIN TO RIM

FENCED MECHANICAL EQUIP

FENCED STORAGE

GRAVEL SURCHARGE PILE

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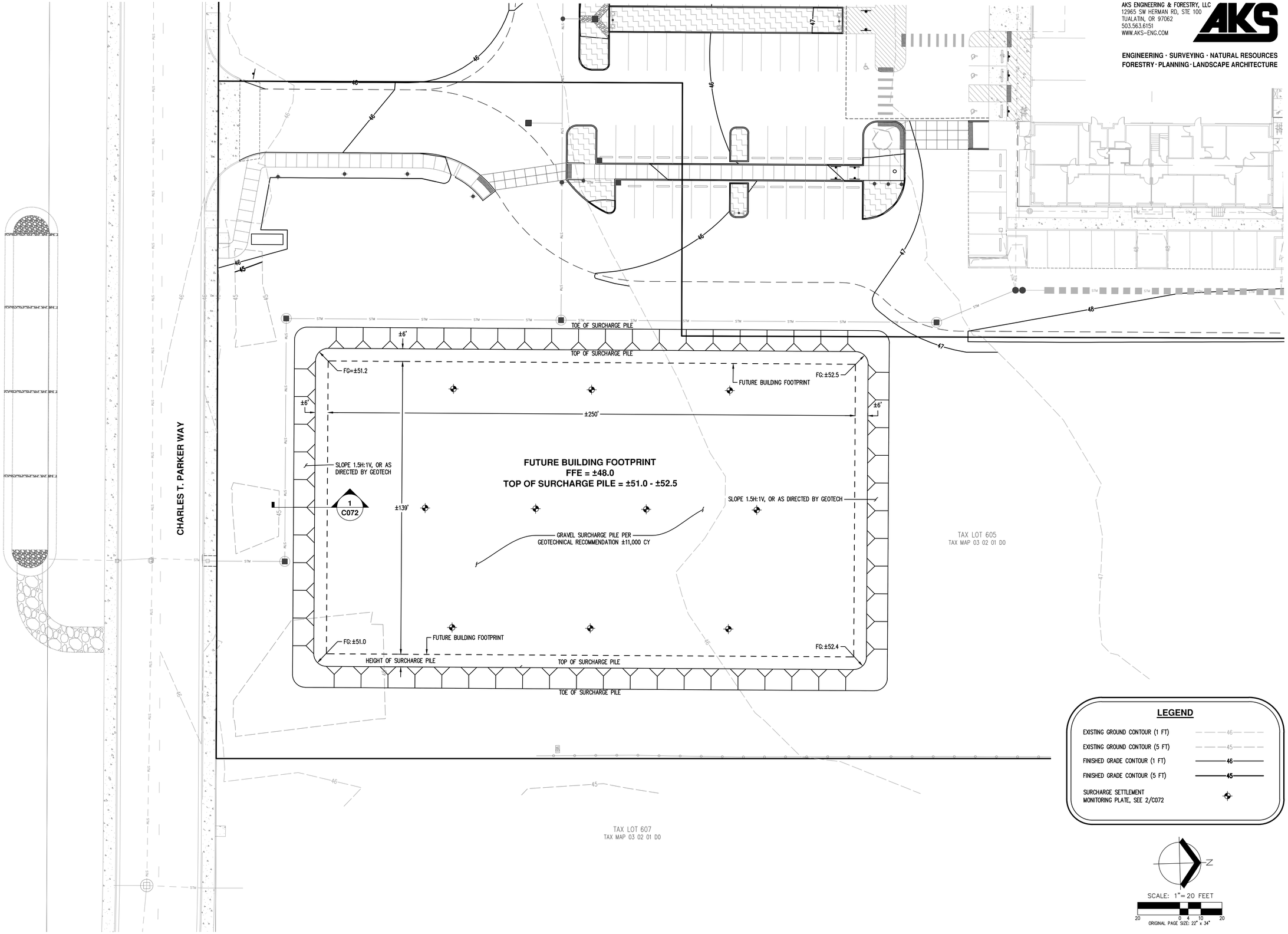
2	04/16/2020	PARKING RECONFIG

CONTENTS:

GRADING PLAN

SHEET NO:

C070



LEGEND

EXISTING GROUND CONTOUR (1 FT)	46
EXISTING GROUND CONTOUR (5 FT)	45
FINISHED GRADE CONTOUR (1 FT)	46
FINISHED GRADE CONTOUR (5 FT)	45
SURCHARGE SETTLEMENT MONITORING PLATE, SEE 2/C072	

N

SCALE: 1" = 20 FEET

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ORIGINAL PAGE SIZE: 22" x 34"

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SURCHARGE GRADING PLAN

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C071

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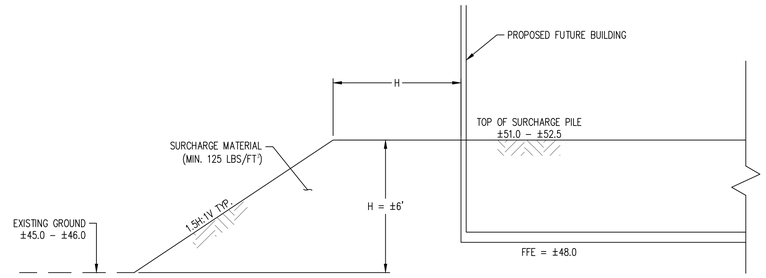
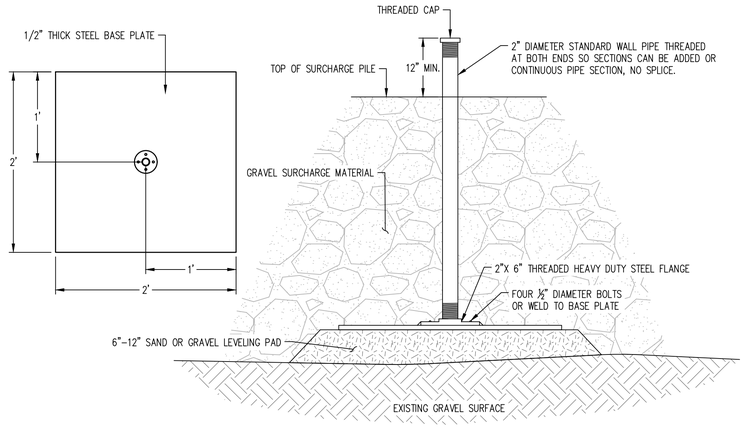


SURCHARGE NOTES:

1. EXCAVATOR(S) MUST COMPLY WITH O.R.S. 757.541 THROUGH 757.571; EXCAVATORS(S) SHALL NOTIFY ALL UTILITY COMPANIES FOR LINE LOCATIONS 48 HOURS PRIOR TO START OF WORK. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. ONE-CALL NOTIFICATION CENTER FOR OREGON: 503-246-6699 OR 1-800-332-2344.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE ENGINEER 3 DAYS PRIOR TO PLACEMENT OF THE MONITORING PLATES TO ALLOW COORDINATION OF INITIAL SURVEY READINGS.
3. SEE GEOTECHNICAL REPORT BY INTERTEK PSI DATED JANUARY 10, 2020 FOR ADDITIONAL INFORMATION.
4. EXISTING TOPOGRAPHIC INFORMATION IS BASED ON SURVEY BY AKS ENGINEERING AND FORESTRY DATED MAY 13, 2019.
5. SETTLEMENT PLATES SHALL BE SURVEYED AT LEAST TWICE PER WEEK DURING SURCHARGE CONSTRUCTION AND IMMEDIATELY FOLLOWING PLACEMENT. CONTINUE TWICE WEEKLY READINGS FOR ONE MONTH FOLLOWING SURCHARGE COMPLETION FOLLOWED BY ONCE WEEKLY THEREAFTER. CONTRACTOR SHALL VERIFY THE SURVEY SCHEDULE WITH THE GEOTECHNICAL ENGINEER PRIOR TO STARTING WORK.

SURCHARGE SECTION – FUTURE BUILDING
NTS

1

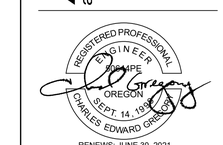


NOTES (MONITORING PLATE):

1. INSTALL MARKERS ON FIRM GROUND OR ON SAND OR GRAVEL PADS IF NEEDED FOR STABILITY. TAKE INITIAL READING ON TOP OF ROD AND AT ADJACENT GROUND LEVEL PRIOR TO PLACING ANY FILL.
2. RECORD THE ELEVATION OF THE TOP OF THE MEASUREMENT CAP AT THE RECOMMENDED TIME INTERVALS. EACH TIME, NOTE THE ELEVATION OF THE ADJACENT FILL SURFACE.
3. READ THE MARKER TO THE NEAREST 0.01 FOOT. NOTE THE FILL ELEVATION TO THE NEAREST 0.1 FOOT.
4. THE ELEVATIONS SHOULD BE REFERENCED TO A TEMPORARY BENCHMARK LOCATED ON STABLE GROUND AT LEAST 500 FEET FROM THE EMBANKMENT.
5. COORDINATE WITH GEOTECH TO PROVIDE SPECIAL INSPECTION AND SURCHARGE MONITORING.
6. LOCATION AND NUMBER OF MONITORING PLATES WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

SURCHARGE SETTLEMENT MONITORING PLATE
NTS

2



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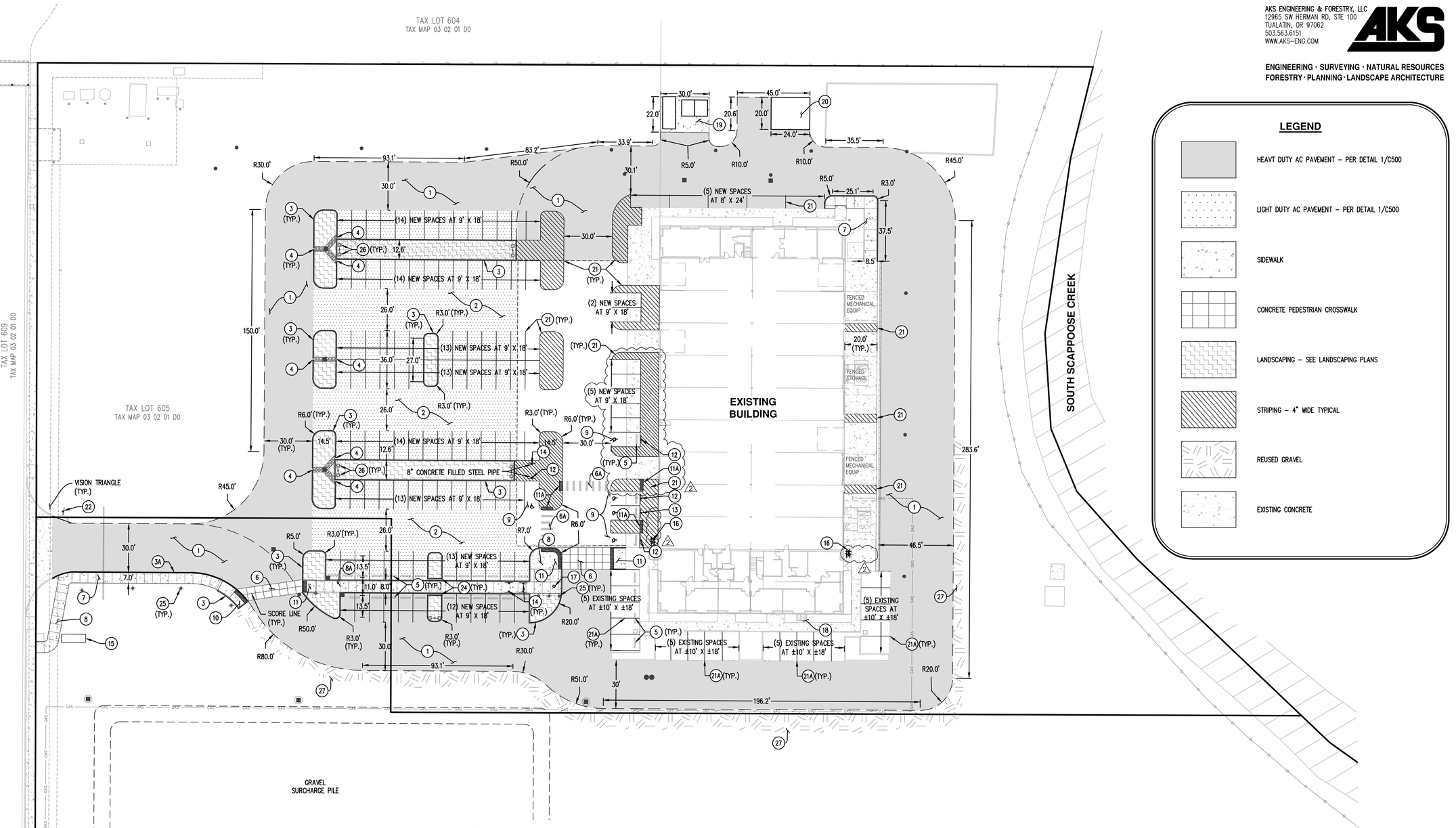

PARKING SUMMARY

EXISTING STANDARD SPACES:	20
EXISTING ACCESSIBLE SPACES:	1
TOTAL EXISTING PARKING SPACES:	21
NEW STANDARD SPACES:	118
NEW ACCESSIBLE SPACES:	4
TOTAL NEW PARKING SPACES:	122
TOTAL STANDARD SPACES PROVIDED:	138
TOTAL ACCESSIBLE SPACES PROVIDED:	5
TOTAL PROVIDED PARKING SPACES:	143
TOTAL REQUIRED ACCESSIBLE SPACES:	5 (1 VAN ACCESSIBLE)
EXISTING BIKE PARKING SPACES:	0
NEW BIKE PARKING SPACES:	4
TOTAL BIKE PARKING SPACES:	4

KEYED SITE NOTES:

1. CONSTRUCT HEAVY DUTY AC PAVEMENT SECTION PER DETAIL 1/C500
2. CONSTRUCT LIGHT DUTY AC PAVEMENT SECTION PER DETAIL 1/C500
3. CONSTRUCT 6" CURB PER DETAIL 2/C500
3A. CONSTRUCT 6" PAINTED RED CURB PER DETAIL 2/C500
4. CONSTRUCT CURB CUT WITH RIPRAP PROTECTION PER DETAIL 3/C500
5. INSTALL WHEEL STOP PER DETAIL 4/C500
6. CONSTRUCT CONCRETE PEDESTRIAN CROSSWALK PER DETAIL 5/C500
6A. STRIPE PEDESTRIAN CROSSWALK PER DETAIL 8/C500
7. CONSTRUCT MONOLITHIC CURB AND SIDEWALK PER DETAIL 6/C500
8. CONSTRUCT SIDEWALK PER DETAIL 7A/C500
8A. CONSTRUCT SIDEWALK PER DETAIL 7B/C500
9. STRIPE ACCESSIBLE PARKING SPACES PER DETAILS 3/C501 & 4/C501
10. CONSTRUCT ACCESSIBLE RAMP WITH DETECTABLE WARNING SURFACE PER DETAILS 1/C501 & 2/C501
11. CONSTRUCT ACCESSIBLE RAMP WITH DETECTABLE WARNING SURFACE PER DETAIL 2/C501.
11A. INSTALL SURFACE APPLIED DETECTABLE WARNING SURFACE SIMILAR TO DETAIL 2/C501
12. CORE DRILL AND INSTALL ACCESSIBLE PARKING SIGN AND POST PER DETAIL 5/C501. FILL GAPS WITH NON SHRINK GROUT
13. CORE DRILL AND INSTALL VAN ACCESSIBLE PARKING SIGN AND POST PER DETAIL 5/C501. FILL GAPS WITH NON SHRINK GROUT
14. CORE DRILL AND INSTALL "CARPOOL USE ONLY BEFORE 9:00AM ON WEEKDAYS" SIGN AND POST SIMILAR TO DETAIL 6/C501.
15. NEW MONUMENT SIGN UNDER SEPARATE PERMIT, SEE PLANS BY OTHERS
16. NEW BIKE PARKING, SEE PLANS BY OTHERS
17. NEW AUTOMATED FLAGPOLE AND LIGHTING, SEE PLANS BY OTHERS. SEE MEP PLANS FOR POWER SERVICE LAYOUT
18. OUTDOOR STAIRCASE, SEE PLANS BY ARCHITECT
19. CONSTRUCT 6" CONCRETE SLAB FOR CONNEX BOX STORAGE CONTAINERS PER DETAIL 5/C500
20. PRE-ENGINEERED COMPRESSOR AND STORAGE BUILDING, SEE PLANS BY OTHERS
21. INSTALL 4" WHITE STRIPE SIMILAR TO DETAIL 3/C501
21A. REPAINT EXISTING 4" STRIPES
22. INSTALL STOP SIGN AND POST PER DETAIL 6/C501.
23. REPLACE PUBLIC SIDEWALK PANEL AT NEAREST SCORE JOINT SIMILAR TO DRAWING NO. 513/C504
24. CONSTRUCT LANDSCAPE ISLAND CURB BREAK SIMILAR TO DETAIL 7/C501
25. PEDESTRIAN BOLLARD LIGHTS. SEE ELECTRICAL PLANS
26. OVERHEAD PARKING LIGHTS. SEE ELECTRICAL PLANS
27. REUSE SALVAGED GRAVEL FROM NEW LANDSCAPE AREAS AT GRADING TRANSITIONS

LEGEND

- HEAVY DUTY AC PAVEMENT – PER DETAIL 1/C500
- LIGHT DUTY AC PAVEMENT – PER DETAIL 1/C500
- SIDEWALK
- CONCRETE PEDESTRIAN CROSSWALK
- LANDSCAPING – SEE LANDSCAPING PLANS
- STRIPING – 4" WIDE TYPICAL
- REUSED GRAVEL
- EXISTING CONCRETE

SCALE: 1"=30 FEET
30 0 6 15 30
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SITE PLAN

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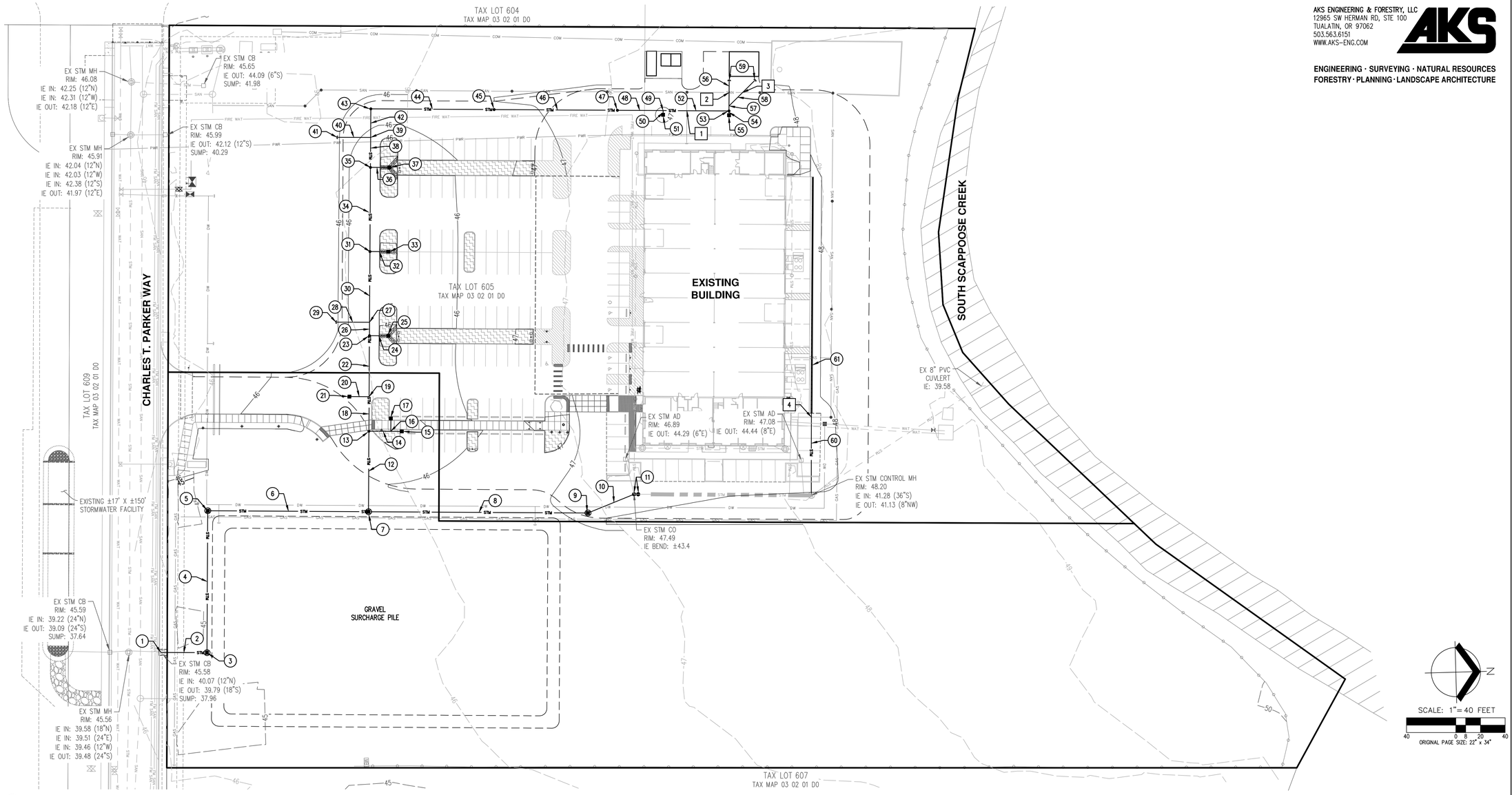
C100



(#) KEYED STORM DRAINAGE NOTES:

1. REPLACE EXISTING 12" STUB WITH 18" PVC D3034 STORM PIPE
   IE IN (18"): 40.07
2. INSTALL 18" D3034 PVC PIPE
   LENGTH: ±37.4 LF SLOPE: 0.004 FT/FT
3. INSTALL 48" STORM DRAIN FLAT-TOP MANHOLE PER DETAIL 8/C502
   RIM: ±45.1 (SET TO EG) IE IN (18"W): 40.22
   IE OUT (18"S): 40.22
4. INSTALL 18" D3034 PVC PIPE
   LENGTH: ±115.2 LF SLOPE: 0.004 FT/FT
5. INSTALL 48" STORM DRAIN FLAT-TOP MANHOLE PER DETAIL 8/C502
   RIM: ±45.1 (SET TO EG) IE IN (18"N): 40.68
   IE OUT (18"E): 40.68
6. INSTALL 18" PVC D3034 PIPE
   LENGTH: ±130.3 LF SLOPE: 0.004 FT/FT
7. INSTALL 48" STORM DRAIN FLAT-TOP MANHOLE PER DETAIL 8/C502
   RIM: ±45.7 (SET TO EG) IE IN (18"N): 41.20
   IE OUT (18"S): 41.20 IE IN (12"W): 41.20
8. INSTALL 18" D3034 PVC PIPE
   LENGTH: ±178.0 LF SLOPE: 0.004 FT/FT
9. INSTALL 48" STORM DRAIN FLAT-TOP MANHOLE PER DETAIL 8/C502
   RIM: ±47.7 (SET TO FG) IE IN (8"NW): 42.73
   IE OUT (18"S): 41.91
10. INSTALL 8" D3034 PVC PIPE
    LENGTH: ±40.5 LF SLOPE: 0.014 FT/FT
11. INSTALL CLEANOUT WITH 8" X 6" "WYE" PER DETAIL 3/C502. CONTRACTOR TO VERIFY PIPE LOCATIONS AND CONTACT ENGINEER IF IN CONFLICT
    RIM: ±47.8 (SET TO FG) IE (8"): ±43.3
    IE (6"): ±43.4
12. INSTALL 12" C900 PVC PIPE
    LENGTH: ±65.4 SLOPE: 0.004 FT/FT
13. INSTALL CLEANOUT WITH 12" X 6" "WYE" PER DETAIL 3/C502
    RIM: ±45.4 (SET TO FG) IE (12"): 41.46
    IE (6"): 41.71
14. INSTALL 6" C900 PVC PIPE
    LENGTH: ±26.8 LF SLOPE: 0.037 FT/FT MIN.
15. INSTALL CATCH BASIN PER DETAIL 7/C502
    RIM: ±45.2 (SET TO FG) IE (6"): 42.70
16. INSTALL 6" C900 PVC PIPE WITH 6" X 6" "WYE"
    LENGTH: ±10.5 LF SLOPE: 0.032 FT/FT MIN.
    IE (6"): 42.37
17. INSTALL CATCH BASIN PER DETAIL 7/C502
    RIM: ±45.2 (SET TO FG) IE (6"): 42.70
18. INSTALL 12" C900 PVC PIPE
    LENGTH: ±28.0 LF SLOPE: 0.004 FT/FT
19. INSTALL 12" X 6" "WYE"
    IE (12"): 41.57 IE (6"): 41.82
20. INSTALL 6" C900 PVC PIPE
    LENGTH: ±16.0 LF SLOPE: 0.043 FT/FT MIN.
21. INSTALL CATCH BASIN PER DETAIL 7/C502
    RIM: ±45.0 (SET TO FG) IE (6"): 42.50
22. INSTALL 12" C900 PVC PIPE
    LENGTH: ±49.5 LF SLOPE: 0.004 FT/FT
23. INSTALL CLEANOUT WITH 12" X 6" "WYE" PER DETAIL 3/C502
    RIM: ±45.7 (SET TO FG) IE (12"): 41.77
    IE (6"): 42.02
24. INSTALL 6" C900 PVC PIPE
    LENGTH: ±15.3 LF SLOPE: 0.097 FT/FT
25. INSTALL BABY BOX CATCH BASIN PER DETAIL 6/C502
    RIM: ± 45.0 (SET TO FG) IE (6"): 43.50
26. INSTALL 12" C900 PVC PIPE
    LENGTH: ±10.9 LF SLOPE: 0.004 FT/FT
27. INSTALL 12" X 8" "WYE"
    IE (12"): 41.81 IE (8"): 41.98
28. INSTALL 8" C900 PVC PIPE
    LENGTH: ±27.3 LF SLOPE: 0.034 FT/FT
29. STUB STORM LINE FOR FUTURE BUILDING
    IE STUB: ±42.9
30. INSTALL 12" C900 PVC PIPE
    LENGTH: ±57.4 SLOPE: 0.004 FT/FT
31. INSTALL CLEANOUT WITH 12" X 6" "WYE" PER DETAIL 3/C502
    RIM: ±45.7 (SET TO FG) IE (12"): 42.05
    IE (6"): 42.30
32. INSTALL 6" C900 PVC PIPE
    LENGTH: ±15.0 LF SLOPE: 0.080 FT/FT
33. INSTALL BABY BOX CATCH BASIN PER DETAIL 6/C502
    RIM: ±45.0 (SET TO FG) IE (6"): 43.50
34. INSTALL 12" C900 PVC PIPE
    LENGTH: ±68.3 LF SLOPE: 0.004 FT/FT
35. INSTALL CLEANOUT WITH 12" X 6" "WYE" PER DETAIL 3/C502
    RIM: ±45.7 (SET TO FG) IE (12"): 42.32
    IE (6"): 42.57
36. INSTALL 6" C900 PVC PIPE
    LENGTH: ±15.0 LF SLOPE: 0.062 FT/FT
37. INSTALL BABY BOX CATCH BASIN PER DETAIL 6/C502
    RIM: ±45.0 (SET TO FG) IE (6"): 43.50
38. INSTALL 12" C900 PVC PIPE
    LENGTH: ±24.3 LF SLOPE: 0.004 FT/FT
39. INSTALL 12" X 8" "WYE"
    IE (12"): 42.42 IE (8"): 42.59
40. INSTALL 8" C900 PVC PIPE
    LENGTH: ±27.3 LF SLOPE: 0.012 FT/FT
41. STUB STORM LINE FOR FUTURE BUILDING
    IE STUB: ±42.9
42. INSTALL 12" C900 PVC
    LENGTH: ±23.3 LF SLOPE: 0.004 FT/FT
43. INSTALL CLEANOUT WITH 12" X 6" "WYE" PER DETAIL 3/C502
    RIM: ±46.2 (SET TO FG) IE (12"): 42.51
    IE (6"): 42.76
44. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±100.0 LF SLOPE: 0.004 FT/FT
45. INSTALL CLEANOUT WITH 6" "WYE" PER DETAIL 3/C502
    RIM: ±46.9 (SET TO FG) IE (6"): 43.16
46. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±100.0 LF SLOPE: 0.004 FT/FT
47. INSTALL CLEANOUT PER DETAIL 3/C502
    RIM: ±47.2 (SET TO FG) IE (6"): 43.56
48. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±37.1 LF SLOPE: 0.004 FT/FT
49. INSTALL 6" "WYE"
    IE (6"): 43.71
50. INSTALL 6" D3034 PVC
    LENGTH: ±3.5 LF SLOPE: 0.197 FT/FT
51. INSTALL CATCH BASIN PER DETAIL 7/C502
    RIM: ±46.9 (SET TO FG) IE (6"): 44.40
52. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±53.4 LF SLOPE: 0.004 FT/FT
53. INSTALL CLEANOUT WITH 6" "WYE" PER DETAIL 3/C502
    RIM: ±47.0 (SET TO FG) IE (6"): 43.92
54. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±3.5 LF SLOPE: 0.166 FT/FT
55. INSTALL CATCH BASIN PER DETAIL 7/C502
    RIM: ±47.0 (SET TO FG) IE (6"): 44.50
56. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±25.0 LF SLOPE: 0.043 FT/FT
57. INSTALL 6" X 6" "WYE"
    IE (6"): 44.10
58. INSTALL 6" D3034 PIPE
    LENGTH: ±30.0 LF SLOPE: 0.030 FT/FT MIN.
59. STUB STORM LINE FOR COMPRESSOR BUILDING. SEE PLANS BY OTHERS FOR CONTINUATION
    IE STUB: ±45.0
60. CONNECT TO EXISTING STORM FLOW CONTROL MANHOLE AND INSTALL 6" D3034 PVC PIPE
    LENGTH: ±66.6 LF SLOPE: 0.033 FT/FT
    IE (6"): ±44.3
61. CONNECT TO AND INSTALL ±190.9 LF OF ACO K200 PRE-SLOPED TRENCH DRAIN (APPROXIMATELY 58 SECTIONS) WITH TYPE 661Q IRON SLOTTED GRATE OR APPROVED EQUAL PER DETAIL 1/C502
    CONTRACTOR TO INSTALL A TOTAL OF 18 NEUTRAL CHANNEL SEGMENTS SPACED EVENLY EVERY 10 PRE-SLOPED SEGMENTS
    RIM: ±47.9 (SET TO FG)
    IE AT CONNECTION (6"): ±46.5

(#) KEYED CROSSING NOTES:

1. IE OF 6" STORM LINE: ±43.8
   TOP OF 6" SANITARY SERVICE: ±41.9
   CLEARANCE: ±1.9' (VERIFY PRIOR TO CONSTRUCTION)
2. IE OF 6" STORM LINE: ±44.6
   TOP OF 6" SANITARY SERVICE: ±37.9
   CLEARANCE: ±6.7' (VERIFY PRIOR TO CONSTRUCTION)
3. IE OF 6" STORM LINE: ±44.6
   TOP OF 6" SANITARY SERVICE: ±38.1
   CLEARANCE: ±6.5' (VERIFY PRIOR TO CONSTRUCTION)
4. IE OF 6" STORM LINE: ±46.4
   TOP OF 6" SANITARY SERVICE: ±43.7
   CLEARANCE: ±2.7' (VERIFY PRIOR TO CONSTRUCTION)

NOTE:

CONTRACTOR SHALL PROVIDE PRIVATE UTILITY LOCATE SERVICES AND SHALL POTHOLE AND VERIFY ELEVATIONS AND CROSSING SEPARATIONS WITH ALL UTILITIES (POWER, GAS, TELEPHONE, FIRE WATER, ETC.) PRIOR TO STARTING CONSTRUCTION.

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REGISTERED PROFESSIONAL ENGINEER
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SEPT. 14, 1990
CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 2021

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SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

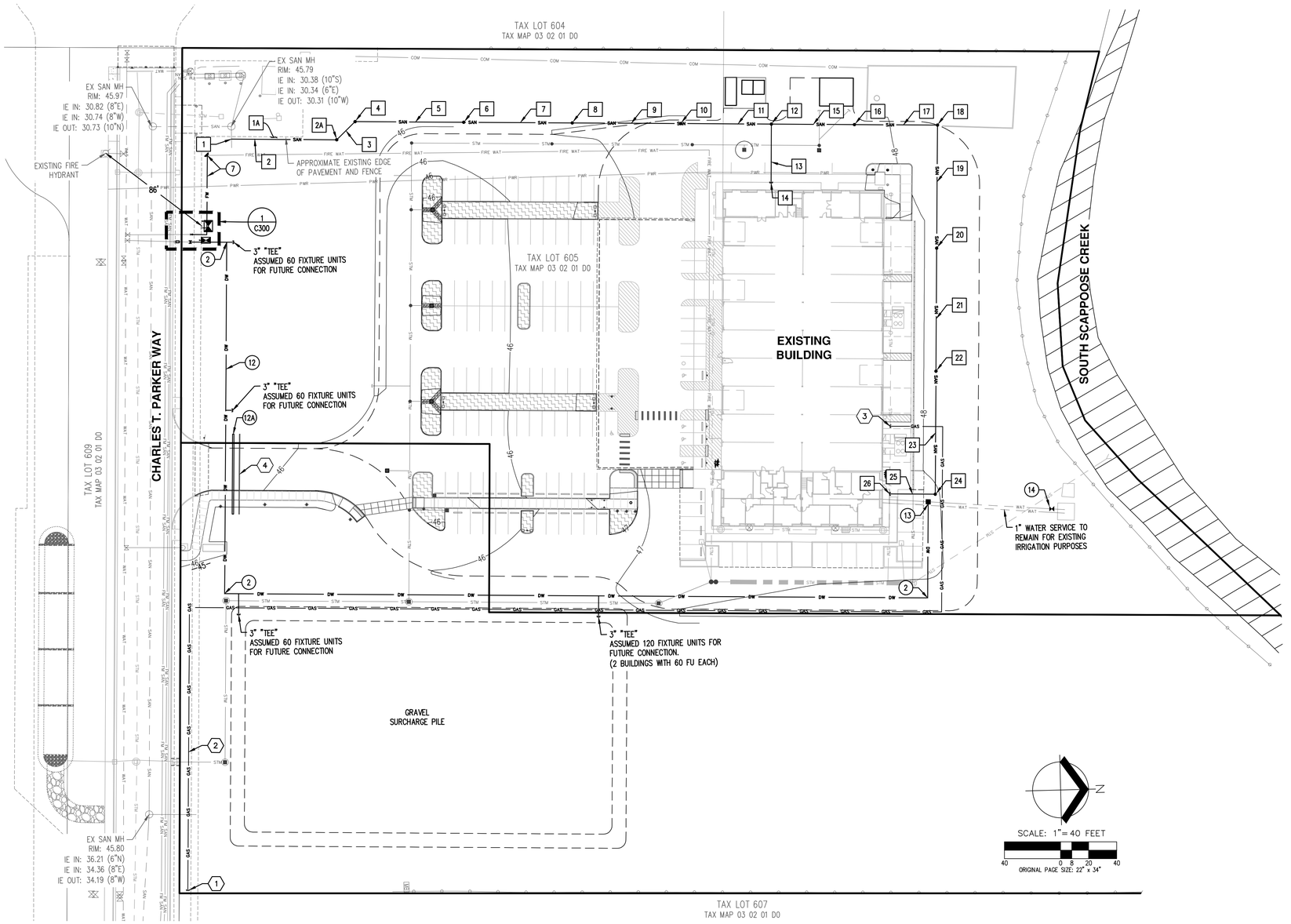
REVISIONS

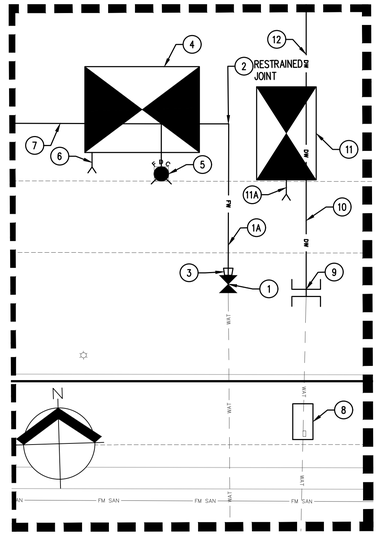
△	DATE	DESCRIPTION

CONTENTS:
STORMWATER DRAINAGE PLAN

SHEET NO:

C200





1 **WATER UTILITIES ENLARGEMENT**
1" = 5'

KEYED SANITARY SEWER NOTES:

1. INSTALL 6" INSERTA-TEE AND CONNECT TO EXISTING 6" SANITARY LINE. CONTRACTOR TO VERIFY ELEVATION AND LOCATION PRIOR TO CONSTRUCTION. CONTACT ENGINEER IF IN CONFLICT
   ESTIMATED IE (6"): ±30.6

1A. PROTECT EXISTING EDGE OF PAVEMENT AND FENCE. DAMAGE SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL JOG SEWER PIPE AS NEEDED TO AVOID CONFLICT WITH EXISTING FENCE. CONTACT ENGINEER IF IN CONFLICT

2. INSTALL 6" D3034 PVC PIPE
   LENGTH: ±75.0 LF
   SLOPE: 0.016 FT/FT

2A. INSTALL CLEANOUT PER DETAIL 3/C502
   RIM: ±46.1 (SET TO EG)
   IE AT BEND: 31.82

3. INSTALL 6" D3034 PVC PIPE
   LENGTH: ±18.4 LF
   SLOPE: 0.016 FT/FT

4. INSTALL CLEANOUT PER DETAIL 3/C502
   RIM: ±46.0 (SET TO EG)
   IE (6"): 32.11

5. INSTALL 6" D3034 PVC PIPE
   LENGTH: ±77.4 LF
   SLOPE: 0.016 FT/FT

6. INSTALL CLEANOUT PER DETAIL 3/C502
   RIM: ±46.1 (SET TO FG)
   IE (6"): 33.35

7. INSTALL 6" D3034 PVC PIPE
   LENGTH: ±77.4 LF
   SLOPE: 0.016 FT/FT

8. INSTALL CLEANOUT PER DETAIL 3/C502
   RIM: ±46.5 (SET TO FG)
   IE (6"): 34.59

9. INSTALL 6" D3034 PVC PIPE
   LENGTH: ±77.4 LF
   SLOPE: 0.016 FT/FT

10. INSTALL CLEANOUT PER DETAIL 3/C502
    RIM: ±47.0 (SET TO FG)
    IE (6"): 35.83

11. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±64.5 LF
    SLOPE: 0.016 FT/FT

12. INSTALL CLEANOUT WITH 6" "WYE" PER DETAIL 3/C502
    RIM: ±47.3 (SET TO FG)
    IE (6"): 36.86

13. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±41.9 LF
    SLOPE: 0.168 FT/FT MIN.

14. CONNECT TO SANITARY FROM BUILDING. CONTRACTOR TO VERIFY ELEVATION PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT ENGINEER IF CONFLICT. INCREASE SLOPE OF CONNECTING PIPE AS NECESSARY TO MATCH MEP PLANS. SEE PLUMBING PLAN FOR CONTINUATION.
    ESTIMATED IE AT BUILDING: ±43.9

15. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±59.2 LF
    SLOPE: 0.016 FT/FT

16. INSTALL CLEANOUT PER DETAIL 3/C502
    RIM: ±47.5 (SET TO FG)
    IE (6"): 37.81

17. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±59.2 LF
    SLOPE: 0.016 FT/FT

18. INSTALL CLEANOUT WITH BEND PER DETAIL 3/C502
    RIM: ±48.2 (SET TO FG)
    IE (6"): 38.76

19. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±87.7 LF
    SLOPE: 0.016 FT/FT

20. INSTALL CLEANOUT PER DETAIL 3/C502
    RIM: ±48.1 (SET TO FG)
    IE (6"): 40.16

21. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±87.7 LF
    SLOPE: 0.016 FT/FT

22. INSTALL CLEANOUT PER DETAIL 3/C502
    RIM: ±48.1 (SET TO FG)
    IE (6"): 41.56

23. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±87.7 LF
    SLOPE: 0.016 FT/FT

24. INSTALL CLEANOUT WITH BEND PER DETAIL 3/C502
    RIM: ±47.9 (SET TO FG)
    IE (6"): 42.97

25. INSTALL 6" D3034 PVC PIPE
    LENGTH: ±32.5 LF
    SLOPE: 0.016 FT/FT MIN.

26. CONNECT TO SANITARY FROM BUILDING. CONTRACTOR TO VERIFY ELEVATION PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT ENGINEER IF CONFLICT. INCREASE SLOPE OF CONNECTING PIPE AS NECESSARY TO MATCH MEP PLANS. SEE PLUMBING PLAN FOR CONTINUATION.
    ESTIMATED IE AT BUILDING: ±43.5

KEYED GAS NOTES:

1. CONNECT TO EXISTING GAS SERVICE. COORDINATE WITH NW NATURAL FOR EXACT STUB LOCATION AND NOTIFY ENGINEER IF IN CONFLICT.

2. COORDINATE WITH NW NATURAL (SID STAFFORD AT SID.STAFFORD@NWNATURAL.COM OR 503.220.2394) FOR INSTALLATION AND TRENCHING OF ±908 LF OF 2" GAS SERVICE. COORDINATE WITH MEP FOR BUILDING CONNECTION. SEE PLANS BY OTHERS FOR CONTINUATION THROUGH BUILDING.

3. PROVIDE STUB FOR BUILDING CONNECTION. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT CONNECTION LOCATION.

4. INSTALL 6" WHITE D3034 SLEEVE FOR FUTURE GAS SERVICE

WATER KEYED NOTES:

1. INSTALL 6" GATE VALVE

1A. CONTRACTOR TO VERIFY WATER SERVICE LOCATION PRIOR TO CONSTRUCTION. CONTACT ENGINEER IF IN CONFLICT. CONNECT AND INSTALL ±13 LF OF 8" CLASS 52 ALL RESTRAINED MECHANICAL JOINT DUCTILE IRON PIPE

2. INSTALL 90° BEND

3. INSTALL 6" X 8" REDUCER

4. INSTALL 8" DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER PER CITY OF SCAPPOOSE STANDARDS AND DRAWINGS NO. 416A, 416C, 416D, 416F AND DETAIL 1/C503.

5. INSTALL FIRE DEPARTMENT CONNECTION (FDC) PER DETAILS 1/C503 & 2/C503

6. INSTALL ±2 LF OF 2" SCH 80 PVC AND DISCHARGE SUMP PUMP TO GRAVEL SURFACE. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER CONNECTION TO SUMP PUMP.

7. INSTALL ±46 LF OF 8" CLASS 52 ALL RESTRAINED JOINT DUCTILE IRON PIPE AND CONNECT TO EXISTING 8" FIRE SERVICE PER DETAIL 5/C503. CONTRACTOR TO POTHOLE AND CONFIRM LOCATION OF EXISTING FIRE WATER SERVICE AND NOTIFY ENGINEER IF IN CONFLICT

8. INSTALL NEW 1-1/2" DOMESTIC WATER METER INSIDE EXISTING METER BOX PER CITY OF SCAPPOOSE DRAWINGS NO. 403

9. CONNECT TO EXISTING 2" DOMESTIC WATER STUB

10. INSTALL ±8 LF OF 3" PVC SCH 80 DUCTILE IRON PIPE

11. INSTALL 3" DOUBLE CHECK VALVE BACKFLOW ASSEMBLY PER CITY OF SCAPPOOSE STANDARDS DRAWINGS NO. 416A, 416C, 416D, 416F AND DETAIL 4/C503

11A. INSTALL ±2 LF PF 2" SCH 80 PVC AND DISCHARGE SUMP PUMP TO GRAVEL SURFACE. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER CONNECTION TO SUMP PUMP.

12. INSTALL ±859 LF OF 3" SCH 80 PVC PIPE

12A. INSTALL ±37 LF OF 12" WHITE D3034 SLEEVE FOR FUTURE FIRE WATER SERVICE

13. CUT IN A 3" X 2" "TEE" AND INSTALL A 2" VALVE (N) ON EXISTING LINE AND 3" VALVE (E) IN A CONCRETE VALVE BOX WITH A TRAFFIC RATED LID

14. CUT IN A 2" X 2" "TEE" AND INSTALL 2" VALVE (S) AND COORDINATE MANUAL VALVE OR DOUBLE CHECK VALVE WITH IRRIGATION (E). 2" WATER SERVICE TO BE REUSED FOR IRRIGATION PURPOSES, SEE IRRIGATION PLANS FOR DETAILS

NOTE:
CONTRACTOR SHALL PROVIDE PRIVATE UTILITY LOCATE SERVICES AND SHALL POTHOLE AND VERIFY ELEVATIONS AND CROSSING SEPARATIONS WITH ALL UTILITIES (POWER, GAS, TELEPHONE, FIRE WATER, ETC.) PRIOR TO STARTING CONSTRUCTION.

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CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 2021

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SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:
COMPOSITE UTILITY PLAN

SHEET NO:
C300

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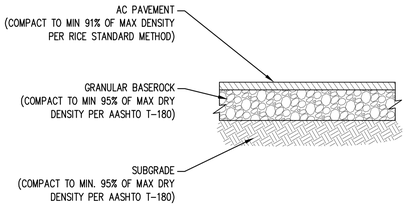
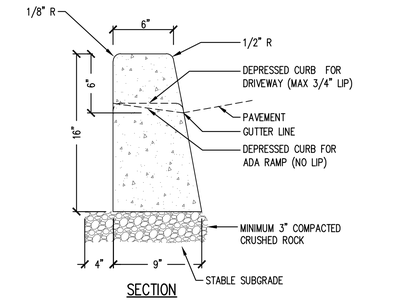


PAVEMENT & BASEROCK SECTIONS:

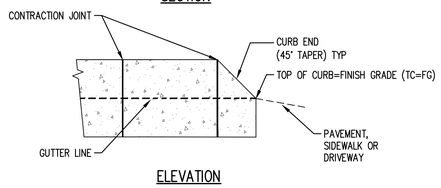
LIGHT DUTY PAVEMENT
2.5" AC PAVEMENT
8" OF 1"-0 GRANULAR BASEROCK
HEAVY DUTY PAVEMENT
3" AC PAVEMENT
10" OF 1"-0 GRANULAR BASEROCK

NOTES:
1. SEE PLANS FOR LOCATION OF LIGHT AND HEAVY DUTY PAVEMENT.
2. DESIGN SUBGRADES SHALL BE COMPACTED AND PROOF-ROLLED PRIOR TO PLACEMENT OF BASEROCK. IF SUBGRADE PASSES PROOF-ROLL BUT FAILS DENSITY TESTING, INSTALL MIN. 4.5 OZ NON-WOVEN GEOTEXTILE FABRIC ON SUBGRADE PRIOR TO PLACEMENT OF BASEROCK. FAILURE OF PROOF-ROLL WILL REQUIRE OVEREXCAVATION OR REPAIR AS DIRECTED BY PROJECT GEOTECHNICAL ENGINEER OR OWNER'S REPRESENTATIVE.
3. IF SUBGRADE FAILS THE PROOF-ROLL, SUBGRADE SHALL BE OVEREXCAVATED TO FIRM AND UNYIELDING SOIL AND BACKFILLED WITH COMPACTED BASEROCK OVER MIN. 8.0-OZ. NON-WOVEN FABRIC AS REQUIRED TO ALLOW COMPACTION OF UPPER (DESIGN) BASEROCK SECTION AND TO MAINTAIN STRUCTURAL INTEGRITY OF SUBGRADE SOILS. TYPICAL MINIMUM OVEREXCAVATION REQUIRED IS 12-INCHES. NO RUBBER TIRED EQUIPMENT ALLOWED ON SUBGRADE FOLLOWING OVEREXCAVATION.
4. PASSING PROOF-ROLL ON BASEROCK IS ALSO REQUIRED IMMEDIATELY PRIOR TO PAVING.
5. CONTRACTOR SHALL CONFORM TO ALL RECOMMENDATIONS IN GEOTECHNICAL REPORT.
6. THE EXISTING BASE ROCK SECTIONS MAY NOT CONFORM TO THE REQUIRED PAVEMENT AND BASE ROCK SECTIONS UPON COMPLETION OF GRADING. CONTRACTOR SHALL POTHOLE WITHIN THE AREA SHOWN AND VERIFY ROCK SECTION THICKNESS. IF THE EXISTING BASE ROCK SECTION DOES NOT MEET THE REQUIRED THICKNESS THEN IT SHALL BE REPLACED AND COMPACTED TO MEET THE MINIMUM BASE ROCK AND PAVEMENT SECTIONS.

AC PAVEMENT SECTION
NTS
1



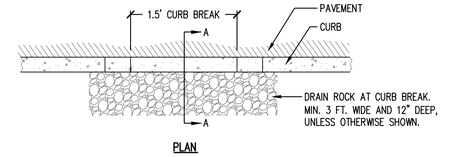
SECTION



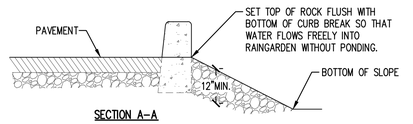
ELEVATION

NOTES:
1. CONCRETE SHALL BE 3300 PSI AT 28 DAYS.
2. CONTRACTION JOINTS ARE REQUIRED AT 15-FT INTERVALS AND AT INLET STRUCTURES AND WHEELCHAIR RAMPS. DEPTH OF JOINTS SHALL BE AT LEAST 1-1/2".
3. CONSTRUCT EXPANSION JOINTS (MIN. 1/2" THICK PREMOLDED BITUMINOUS MATERIAL) AT MAXIMUM 200 FEET SPACING AND AT SIDES OF DRIVEWAY APPROACHES AND POINTS OF TANGENCY.
4. CURBS TO CURE A MINIMUM OF 7 DAYS PRIOR TO PLACING FINAL BASEROCK AND PAVING.

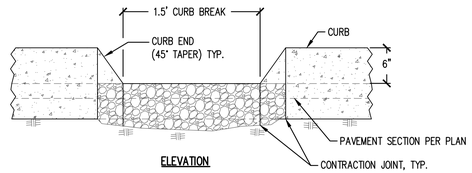
TYPE C CURB
NTS
2



PLAN

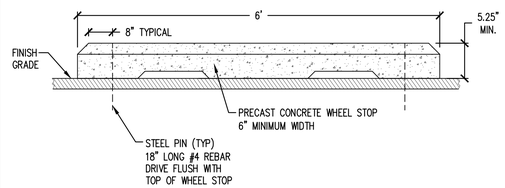


SECTION A-A



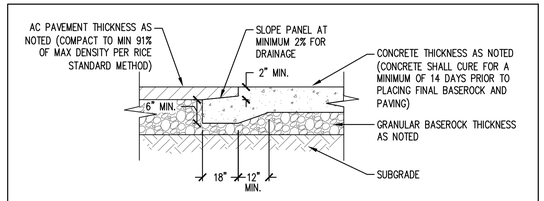
ELEVATION

1.5' CURB BREAK
NTS
3

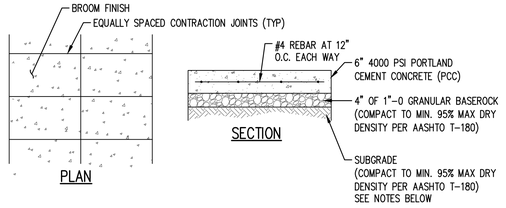


NOTES:
1. CONCRETE SHALL BE MIN. 3300 PSI @ 28 DAYS.
2. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR PLACEMENT OF WHEEL STOPS.

WHEEL STOP
NTS
4

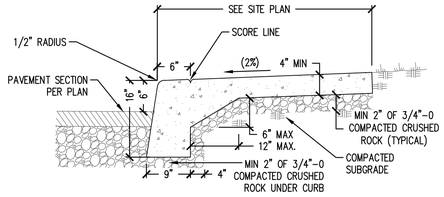


IMPACT PANEL FOR TRANSITION FROM CONCRETE TO AC PAVEMENT



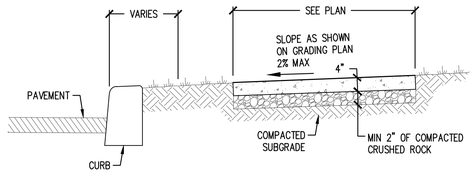
NOTES:
1. SEE PLANS FOR LOCATIONS OF CONCRETE PAVEMENT(S).
2. PCC CONSTRUCTION SHALL CONFORM TO PORTLAND CEMENT ASSOCIATION (PCA) SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED.
3. MAXIMUM JOINT SPACING IS 15 FEET BY 15 FEET.
4. PROPOSED JOINT PATTERN SHALL BE PREPARED BY CONTRACTOR AND SUBMITTED TO OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PLACING PCC.
5. DEPTH OF JOINTS SHALL BE MINIMUM OF 1/3 TO MAXIMUM 1/2 THE PAVEMENT THICKNESS.
6. DESIGN SUBGRADES SHALL BE COMPACTED AND PROOF-ROLLED PRIOR TO PLACEMENT OF BASEROCK. IF SUBGRADE PASSES PROOF-ROLL BUT FAILS DENSITY TESTING, INSTALL MIN. 4.5 OZ NON-WOVEN GEOTEXTILE FABRIC ON SUBGRADE PRIOR TO PLACEMENT OF BASEROCK. FAILURE OF PROOF-ROLL WILL REQUIRE OVEREXCAVATION OR REPAIR AS DIRECTED BY PROJECT GEOTECHNICAL ENGINEER OR OWNER'S REPRESENTATIVE.
7. IF SUBGRADE FAILS THE PROOF-ROLL, SUBGRADE SHALL BE OVEREXCAVATED TO FIRM AND UNYIELDING SOIL AND BACKFILLED WITH COMPACTED BASEROCK OVER MIN. 8.0-OZ. NON-WOVEN FABRIC AS REQUIRED TO ALLOW COMPACTION OF UPPER (DESIGN) BASEROCK SECTION AND TO MAINTAIN STRUCTURAL INTEGRITY OF SUBGRADE SOILS. TYPICAL MINIMUM OVEREXCAVATION REQUIRED IS 12-INCHES. NO RUBBER TIRED EQUIPMENT ALLOWED ON SUBGRADE FOLLOWING OVEREXCAVATION.
8. PASSING PROOF-ROLL ON BASEROCK IS ALSO REQUIRED IMMEDIATELY PRIOR TO PLACING PCC.
9. CONTRACTOR SHALL CONFORM TO ALL RECOMMENDATIONS IN GEOTECHNICAL REPORT.

CONCRETE PAVEMENT SECTION
NTS
5

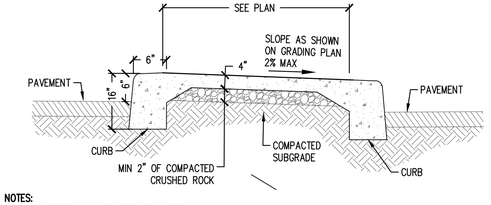


NOTES:
1. CONCRETE SHALL BE 3300 PSI AT 28 DAYS.
2. CONTRACTION JOINTS ARE REQUIRED AT 5-FT INTERVALS WITH EXPANSION JOINT (MIN. 1/2" THICK PREMOLDED BITUMINOUS MATERIAL) SPACING NOT TO EXCEED 45 FEET AND PLACED AT SIDES OF DRIVEWAY APPROACHES, UTILITY VAULTS, AND WHEELCHAIR RAMPS.
3. SIDEWALKS 10-FT. AND WIDER SHALL HAVE LONGITUDINAL CONTRACTION JOINT(S) AT 5-FT ON CENTER.
4. CONCRETE DEPTH FOR STANDARD SIDEWALKS SHALL BE 4" MINIMUM.
5. SUBMIT JOINT LAYOUT TO OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PLACING CONCRETE.
6. CURBS TO CURE A MINIMUM OF 7 DAYS PRIOR TO PLACING FINAL BASEROCK AND PAVING.

MONOLITHIC CURB AND SIDEWALK
NTS
6

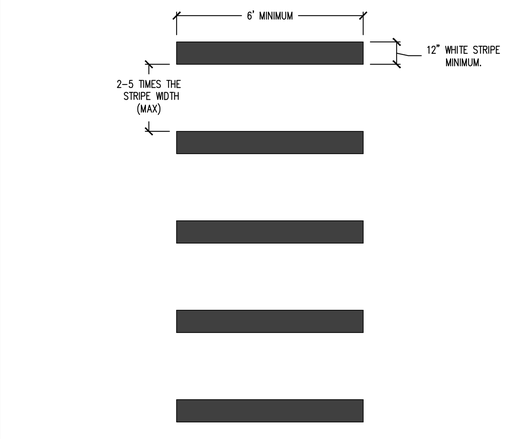


PRIVATE SIDEWALK
NTS
7A



NOTES:
1. CONCRETE SHALL BE 3300 PSI AT 28 DAYS.
2. CONTRACTION JOINTS ARE REQUIRED AT 5-FT INTERVALS WITH EXPANSION JOINT (MIN. 1/2" THICK PREMOLDED BITUMINOUS MATERIAL) SPACING NOT TO EXCEED 45 FEET AND PLACED AT SIDES OF DRIVEWAY APPROACHES, UTILITY VAULTS, AND WHEELCHAIR RAMPS.
3. SIDEWALKS 10-FT. AND WIDER SHALL HAVE LONGITUDINAL CONTRACTION JOINT(S) AT 5-FT ON CENTER.
4. CONCRETE DEPTH FOR STANDARD SIDEWALKS SHALL BE 4" MINIMUM.
5. SUBMIT JOINT LAYOUT FOR REVIEW AND APPROVAL PRIOR TO PLACING CONCRETE.
6. CURBS TO CURE A MINIMUM OF 7 DAYS PRIOR TO PLACING FINAL BASEROCK AND PAVING.

MONOLITHIC PRIVATE SIDEWALK
NTS
7B



NOTES:
1. SLOPES OF PEDESTRIAN CROSSING SHALL NOT EXCEED 1:20 (5.0%) MAX IN DIRECTION OF TRAVEL AND 1:50 (2.0%) CROSS SLOPE PERPENDICULAR TO DIRECTION OF TRAVEL.
2. PAINTED STRIPES SHALL BE PAINTED WHITE AND PERPENDICULAR TO THE PATH OF TRAVEL.
3. THE PAINT SHALL BE A NON-BLEEDING, QUICK DRYING, ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC BEARING SURFACES AND SHALL MEET ODOT QPL 00860 AND MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION.
4. 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. 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.
5. APPLY IN ACCORDANCE WITH SECTION 3B.18 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PEDESTRIAN CROSSING PAVEMENT MARKING
NTS
8

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SEPT. 14, 1982
CHARLES EDWARD GREGOR
RENEWS: JUNE 30, 2021

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503-983-0373

OREGON MANUFACTURING
INNOVATION CENTER
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SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:

DETAILS

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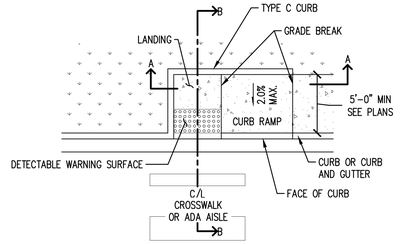
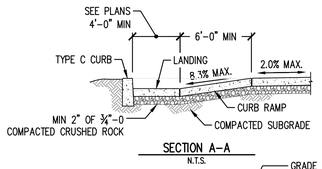
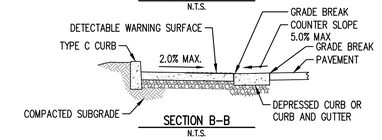
C500





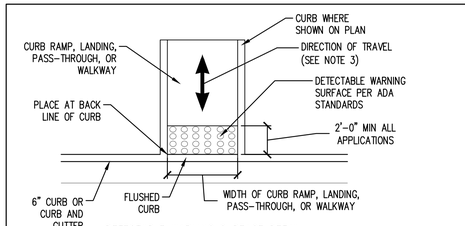
SECTION A–A
N.T.S.



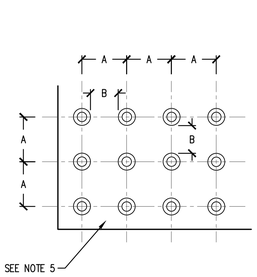
SECTION B–B
N.T.S.

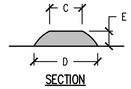
NOTES:
1. CONCRETE SHALL BE 3300 PSI AT 28 DAYS.
2. WHERE "GRADE BREAK" IS CALLED OUT, THE ENTIRE LENGTH OF THE GRADE BREAK BETWEEN THE TWO ADJACENT SURFACE PLANS SHALL BE FLUSH.
3. DO NOT PLACE GRATES, JUNCTION BOXES, ACCESS COVERS, OR OTHER APPURTENANCES IN FRONT OF THE CURB RAMP OR ON ANY PART OF THE CURB RAMP OR LANDING.
4. BROOM FINISH CURB RAMP, LANDING, AND FLARES.
5. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2.0% IN ANY DIRECTION.

ACCESSIBLE RAMP – PARALLEL TYPE B
NTS
1



DETECTABLE WARNING SURFACE DETAIL





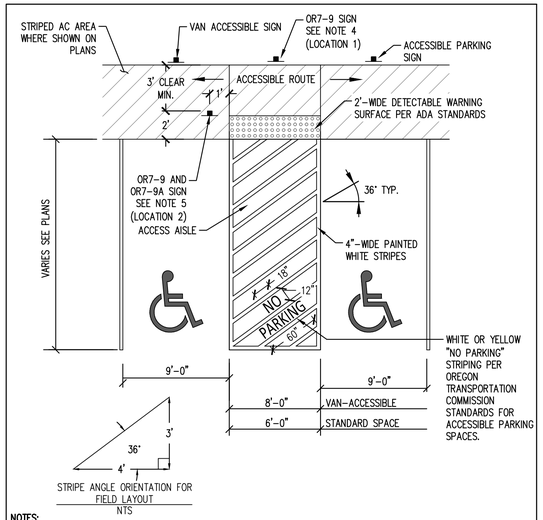
SECTION

	MIN	MAX
A	1.60"	2.40"
B	0.60"	–
C	0.45"	0.90"
D	0.90"	1.40"
E	0.20"	0.20"

TRUNCATED DOMES DETAILS

NOTES:
1. THE DETECTABLE WARNING SURFACE (DWS) SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES) OR THE LANDING.
2. THE EDGE OF THE DWS, SHALL BE PLACED ALONG THE BACK OF THE CURB LINE.
3. THE ROWS OF TRUNCATED DOMES IN A DWS SHALL BE PARALLEL WITH THE DIRECTION OF TRAVEL.
4. IF A CURB IS NOT PRESENT, PLACE THE DWS AT THE EDGE OF PAVEMENT.
5. DWS SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. CONTRACTOR SHALL PROVIDE 2-FOOT ARMOR-TILE TRUNCATED DOMES EMBEDDED INTO THE CONCRETE OR SIMILAR MATERIAL IN ACCORDANCE WITH OWNER AND LOCAL ADA REQUIREMENTS.

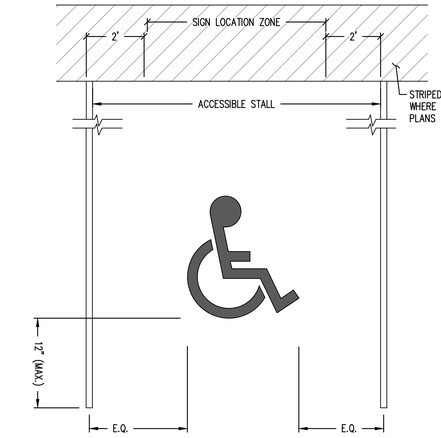
DETECTABLE WARNING SURFACES
NTS
2



NTS

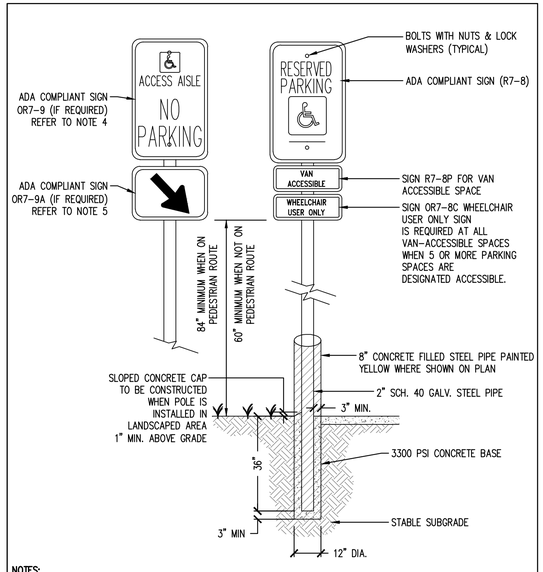
NOTES:
1. SLOPES OF ACCESSIBLE PARKING SPACES AND PARKING ACCESS AISLES SHALL NOT EXCEED 1:50 (2.0%) MAX. IN ANY DIRECTION.
2. WHERE FIVE OR MORE PARKING SPACES ARE DESIGNATED ACCESSIBLE, ANY SPACE THAT IS DESIGNATED AS VAN ACCESSIBLE SHALL BE RESERVED FOR WHEELCHAIR USERS.
3. FOR EVERY SIX OR FRACTION OF SIX ACCESSIBLE PARKING SPACES, AT LEAST ONE SHALL BE A VAN-ACCESSIBLE PARKING SPACE.
4. OR7-9 SIGN REQUIRED ONLY WHEN ACCESS AISLE "NO PARKING" STRIPING MAY NOT BE VISIBLE REGULARLY DUE TO SNOW, SAND, OR OTHER CONDITIONS.
5. IF THE OR7-9 SIGN IS REQUIRED AND CANNOT BE PLACED AT THE BACK OF THE ACCESSIBLE ROUTE (LOCATION 1) AN OR7-9A ARROW SIGN COMBINED WITH OR7-9 SHALL BE INSTALLED BEHIND THE CURB (LOCATION 2) TO IDENTIFY THE ACCESSIBLE ROUTE.
6. OR7-9 AND OR7-9A SIGNS (WHEN REQUIRED) ARE TO BE INSTALLED IN EITHER LOCATION 1 OR LOCATION 2. REFER TO NOTES 4 AND 5.

ACCESSIBLE RAMP STRIPING DETAIL
NTS
3



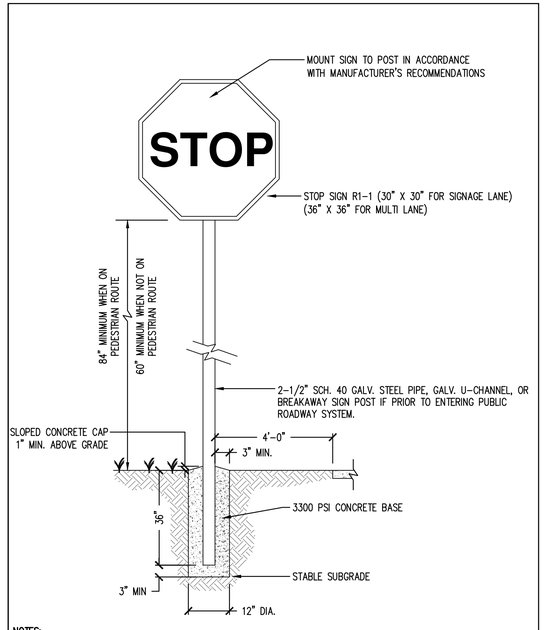
NOTES:
1. PAINT WHEELCHAIR SYMBOL WHITE UNLESS A DIFFERENT COLOR IS REQUIRED TO CONFORM TO LOCAL AND/OR STATE REQUIREMENTS.
2. SYMBOL SHALL BE CENTERED IN THE STALL.

ACCESSIBLE PARKING SPACE PAINTING DETAIL
NTS
4



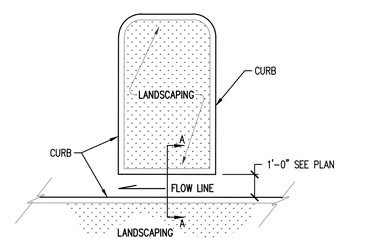
NOTES:
1. ADA REGULATIONS CONTINUALLY CHANGE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR SIGN MOUNTING, TYPE OF SIGNS, AND PENALTIES ARE CORRECTLY DETAILED.
2. ALL LETTER AND SYMBOL SIZES SHALL BE IN ACCORDANCE WITH THE LATEST ADA STANDARDS.
3. STANDARD 2" WELDED STEEL PIPE HOT DIP GALVANIZED AFTER FABRICATION CONFORMING TO ASTM A120 & A123.
4. OR7-9 SIGN REQUIRED ONLY WHEN ACCESS AISLE "NO PARKING" STRIPING MAY NOT BE VISIBLE REGULARLY DUE TO SNOW, SAND, OR OTHER CONDITIONS.
5. IF THE OR7-9 SIGN IS REQUIRED AND CANNOT BE PLACED AT THE BACK OF THE ACCESSIBLE ROUTE AN OR7-9A ARROW SIGN COMBINED WITH OR7-9 SHALL BE INSTALLED BEHIND THE CURB TO IDENTIFY THE ACCESSIBLE ROUTE.

ACCESSIBLE PARKING SIGNAGE
NTS
5

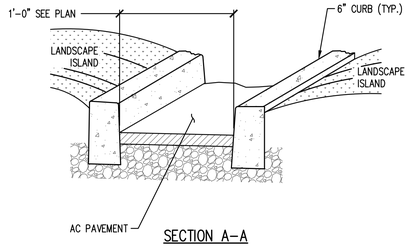


NOTES:
1. STOP SIGN SHALL COMPLY WITH USDOT, FHA MUTCD, ODOT, LOCAL CODES AND AS SPECIFIED. MOUNT SIGN IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. STANDARD 2-1/2" WELDED STEEL PIPE HOT DIP GALVANIZED AFTER FABRICATION CONFORMING TO ASTM A120 & A123.

STOP SIGN DETAIL
NTS
6

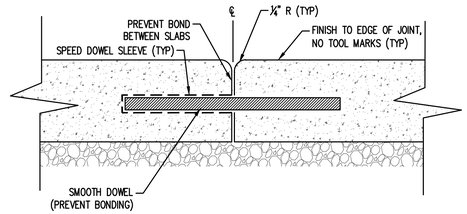


PLAN



SECTION A–A

LANDSCAPE ISLAND CURB BREAK
NTS
7



DOWEL DETAIL
NTS
8

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
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WWW.AKS-ENG.COM

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FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

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OREGON
SEPT. 14, 1982
CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 2021

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SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:
DETAILS

SHEET NO:
C501

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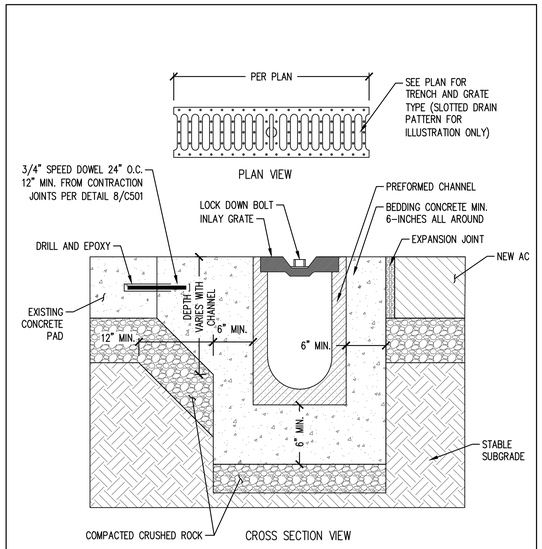
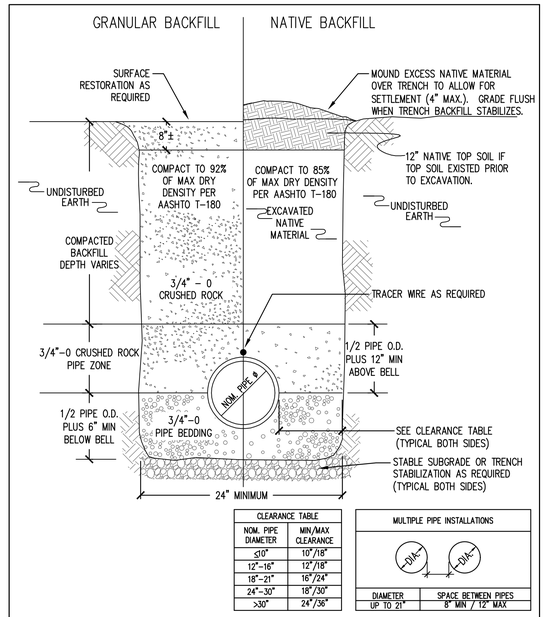


NOTES:
1. PRECAST SECTIONS SHALL MEET OR EXCEED ASTM C-478.
2. WATERTIGHT O-RING OR MASTIC KEYLOCK JOINTS REQUIRED.
3. STEPS TO BE FACTORY INSTALLED POLYPROPYLENE PLASTIC WITH GRADE 60 REINFORCING ROD.

PRE-SLOPED TRENCH DRAIN
NTS
1

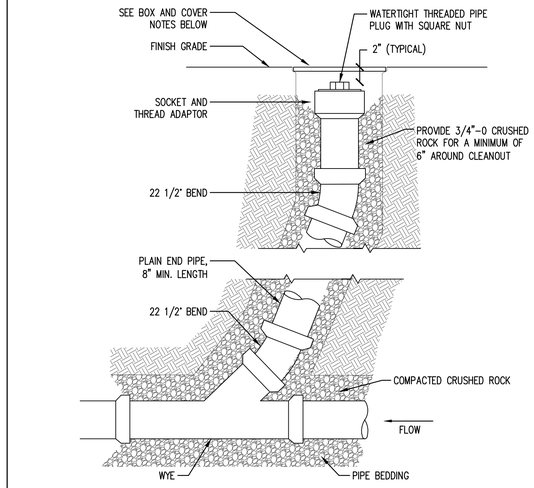


CLEARANCE TABLE	
NOM. PIPE DIAMETER	MIN./MAX. CLEARANCE
≤10"	10"/18"
12"-16"	12"/18"
18"-21"	16"/24"
24"-30"	18"/30"
>30"	24"/36"

MULTIPLE PIPE INSTALLATIONS	
DIA.	DIA.
DIAMETER UP TO 21"	SPACE BETWEEN PIPES 8" MIN / 12" MAX

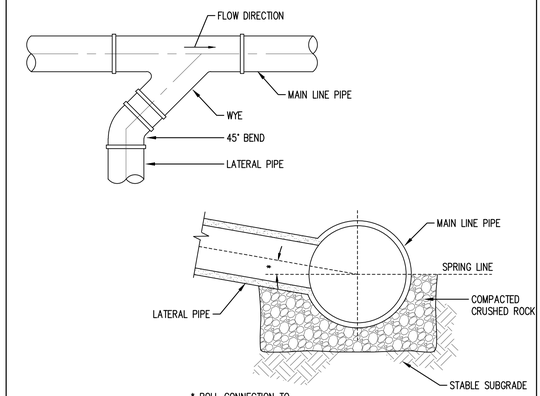
NOTES:
1. GRANULAR BACKFILL REQUIRED UNDER ALL EXISTING OR FUTURE IMPROVED AREAS INCLUDING SIDEWALKS.
2. WHERE NEW PIPING IS IN SAME ALIGNMENT AS EXISTING PIPING, THE PIPE EMBEDMENT SHALL EXTEND TO A MINIMUM OF 6" BELOW THE NEW PIPING OR 6" BELOW EXISTING PIPING, WHICHEVER IS DEEPER.
3. FOR FLEXIBLE PIPE, BOTTOM OF TRENCH SHORING SHALL BE ABOVE SPRINGLINE AND UNDER THE PIPE HAUNCHES.

TRENCH BACKFILL
NTS
2



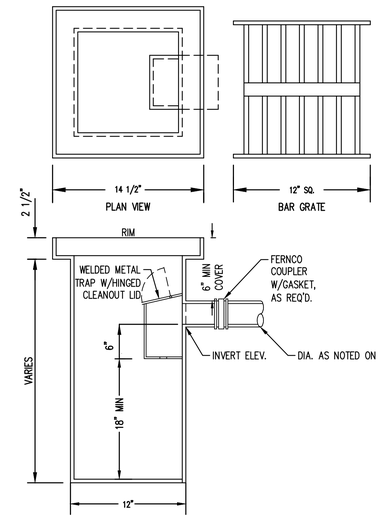
NOTES:
1. CLEANOUT RISER SHALL BE SAME SIZE (6" MAX RISER DIAMETER) AND MATERIAL AS LATERAL PIPE.
2. CLEANOUT PIPE SHALL BE LEFT 18" ABOVE EXISTING GRADE UNTIL ALL CURBS ARE INSTALLED AND PRIVATE UTILITY TRENCHES ARE BACKFILLED. CLEANOUTS SHALL THEN BE SET FLUSH WITH FINISH GRADE.
3. TRAFFIC AREA CLEANOUT SHALL BE 8"X4" CAST IRON FRAME AND COVER, OLYMPIC M1007 OR APPROVED EQUAL.
5. NON-TRAFFIC AREA CLEANOUT: CARSON MODEL 910 T-COVER OR APPROVED EQUAL (GREEN FOR SEWER, GRAY FOR STORM)
6. ALL STORM SEWER LIDS TO READ "STORM" OR "C/O".
7. ALL SANITARY SEWER LIDS TO READ "SEWER"

CLEANOUT
NTS
3



* ROLL CONNECTION TO VERTICAL AS NECESSARY FOR DEEP MAIN LINE TIE-IN.

TYPICAL GRAVITY LATERAL CONNECTION
NTS
4



BASIN: WELDED 10GA MILD STEEL, COATED ALL SURFACES WITH ASPHALTIC PAINT.

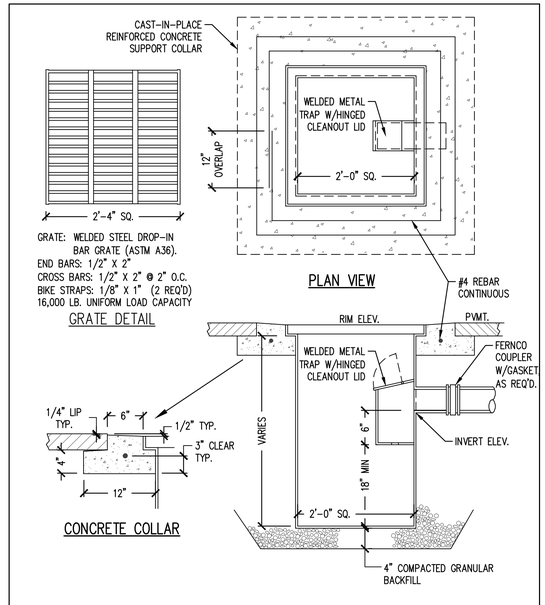
OUTLET STUB: SIZE AS SHOWN ON PLAN

GRATE:
OTHERWISE: WELDED STEEL DROP-IN BAR GRATE
- ☐ ASTM A 36
- ☐ END BARS: 1/2" X 2"
- ☐ CROSS BARS: 1/2" X 2" @ 2" O.C.
- ☐ BIKE STRAP: 1/8" X 1"

AS MANUFACTURED BY:

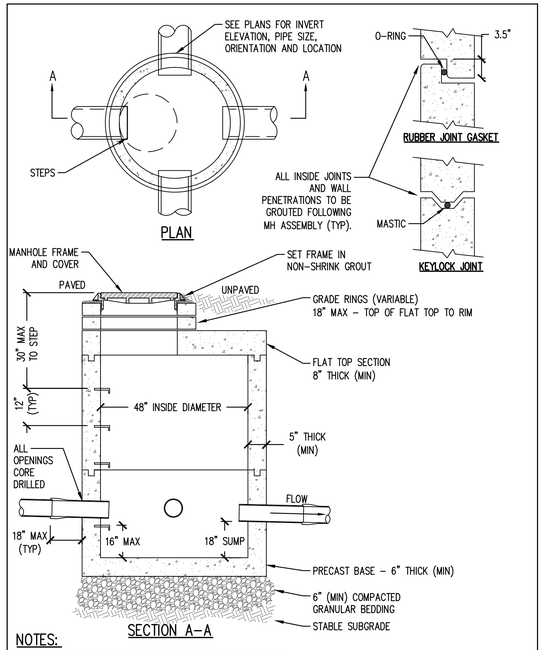
GRATEMASTER, INC.
P.O. BOX 1040
10780 NW 324TH AVE.
NORTH PLAINS, OR
503-647-2050
FAX 503-647-2425
(OR APPROVED EQUAL)

CATCH BASIN (BABY BOX)
NTS
6



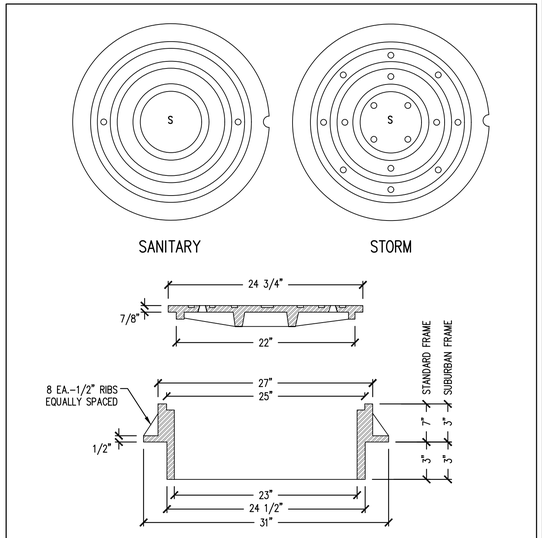
NOTES:
1. SEE CONSTRUCTION DRAWINGS FOR PIPE SIZE, LOCATION AND INVERT ELEVATION.
2. OUTLET: SIZE AS REQ'D. FOR INDICATED PIPE SIZE.
3. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS.
4. CONSTRUCT BASIN OF WELDED 1/4" STEEL. COAT ALL SURFACES WITH ASPHALTIC PAINT.

STANDARD CATCH BASIN (LYNCH STYLE)
NTS
7



NOTES:
1. PRECAST SECTIONS SHALL MEET OR EXCEED ASTM C-478.
2. WATERTIGHT O-RING OR MASTIC KEYLOCK JOINTS REQUIRED.
3. STEPS TO BE FACTORY INSTALLED POLYPROPYLENE PLASTIC WITH GRADE 60 REINFORCING ROD.

48" STORM DRAIN FLAT-TOP MANHOLE
NTS
8



NOTES:
1. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48, CLASS 30.
2. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
3. NOTCH LID FOR LIFTING HOOK.

MANHOLE FRAME AND COVER
NTS
9

REGISTERED PROFESSIONAL ENGINEER
OREGON
SEPT. 14, 1982
CHARLES EDWARD GREGORY
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P. 503.292.1635

MEP ENGINEER:
FLUENT ENGINEERING INC.
2110 State Street
Salem, Oregon 97301
P. 503-447-5030

OWNER:
OMIC R&D / OREGON TECH.
Procurement and Contract Services
27500 SW Parkway Avenue
Wilsonville, OR 97070

OWNER'S REPRESENTATIVE:
CRAIG CAMPBELL, Executive Director
OMIC R&D
33701 Charles T. Parker Way
Scappoose, Oregon 97056
503-983-0373

OREGON MANUFACTURING INNOVATION CENTER
RESEARCH & DEVELOPMENT
33701 Charles T. Parker Way
Scappoose, Oregon 97056

SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:
DETAILS

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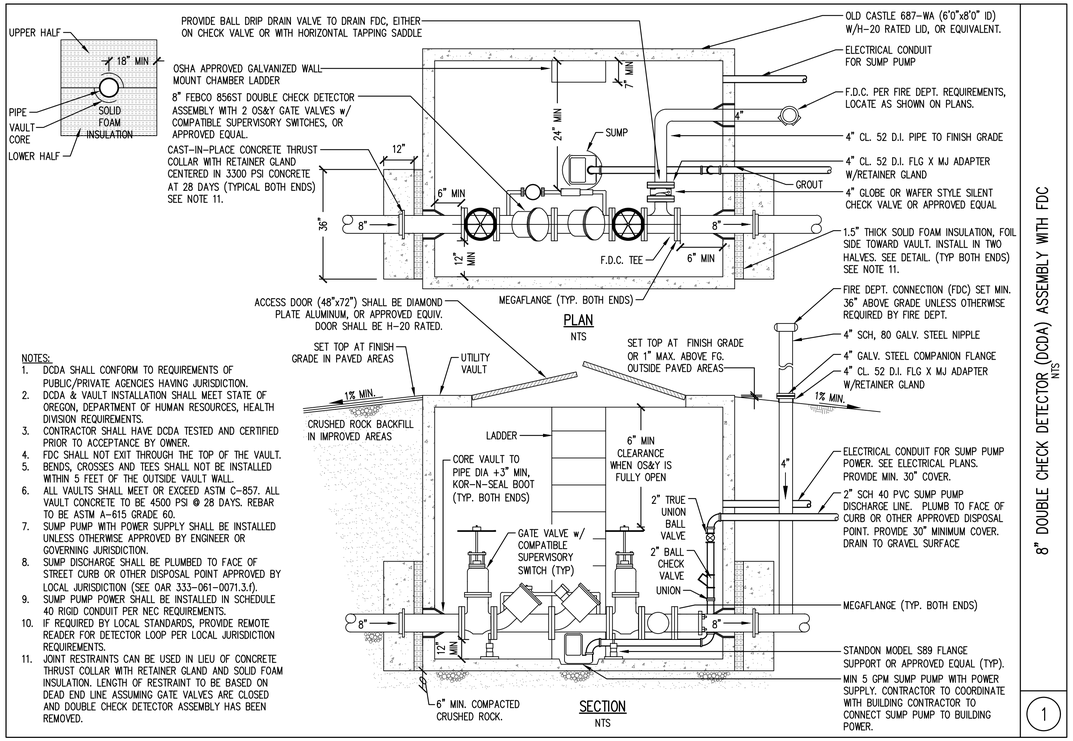
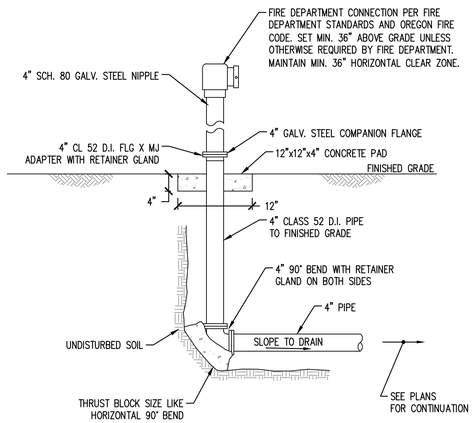
C502



NOTES:
1. DCDA SHALL CONFORM TO REQUIREMENTS OF PUBLIC/PRIVATE AGENCIES HAVING JURISDICTION.
2. DCDA & VAULT INSTALLATION SHALL MEET STATE OF OREGON, DEPARTMENT OF HUMAN RESOURCES, HEALTH DIVISION REQUIREMENTS.
3. CONTRACTOR SHALL HAVE DCDA TESTED AND CERTIFIED PRIOR TO ACCEPTANCE BY OWNER.
4. FDC SHALL NOT EXIT THROUGH THE TOP OF THE VAULT.
5. BENDS, CROSSES AND TEES SHALL NOT BE INSTALLED WITHIN 5 FEET OF THE OUTSIDE VAULT WALL.
6. ALL VAULTS SHALL MEET OR EXCEED ASTM C-857. ALL VAULT CONCRETE TO BE 4500 PSI @ 28 DAYS. REBAR TO BE ASTM A-615 GRADE 60.
7. SUMP PUMP WITH POWER SUPPLY SHALL BE INSTALLED UNLESS OTHERWISE APPROVED BY ENGINEER OR GOVERNING JURISDICTION.
8. SUMP DISCHARGE SHALL BE PLUMBED TO FACE OF STREET CURB OR OTHER DISPOSAL POINT APPROVED BY LOCAL JURISDICTION (SEE OAR 333-061-0071.3.f).
9. SUMP PUMP POWER SHALL BE INSTALLED IN SCHEDULE 40 RIGID CONDUIT PER NEC REQUIREMENTS.
10. IF REQUIRED BY LOCAL STANDARDS, PROVIDE REMOTE READER FOR DETECTOR LOOP PER LOCAL JURISDICTION REQUIREMENTS.
11. JOINT RESTRAINTS CAN BE USED IN LIEU OF CONCRETE THRUST COLLAR WITH RETAINER GLAND AND SOLID FOAM INSULATION. LENGTH OF RESTRAINT TO BE BASED ON DEAD END LINE ASSUMING GATE VALVES ARE CLOSED AND DOUBLE CHECK DETECTOR ASSEMBLY HAS BEEN REMOVED.

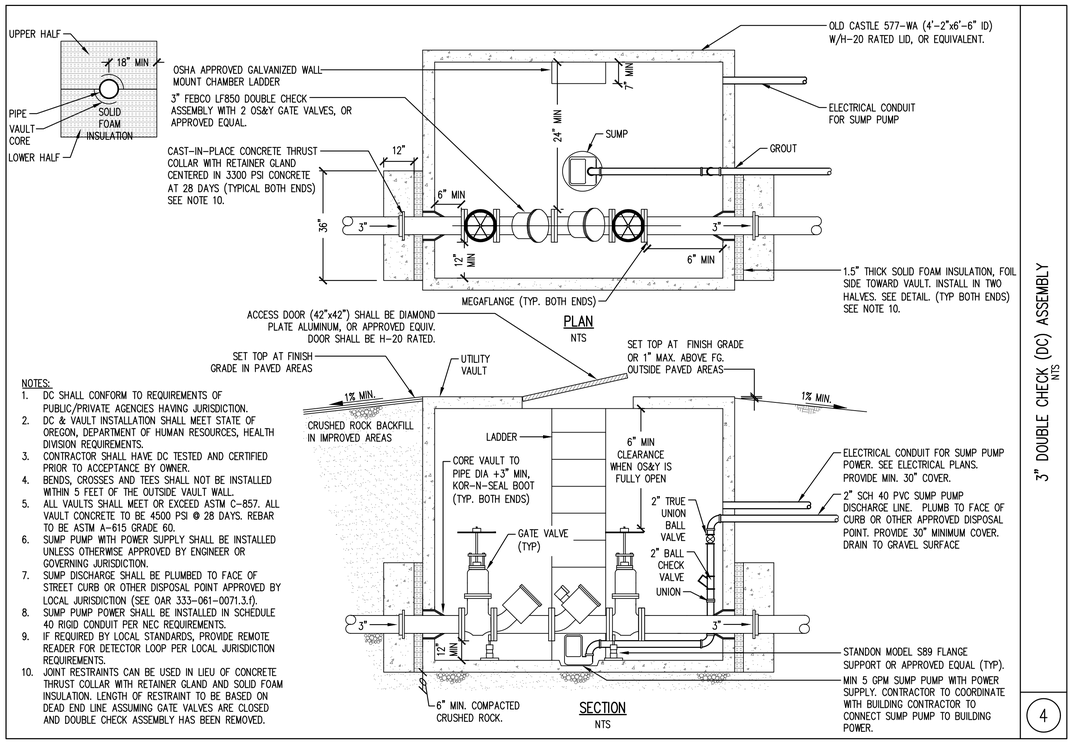
8" DOUBLE CHECK DETECTOR (DCDA) ASSEMBLY WITH FDC
NTS

1



FDC LINE DETAIL
NTS

2



NOTES:
1. DC SHALL CONFORM TO REQUIREMENTS OF PUBLIC/PRIVATE AGENCIES HAVING JURISDICTION.
2. DC & VAULT INSTALLATION SHALL MEET STATE OF OREGON, DEPARTMENT OF HUMAN RESOURCES, HEALTH DIVISION REQUIREMENTS.
3. CONTRACTOR SHALL HAVE DC TESTED AND CERTIFIED PRIOR TO ACCEPTANCE BY OWNER.
4. BENDS, CROSSES AND TEES SHALL NOT BE INSTALLED WITHIN 5 FEET OF THE OUTSIDE VAULT WALL.
5. ALL VAULTS SHALL MEET OR EXCEED ASTM C-857. ALL VAULT CONCRETE TO BE 4500 PSI @ 28 DAYS. REBAR TO BE ASTM A-615 GRADE 60.
6. SUMP PUMP WITH POWER SUPPLY SHALL BE INSTALLED UNLESS OTHERWISE APPROVED BY ENGINEER OR GOVERNING JURISDICTION.
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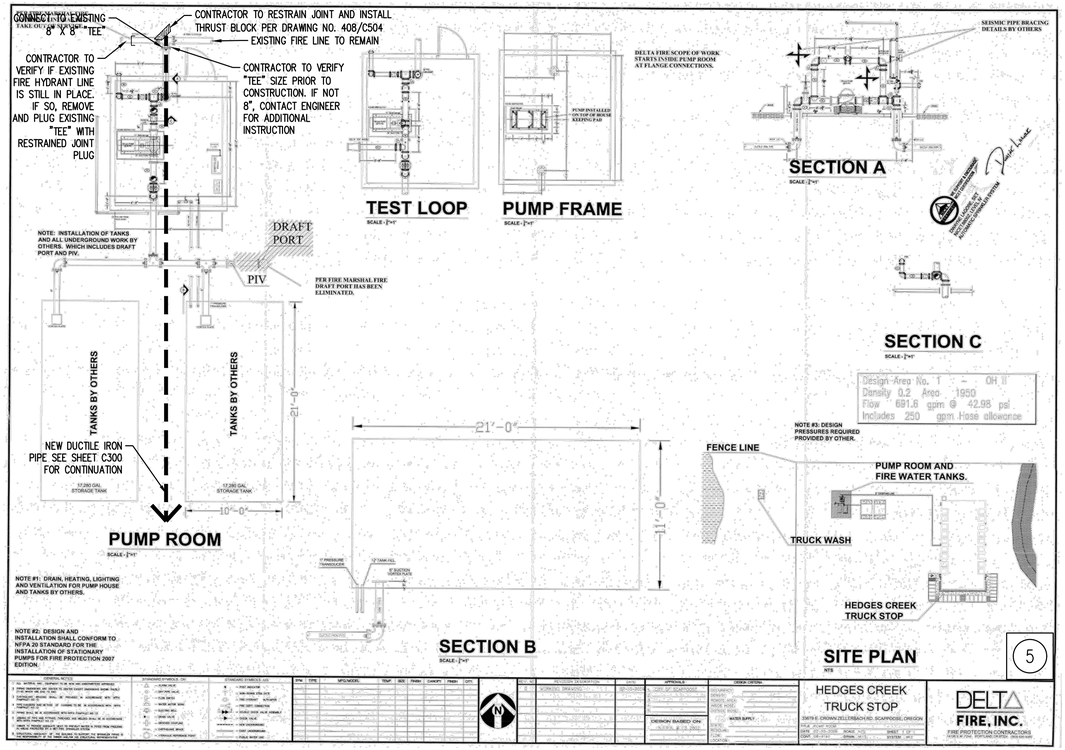
10. JOINT RESTRAINTS CAN BE USED IN LIEU OF CONCRETE THRUST COLLAR WITH RETAINER GLAND AND SOLID FOAM INSULATION. LENGTH OF RESTRAINT TO BE BASED ON DEAD END LINE ASSUMING GATE VALVES ARE CLOSED AND DOUBLE CHECK ASSEMBLY HAS BEEN REMOVED.

3" DOUBLE CHECK (DC) ASSEMBLY
NTS

4



5

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101 ST HELENS ST
ST HELENS, OR 97051
T: 503 366 3060 F: 503 366 3055

REGISTERED PROFESSIONAL ENGINEER
OREGON
SEPT. 14, 1982
CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 2021

PROJECT TEAM:

CIVIL ENGINEER:
AKS ENGINEERING & FORESTRY
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STRUCTURAL ENGINEER:
PETERSON STRUCTURAL ENGINEERS
9400 SW Barnes Road, Suite 100
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MEP ENGINEER:
FLUENT ENGINEERING INC.
2110 State Street
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Procurement and Contract Services
27500 SW Parkway Avenue
Wilsonville, OR 97070

OWNER'S REPRESENTATIVE:
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503-983-0573

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33701 Charles T. Parker Way
Scappoose, Oregon 97056

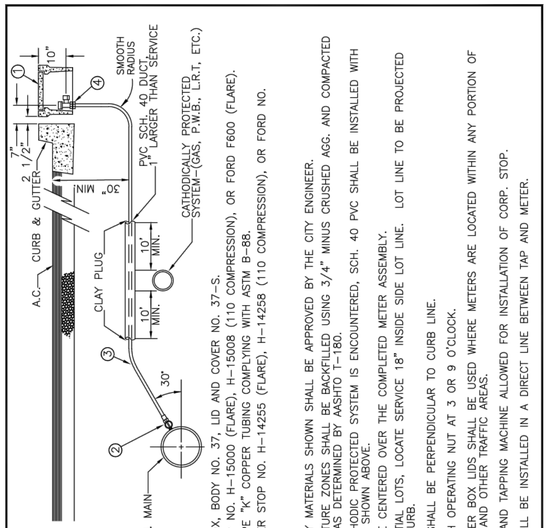
SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:
DETAILS

SHEET NO:
C503



MATERIALS:

1. OLDCASTLE METER BOX, BODY NO. 37, LID AND COVER NO. 37-S.
2. MUELLER CORP. STOP NO. H-15000 (FLARE), H-15008 (110 COMPRESSION), OR FORD F600 (FLARE).
3. 1" SOFT TEMPER, TYPE "K" COPPER TUBING COMPLYING WITH ASTM B-88.
4. MUELLER ANGLE METER STOP NO. H-14255 (FLARE), H-14258 (110 COMPRESSION), OR FORD NO. KV23-444W (FLARE).

NOTES:

1. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER.
2. ALL PIPE AND STRUCTURE ZONES SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED AGG. AND COMPACTED TO 95% MAX. DENS. AS DETERMINED BY AASHTO T-180.
3. WHEN AN ACTIVE CATHODIC PROTECTED SYSTEM IS ENCOUNTERED, SCH. 40 PVC SHALL BE INSTALLED WITH IMPERVIOUS PLUG AS SHOWN ABOVE.
4. METER BOX SHALL BE CENTERED OVER THE COMPLETED METER ASSEMBLY.
5. FOR VACANT RESIDENTIAL LOTS, LOCATE SERVICE 18" INSIDE SIDE LOT LINE. LOT LINE TO BE PROJECTED PERPENDICULAR TO CURB.
6. ANGLE METER STOP SHALL BE PERPENDICULAR TO CURB LINE.
7. SET CORP. STOP WITH OPERATING NUT AT 3 OR 9 O'CLOCK.
8. TRAFFIC BEARING METER BOX LIDS SHALL BE USED WHERE METERS ARE LOCATED WITHIN ANY PORTION OF DRIVEWAY OR APRON AND OTHER TRAFFIC AREAS.
9. ONLY APPROVED BIT AND TAPPING MACHINE ALLOWED FOR INSTALLATION OF CORP. STOP.
10. COPPER SERVICE SHALL BE INSTALLED IN A DIRECT LINE BETWEEN TAP AND METER.

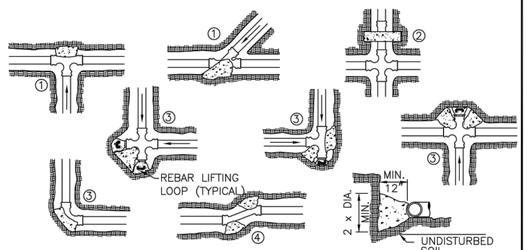
DRAWN	DRAWN	COMMUNITY DEVELOPMENT	SCALE	N.T.S.
DIV.	DEPT	CITY OF SCAPPOOSE	DATE	2002
REV.	DATE APPR.	34485 E. COLUMBIA AVENUE, PO BOX "P", CITY OF SCAPPOOSE, OR. 97056	APPR.	
		STANDARD 1" SERVICE	DWG. NO.	403

FITTING SIZE (Inches)	TEE,& WYE ①	STRADDLE BLOCK ②	90° BEND ③ PLUGGED CROSS TEE PLUGGED-RUNS	45° BEND ④	22 1/2° BEND ④	11 1/4° BEND ④
2	*	*	*	*	*	*
4	1.7	2.1	2.4	1.3	*	*
6	3.7	4.9	5.3	2.9	1.5	*
8	6.7	8.7	9.5	5.1	2.7	1.3
10	10.5	13.6	14.8	8	4.1	2
12	15.1	19.6	21.3	11.6	5.9	2.9
16	26.8	34.8	37.9	20.5	10.4	5.2
18	33.9	44	47.9	25.9	12.8	6.7
LARGER	* *	* *	* *	* *	* *	* *
BEARING AREA OF THRUST BLOCKS (sq. ft.)						

1. ALL VALUES ARE BASED ON THE FOLLOWING ASSUMPTIONS: AVG. PRESSURE = 100 PSI x 2 (safety factor); 1500 PSF SOIL BEARING CAPACITY; NORMAL DISTRBUTION DESIGN VELOCITY NOT TO EXCEED 5 F/S.
2. ALL FITTINGS SHALL BE WRAPPED IN PLASTIC PRIOR TO PLACEMENT OF CONCRETE.
3. ALL THRUST BLOCKS SHALL BE FORMED TO ELIMINATE ANY CONCRETE AROUND FITTING BOLTS.
4. BEARING SURFACE OF THRUST BLOCKING SHALL BE AGAINST UNDISTURBED SOIL.
5. ALL CONCRETE MIX SHALL HAVE A MIN. 28 DAY STRENGTH OF 3000 PSI.
6. ALL PIPE ZONES SHALL BE GRAVEL FILLED AND COMPACTED.
7. THRUST BLOCKS FOR PLUGGED CROSS AND PLUGGED TEE SHALL HAVE #4 REBAR LIFTING LOOPS INSTALLED AS SHOWN.
8. VERTICAL THRUST DETAILS – SEE DWG. #409
9. STRADDLE BLOCK DETAILS – SEE DWG. #410.

* BLOCK TO UNDISTURBED TRENCH WALLS

* * THRUST BLOCKS FOR PIPES LARGER THAN 18" WILL BE INDIVIDUALLY DESIGNED BY THE ENGINEER.



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DIV.	DEPT	CITY OF SCAPPOOSE	DATE	2002
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		HORIZONTAL THRUST BLOCKING	DWG. NO.	408

CITY OF SCAPPOOSE
CROSS CONNECTION PROGRAM

BACKFLOW ASSEMBLY AND VAULT INSTALLATION STANDARDS

* DOUBLE CHECK VALVE ASSEMBLY
* DOUBLE CHECK DETECTOR ASSEMBLY
* REDUCED PRESSURE (R.P.) ASSEMBLY

CONTACTS

DEPARTMENT	NAME	PHONE NO.
CITY ENGINEER	EUGENE SMITH	503-543-7184
FIELD SERVICES	TERRY ANDREWS	503-543-7184
BUILDING OFFICIAL	DON SALLEE	503-543-7184
FIRE DEPARTMENT	MIKE GREISEN	503-543-5026

DRAWN	DRAWN	COMMUNITY DEVELOPMENT	SCALE	N.T.S.
DIV.	DEPT	CITY OF SCAPPOOSE	DATE	2002
REV.	DATE APPR.	34485 E. COLUMBIA AVENUE, PO BOX "P", CITY OF SCAPPOOSE, OR. 97056	APPR.	
		BACKFLOW ASSEMBLY	DWG. NO.	416A

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AKS JOB NO: 7245
DATE: JAN. 24, 2020

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CONTENTS:
DETAILS

SHEET NO:
C504

CITY OF SCAPPOOSE
REQUIREMENTS FOR BACKFLOW PREVENTION ASSEMBLY INSTALLATIONS ON 1 1/2" AND LARGER DOMESTIC SERVICES, IRRIGATION SERVICES AND FIRELINE SERVICES

AN APPROVED BACKFLOW PREVENTION ASSEMBLY IS REQUIRED ON ALL 1 1/2" AND LARGER DOMESTIC METER SIZE SERVICES, PLUS ALL DEDICATED IRRIGATION AND ALL FIRELINE SYSTEMS. AN ASSEMBLY WILL BE APPROVED BY THE CITY OF SCAPPOOSE ONLY IF THE STATE OF OREGON HEALTH DIVISION HAS APPROVED ITS USE AS A BLACKFLOW ASSEMBLY, AND THE ASSEMBLY IS TESTABLE. THE ASSEMBLY SHALL BE INSTALLED AT THE PROPERTY LINE. WHEN IT IS NOT POSSIBLE TO LOCATE THE ASSEMBLY AT THE PROPERY LINE, THE PROPOSED LOCATION MUST BE APPROVED BY THE FIELD SERVICES SUPERVISOR BEFORE INSTALATION. A WATER SERVICE SHALL NOT BE TURNED ON UNTIL ALL REQUIRED BACKFLOW PREVENTION ASSEMBLIES ARE INSTALLED, INSPECTED, TESTED, AND REGISTERED WITH THE CITY OF SCAPPOOSE (SEE NOTE 8 BELOW). COST OF ALL INSTALLATIONS, INCLUDING ALL COST OF INITIAL INSPECTION AND TESTING FEES, SHALL BE THE RESPONSIBILITY OF THE CUSTOMER. THE CUSTOMER WILL BE RESPONSIBLE FOR ALL MAINTENANCE AND TESTING OF THE ASSEMBLY AND VAULT WHEN USED.

CONSTRUCTION AND DESIGN STANDARDS FOR WATER FACILITIES

1. ALL PIPE WILL BE INSTALLED TO THE CITY OF SCAPPOOSE PUBLIC WORKS STANDARDS.
2. THE CITY OF SCAPPOOSE WILL BE FURNISHED WITH THREE SETS OF PLANS AND SPECIFICATIONS. THE PLANS WILL BE DRAWN AT A SCALE OF 1"=20' FOR PLAN CHECK. ONE SET OF REVISED PLANS WILL BE RETURNED TO THE ENGINEER FOR REVISIONS.
3. THE CONTRACTOR WILL KEEP ONE SET OF APPROVED PLANS AT THE CONSTRUCTION SITE.
4. THE ENGINEER WILL FURNISH THE CITY OF SCAPPOOSE 48-HOUR NOTICE PRIOR TO CONSTRUCTION.
5. WATER FACILITIES WILL BE INSTALLED IN THE PRESENCE OF THE CITY OF SCAPPOOSE INSPECTOR. THE INSPECTOR SHALL HAVE ACCESS TO THE CONSTRUCTION SITE AT ALL TIMES.
6. NEW MAINS ARE TO BE PRESSURE TESTED AND DISINFECTED BY THE CONTRACTOR AND PROVEN TO BE BACTERIOLOGICALLY SAFE PRIOR TO PLACING NEW MAINS IN SERVICE AND PRIOR TO CONNECTION TO CITY FACILITIES.
7. UPON COMPLETION OF THE WATER FACILITY, THE ENGINEER WILL NOTIFY THE CITY OF SCAPPOOSE 48 HOURS IN ADVANCE OF DESIRED, FINAL INSPECTION.
8. CONTRACTOR MUST COORDINATE BACKFLOW ASSEMBLY TEST WITH THE FIELD SERVICES SUPERVISOR. (TELEPHONE NO. 503-543-7184) TO RECEIVE SERVICE TO PROPERTY. METER STOPS AND VALVES TO REMAIN LOCKED & OFF UNTIL THAT TIME OF COORD-INATION AND APPROVED TEST.

DRAWN	DRAWN	COMMUNITY DEVELOPMENT	SCALE	N.T.S.
DIV.	DEPT	CITY OF SCAPPOOSE	DATE	2002
REV.	DATE APPR.	34485 E. COLUMBIA AVENUE, PO BOX "P", CITY OF SCAPPOOSE, OR. 97056	APPR.	
		BACKFLOW ASSEMBLY	DWG. NO.	416C

DOUBLE CHECK VALVE (DETECTOR) ASSEMBLY
BACKFLOW ASSEMBLY INSTALLATION STANDARD

TO ENSURE PROPER OPERATION AND ACCESSIBLITY OF ALL BACKFLOW PREVENTION ASSEMBLIES, THE FOLLOWING REQUIREMENTS SHALL APPLY TO INSTALLATION OF THESE ASSEMBLIES UNLESS SPECIFICALLY APPROVED BY THE FIELD SERVICES SUPERVISOR. THE CITY OF SCAPPOOSE PUBLIC WORKS STANDARDS AND CHAPTER 5 OF THE CITY CODE WILL TAKE PRECEDENCE IN DESIGN AND INSTALLATION.

1. NO PART OF THE BACKFLOW PREVENTION ASSEMBLY SHALL BE SUBMERGED IN WATER OR INSTALLED IN A LOCATION SUBJECT TO FLOODING. IF INSTALLED IN A VAULT OR CHAMBER, ADEQUATE DRAINAGE SHALL BE PROVIDED ONTO OWNER'S PROPERTY BY EITHER DRAINAGE TO DAYLIGHT OR BY SUMP PUMP TO DAYLIGHT WITH HIGH WATER ALARM SYSTEM. TEST COCKS SHALL BE PLUGGED. THE PLUGS SHALL NOT BE OF DISSIMILAR METALS.
2. THE ASSEMBLY MUST BE PROTECTED FROM FREEZING AND OTHER SEVERE WEATHER CONDITIONS.
3. ONLY ASSEMBLIES APPROVED FOR VERTICAL INSTALLATION MAY BE INSTALLED VERTICALLY.
4. THE ASSEMBLY SHALL BE READILY ACCESSIBLE WITH ADEQUATE ROOM FOR MAINTENANCE AND TESTING. ASSEMBLIES 2 INCHES AND SMALLER SHALL HAVE AT LEAST A 12-INCH CLEARANCE BELOW AND ON BOTH SIDES OF THE ASSEMBLY; AND IF LOCATED IN A VAULT, THE TOP OF THE ASSEMBLY SHALL BE BETWEEN 18 AND 24 INCHES BELOW GRADE.

   ALL ASSEMBLIES LARGER THAN 2 INCHES SHALL HAVE A 12-INCH CLEARANCE ON THE BACKSIDE, A 24-INCH CLEARANCE ON THE TEST-COCK SIDE, AND 12 INCH BELOW THE ASSEMBLY. ADEQUATE CLEARANCE (3 INCHES MIN.) MUST BE MAINTAINED ABOVE O.S. & Y. GATE-VALVE STEM. HEADROOM OF 6'-0" IS REQ'D IN VAULTS. ACCESS TO THE ASSEMBLIES AND TO ANY VAULT OR CHAMBER SHALL REMAIN CLEAR AT ALL TIMES. AN OR/OSHA APPROVED CHAMBER LADDER THAT EXTENDS 3 FT. ABOVE SURFACE OF VAULT SHALL BE INSTALLED.
5. NO POST INDICATING VALVES ARE ALLOWED TO BE INSTALLED DIRECTLY ON DOUBLE CHECK DETECTOR ASSEMBLIES.
6. ONLY APPROVED DOUBLE CHECK DETECTOR ASSEMBLIES ARE TO BE USED FOR SYSTEM CONTAINMENT ON FIRE LINE SERVICES IN THE CITY OF SCAPPOOSE THE METER ON BYPASS ASSEMBLY SHALL READ IN CUBIC FEET.
7. IF A FIRE LINE FLOW, OR TAMPER SWITCH IS INSTALLED, IT MUST BE CONNECTED TO A MONITORED FIRE DETECTION SYSTEM APPROVED BY THE FIRE MARSHAL. NO INSTAL-LATION WILL MODIFY THE BACKFLOW ASSEMBLY OR INTERFERE WITH ITS OPERATION OR MAINTENANCE.
8. ALL BACKFLOW ASSEMBLIES SHALL BE INSTALLED AT THE SERVICE CONNECTION TO THE PREMISES PER OREGON ADMINISTRATIVE RULES 333-61-070, CROSS CONNECTION CONTROL REQUIREMENTS, UNLESS SPECIFICALLY APPROVED BY THE FIELD SERVICES SUPERVISOR. (SERVICE CONNECTION – A LOCATION WHERE THE PUBLIC WATER FACILITIES END AT OR NEAR THE PROPERTY LINE)
9. ALL PIPE BETWEEN MAIN AND ASSEMBLY SHALL BE RESTRAINED. USE "MEGALUG" RETAINER GLANDS ON MJ FITTINGS AND "FIELD-LOK" TYPE GASKETS ON BELL JOINTS. UNI-FLANGE ADAPTERS MAY BE USED IN VAULTS.
10. APPROVED BACKFLOW ASSEMBLY MAY NOT BE MODIFIED IN ANY WAY FROM WHICH IT WAS MANUFACTURED, TESTED AND APPROVED.

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		DOUBLE CHECK VALVE (DETECTOR) BACKFLOW ASSEMBLY	DWG. NO.	416D

REDUCED PRESSURE (R.P.) PRINCIPLE BACKFLOW PREVENTION ASSEMBLY (R.P.) INSTALLATION STANDARD

ASSEMBLIES INSTALLED MORE THAN 5 FEET ABOVE FLOOR LEVEL MUST HAVE A SUITABLE PLATFORM FOR USE BY TESTING OR MAINTENANCE PERSONNEL.

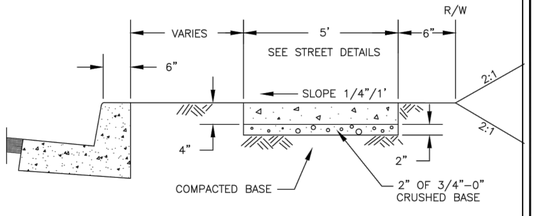
5. THE ASSEMBLY MUST BE PROTECTED FROM FREEZING AND OTHER SEVERE WEATHER CONDITIONS.
6. VERTICAL INSTALLATION IS PROHIBITED.
7. THE PROPERTY OWNER ASSUMES ALL RESPONSIBILITY FOR LEAKS AND DAMAGE. THE OWNER SHALL ALSO KEEP THE VAULT REASONABLY FREE OF SILT AND DEBRIS.
8. VARIANCES FROM THESE REGULATIONS WILL BE EVALUTED ON A CASE-BY-CASE BASIS. ANY DEVIATIONS MUST HAVE PRIOR WRITTEN APPROVAL OF THE WATER DIVISION MANAGER PRIOR TO INSTALLATION.

VAULT SIZING CHART FOR DOUBLE CHECK & R.P. BACKFLOW ASSEMBLIES

SIZE	UTILITY VAULT FOR BACKFLOW ASSEMBLY	
	VAULT	LID
3"	577-LA	LID 577-TL2-332P
4"	577-LA	LID 577-TL2-332P
6"	676-LA	LID 676-TL2-332P
8"	687-LA	LID 687-TL2-332P
10"	5106-LA	LID 5106-TL2-332P

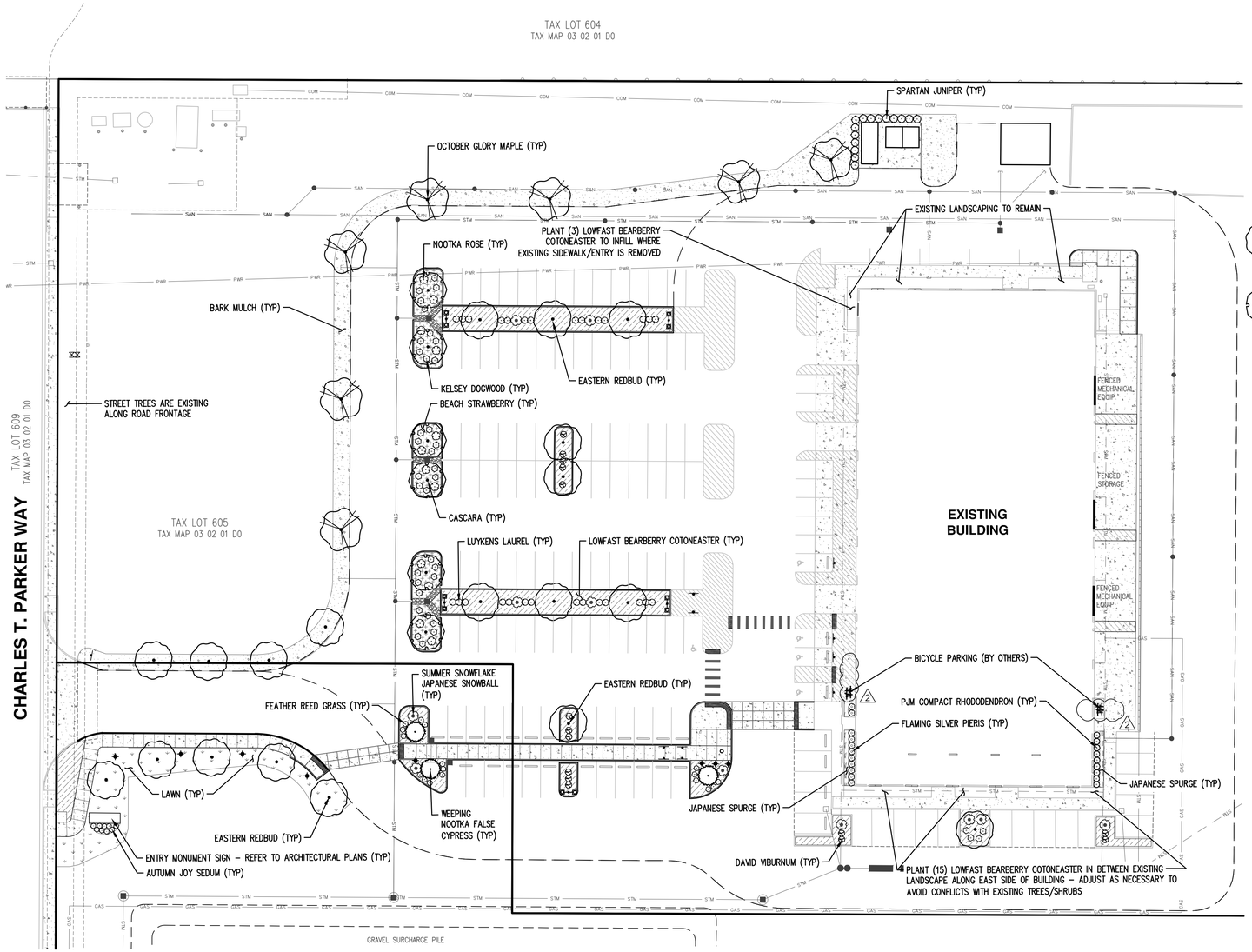
DRAWN	DRAWN	COMMUNITY DEVELOPMENT	SCALE	N.T.S.
DIV.	DEPT	CITY OF SCAPPOOSE	DATE	2002
REV.	DATE APPR.	34485 E. COLUMBIA AVE., PO BOX "P", SCAPPOOSE, OREGON	APPR.	
		BACKFLOW ASSEMBLY	DWG. NO.	416F

TYPICAL SIDEWALK DETAIL
(FOR LOCAL STREET)



1. LOCATION AND WIDTH OF SIDEWALK WILL VARY DEPENDING UPON FUNCTIONAL CLASSIFICATION OF THE STREET. SEE TYPICAL STREET SECTION DRAWINGS ST-500,ST-501,ST-502.
2. PCC SHALL BE 3300 PSI STRENGTH AT 28 DAYS.
3. EXPANSION JOINTS SHALL BE PLACED AT DRIVEWAY APPROACHES, CURB RETURNS AND AT ANY FIXED OBJECT WITHIN THE SIDEWALK AREA. JOINTING MATERIAL AT DRIVEWAYS SHALL CONSIST OF APPROVED FILLER AND SHALL NOT BE LESS THAN 1/2" WIDE.
4. CONTRACTION JOINTS SHALL BE PLACED AT ALL CHANGES OF DIRECTION, POINTS OF CURVATURE AND AT 15' (MAX) INTERVALS. JOINTS SHALL BE 1/8" TO 1/4" WIDE AND A MINIMUM DEPTH OF 1/3 THE THICKNESS OF THE CONCRETE.
5. ALL SURFACES SHALL BE TROWELED AND BROOMED IN A WORKMANLIKE MANNER. ALL CONTRACTION JOINTS SHALL BE STEEL TROWELED (3 IN. TYP.).

DRAWN	MRM	COMMUNITY DEVELOPMENT	SCALE	N.T.S.
DIV.	TRANSPORTATION	CITY OF SCAPPOOSE	DATE	2002
REV.	DATE APPR.	34485 E. COLUMBIA AVE., PO BOX "P", SCAPPOOSE, OREGON	APPR.	
		TYPICAL SIDEWALK DETAIL	DWG. NO.	513



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PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	7	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2" CAL. B&B	AS SHOWN
	19	CERCIS CANADENSIS	EASTERN REDBUD	2" CAL. B&B	AS SHOWN
	3	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING NOOTKA FALSE CYPRESS	6' HT. B&B	AS SHOWN
	6	RHAMNUS PURSHIANA	CASCARA	2" CAL. B&B	AS SHOWN

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	37	CORNUS SERICEA 'KELSEYI'	KELSEY DOGWOOD	2 GAL CONT.	36" o.c.
	15	JUNIPERUS CHINENSIS 'SPARTAN'	SPARTAN JUNIPER	5'–6' HT. CONT.	48" o.c.
	11	PIERIS JAPONICA 'FLAMING SILVER'	FLAMING SILVER PIERIS	2 GAL CONT.	36" o.c.
	28	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	LUYKENS LAUREL	2 GAL CONT.	36" o.c.
	9	RHODODENDRON X 'P.J.M. COMPACT'	PJM COMPACT RHODODENDRON	2 GAL CONT.	36" o.c.
	12	ROSA NUTKANA	NOOTKA ROSE	2 GAL CONT.	48" o.c.
	15	VIBURNUM DAVIDII	DAVID VIBURNUM	2 GAL CONT.	36" o.c.
	11	VIBURNUM PLICATUM TOMENTOSUM 'SUMMER SNOWFLAKE'	SUMMER SNOWFLAKE JAPANESE SNOWBALL	5 GAL CONT.	60" o.c.

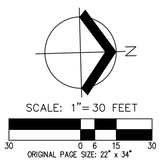
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	17	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL CONT.	30" o.c.

PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	9	SEDUM SPECTABILE 'AUTUMN JOY'	AUTUMN JOY SEDUM	1 GAL CONT.	30" o.c.

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
		BARK: REMOVE GRAVEL AND CONTAMINATED SOIL FROM AREA. REPLACE WITH TOPSOIL AND APPLY DARK HEMLOCK OR FIR BARK MULCH, MEDIUM GRIND OR SHREDDED, 3" DEEP. NOTE ADDITIONAL BARK MULCH WILL BE REQUIRED IN PLANTING BED AREAS AROUND AND UNDER PLANT MATERIAL.			
	325*	COTONEASTER DAMMERI 'LOWFAST' (*PLUS AN ADDITIONAL (15) COTONEASTER FOR INFILLING EXISTING EAST BUILDING PLANTING BED AND (3) TO INFILL SW CORNER OF BUILDING AS NOTED ON PLANS)	LOWFAST COTONEASTER	1 GAL CONT	42" o.c.
	197	FRAGARIA CHILOENSIS	BEACH STRAWBERRY	1 GAL CONT	30" o.c.
	± 2,224 SF	LAWN – NORTHWEST SUPREME LAWN SEED MIX – SUNMARK SEEDS (OR APPROVED EQUAL) DASHER 3 PERENNIAL RYEGRASS (35%); CUTTER II PERENNIAL RYEGRASS (35%); GARNET CREEPING RED FESCUE (15%); WINDWARD CHEWINGS FESCUE (15%); APPLY AT A RATE OF 8 LBS. PER 1,000 SF OR AS RECOMMENDED BY SUPPLIER.			
	35	PACHYSANDRA TERMINALIS	JAPANESE SPURGE	1 GAL CONT	24" o.c.

LANDSCAPE NOTES

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT MATERIAL AND QUANTITIES. IF DISCREPANCIES OCCUR, DESIGN INTENT OF THE DRAWINGS PREVAILS OVER QUANTITIES LISTED.
2. ALL LANDSCAPING SHALL CONFORM TO APPLICABLE CITY OF SCAPPOOSE DEVELOPMENT CODE AND TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1–2014 (OR CURRENT EDITION). ALL LANDSCAPING MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH ACCEPTED BEST PRACTICE INDUSTRY STANDARDS SUCH AS THOSE ADOPTED BY THE OREGON LANDSCAPE CONTRACTORS BOARD (OLCB) AND THE AMERICAN HORTICULTURE INDUSTRY ASSOCIATION (AMERICANHORT).
3. REVISIONS OR SUBSTITUTIONS TO PLANTINGS, INCLUDING CHANGES TO LOCATION, QUANTITIES, SPECIES, SIZES, SPACING, ETC. DUE TO UNFORESEEN SITE CONDITIONS, PLANT AVAILABILITY, ETC. MAY BE MADE, WITH APPROVAL, WHERE ALLOWED BY CITY OF SCAPPOOSE LANDSCAPE DESIGN STANDARDS, PRIOR TO FINAL INSTALLATION.
4. MINOR FIELD ADJUSTMENTS TO PLANT LOCATIONS MAY BE NECESSARY TO AVOID CONFLICTS WITH UTILITIES, MECHANICAL EQUIPMENT, DRAINAGE PATTERNS, RIP–RAP, LIGHTS, ETC. PLANT MATERIAL SHALL NOT BE PLACE IN DIRECT STORMWATER FLOW PATTERNS.
   - 4.1. DO NOT DISTURB EXISTING TREES/SHRUBS WHERE INFILL PLANTS ARE PROPOSED. ADJUST NEW PLANTS AS NECESSARY.
   - 4.2. WHERE EXISTING VEGETATION IS REMOVED AND/OR REPLANTED (SUCH AS NEAR BUILDING ENTRANCES), CONTRACTOR SHALL PROTECT AND PRESERVE EXISTING IRRIGATION SYSTEMS, UTILITIES AND LIGHTS, MECHANICAL EQUIPMENT, DRAINAGE PATTERNS, HARDSCAPING, BUILDING ELEMENTS, ETC. WHERE ENCOUNTERED. REPAIR AT NO ADDITIONAL COST TO THE OWNER IF DAMAGED OR DISTURBED.
5. SOIL PREPARATION: ADEQUATE TOPSOIL SHALL BE PROVIDED FOR HEALTHY PLANT ESTABLISHMENT IN ALL PLANT AREAS. CONTRACTOR SHALL EXCAVATE NEW PLANTING BED AREAS, PROTECTING CURBS, SIDEWALKS, AND OTHER PAVEMENT AND IMPROVEMENTS, TO A DEPTH NECESSARY TO REMOVE GRAVELS AND OTHER UNSUITABLE SOILS AND REACH FREE–DRAINING SUBSOIL. **CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING GRAVEL AND REUSE WHERE SHOWN ON CIVIL SITE AND GRADING PLANS.** REMOVE AND DISPOSE OF OTHER NON–USABLE CONTAMINATED SOIL AND DEBRIS FROM SITE IN A MANNER TO MEET APPLICABLE JURISDICTIONAL STANDARDS.
   - 5.1. IMPORTED TOPSOIL FROM OUTSIDE SOURCES IS ANTICIPATED TO BE NECESSARY TO MAKE UP REQUIRED AMOUNTS TO MEET GRADES AS INDICATED IN THE GRADING PLANS, HOWEVER EXISTING SOIL STOCKPILES ON SITE MAY BE USED IF THEY MEET THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. TOPSOIL SHALL BE RICH DARK BROWN IN COLOR, HAVE SUFFICIENT ORGANIC CONTENT FOR PLANT GROWTH, BE FREE–DRAINING, AND FREE OF DEBRIS, ROCKS OVER 3/4" DIAMETER, CLAY LUMPS, CONTAMINANTS, ROOTS/WOODY PLANT MATERIAL, AND OTHER EXTRANEOUS MATERIAL HARMFUL TO PLANT GROWTH. SOIL SHALL BE IN FRIABLE (WORKABLE) CONDITION, NOT OVERLY SATURATED OR COMPACTED, WHEN PLANTING OCCURS.
   - 5.2. SOIL CONDITIONS IN NEW PLANTING AREAS (SUCH AS IN NEW PARKING LOT ISLANDS) SHALL NOT IMPEDE NORMAL AND HEALTHY PLANT GROWTH AND ESTABLISHMENT. SUBGRADE SHALL BE FREE–DRAINING AND FREE OF CONTAMINATES, DELETERIOUS MATERIAL, AND OTHER OBJECTS HARMFUL TO PLANT GROWTH. NEW PLANTING BEDS SHALL HAVE TOPSOIL INSTALLED TO A MINIMUM DEPTH OF 12" (OR AS NECESSARY TO REACH FREE DRAINING SUBSOIL) AND BE AMENDED WITH 2" OF COMPOST TILLED TO A MINIMUM DEPTH OF 8". FINISH GRADE AS INDICATED IN THE GRADING PLANS SHALL BE MAINTAINED.
   - 5.1. DO NOT DISTURB ROOT ZONES OF EXISTING PLANTS TO REMAIN, INCLUDING EXISTING TREE AND SHRUB PLANTING AREAS ON THE EAST SIDE OF THE BUILDING. INSTALLATION OF PLANT MATERIAL USED TO INFILL EXISTING PLANTING AREAS SHALL BE POCKET PLANTED AND MINIMIZE DISTURBANCE TO THE EXISTING PLANTING BED AND FINISH GRADE. FIELD ADJUSTMENTS MAY BE REQUIRED TO LIMIT DISTURBANCE AND PROTECT EXISTING PLANT MATERIAL. RESTORE AREA TO PRE–DISTURBED CONDITIONS AND MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING.
   - 5.2. REMOVE EXISTING GRAVEL AND CONTAMINATED/UNSUITABLE SOILS FOR PLANTINGS AROUND THE PARKING LOT PERIMETER (TREES, LAWN, AND OTHER PLANTINGS AND BARK AREA) AND NEAR THE ENTRY MONUMENT. REPLACE WITH TOPSOIL. LAWN AREAS SHALL HAVE A MINIMUM OF 8" OF TOPSOIL. BARK AREAS SHALL HAVE GRAVEL REMOVED AND SOIL REPLACED TO WITHIN 3" OF FINISH GRADE TO ALLOW FOR MULCH APPLICATION EXCEPT WHERE TREES ARE PLANTED AS NOTED. TREES SHALL HAVE A MINIMUM OF 12" OF TOPSOIL (OR AS NECESSARY TO REACH FREE–DRAINING SUBSOIL) COVERING A MINIMUM AREA OF 10' LONG BY 8' WIDE CENTERED ON EACH TREE. IF ADVERSE SOIL CONDITIONS (ROCKY SOIL, DELETERIOUS MATERIALS, CONTAMINATES, ETC.) ARE ENCOUNTERED, CONTRACTOR SHALL COORDINATE SOIL REMOVAL AND REPLACEMENT OF THE AFFECTED SOIL WITH THE OWNER'S REPRESENTATIVE.
6. MULCH: APPLY 3" DEEP WELL–AGED MEDIUM GRIND OR SHREDDED DARK HEMLOCK OR FIR BARK MULCH IN NEW PLANTING BEDS AND IN AREAS SHOWN AS BARK MULCH, TAKING CARE TO NOT COVER FOLIAGE OR BURY ROOT CROWNS OF PLANT MATERIAL.
   - 6.1. TREES IN LAWN AREAS SHALL HAVE A MINIMUM 3" DEEP X 4' DIAMETER MULCH RING CENTERED ON THE TREE FOR EASE OF MAINTENANCE AND SOIL MOISTURE RETENTION.
   - 6.2. ALL EXISTING PLANTING BEDS DIRECTLY ADJACENT TO THE BUILDING SHALL HAVE A FRESH APPLICATION OF MULCH APPLIED FOR A COHESIVE APPEARANCE WITH NEW LANDSCAPE BEDS.
7. REFER TO LANDSCAPE DETAILS AND IRRIGATION PLANS/DETAILS.



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DRAWN BY: WJD
CHECKED BY: CEG
AKS JOB NO: 7245
DATE: JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION
2	04/16/2020	PARKING RECONFIG

CONTENTS:
LANDSCAPING PLAN

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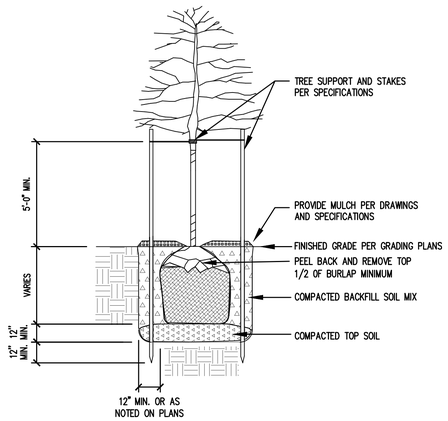
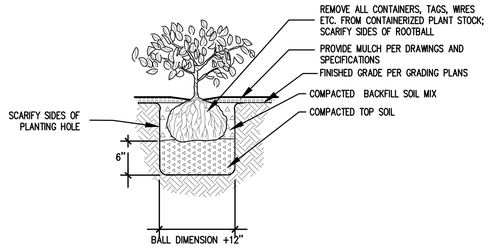
L100



1 L101 TYPICAL TREE PLANTING DETAIL

NTS

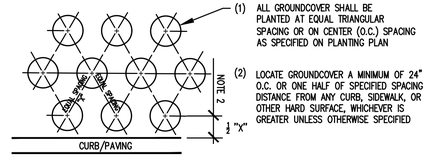
NOTES:
1. DRIVE STAKES OUTSIDE OF ROOTBALL. SINGLE STAKE TREES LESS THAN 6' TALL.
2. SET TREE 2" ABOVE FINISH GRADE TO ALLOW FOR SETTLING OF SOIL.
3. BACKFILL SOIL MIX FOR TREE PLANTING TO BE 1/3 ORGANIC MATERIALS, 1/3 TOPSOIL, AND 1/3 SANDY LOAM.
4. REMOVE ALL WIRES, METAL BASKETS, TWINE, AND OTHER NON-COMPOSTABLE MATERIALS FROM TREE ROOTBALL PRIOR TO PLANTING.
6. CONTRACTOR SHALL WATER-SETTLE PLANTING HOLES TO REMOVE AIR POCKETS PRIOR TO SPREADING MULCH.



2 L101 TYPICAL SHRUB PLANTING DETAIL

NTS

NOTES:
1. BACKFILL SOIL MIX SHALL BE 1/3 ORGANIC MATERIALS, 1/3 TOPSOIL, AND 1/3 SANDY LOAM.
2. REMOVE ALL CONTAINERS, METAL, TWINE, TAGS, AND OTHER NON-BIODEGRADABLE MATERIALS PRIOR TO PLANTING.
3. ALL CONTAINERIZED PLANT STOCK SHALL BE VIGOROUS, FREE OF DISEASE AND PESTS, EVENLY FORMED, AND BE FULLY ROOTED IN THE CONTAINER IN WHICH THEY ARE DELIVERED. ALL PLANTS SHALL FOLLOW ANSI Z60.1 STANDARDS FOR NURSERY STOCK FOR CONTAINER SIZE, HEIGHT, ETC.
4. CONTRACTOR SHALL WATER-SETTLE PLANTING HOLES TO REMOVE AIR POCKETS PRIOR TO SPREADING MULCH.
5. CARE SHALL BE TAKEN TO AVOID COVERING ROOT CROWN OR FOLIAGE OF PLANTS WITH BARK MULCH.



(1) ALL GROUNDCOVER SHALL BE PLANTED AT EQUAL TRIANGULAR SPACING OR ON CENTER (O.C.) SPACING AS SPECIFIED ON PLANTING PLAN

(2) LOCATE GROUNDCOVER A MINIMUM OF 24" O.C. OR ONE HALF OF SPECIFIED SPACING DISTANCE FROM ANY CURB, SIDEWALK, OR OTHER HARD SURFACE, WHICHEVER IS GREATER UNLESS OTHERWISE SPECIFIED

3 L101 TYPICAL GROUNDCOVER PLANTING DETAIL

NTS

NOTES:
1. BACKFILL SOIL MIX SHALL BE 1/3 ORGANIC MATERIALS, 1/3 TOPSOIL, AND 1/3 SANDY LOAM.
2. REMOVE ALL CONTAINERS, METAL, TWINE, TAGS, AND OTHER NON-BIODEGRADABLE MATERIALS PRIOR TO PLANTING.
3. ALL CONTAINERIZED PLANT STOCK SHALL BE VIGOROUS, FREE OF DISEASE AND PESTS, EVENLY FORMED, AND BE FULLY ROOTED IN THE CONTAINER IN WHICH THEY ARE DELIVERED. ALL PLANTS SHALL FOLLOW ANSI Z60.1 STANDARDS FOR NURSERY STOCK FOR CONTAINER SIZE, HEIGHT, ETC.
4. CONTRACTOR SHALL WATER-SETTLE PLANTING HOLES TO REMOVE AIR POCKETS PRIOR TO SPREADING MULCH. DO NOT COVER FOLIAGE OR ROOT CROWN OF GROUNDCOVER PLANTS.

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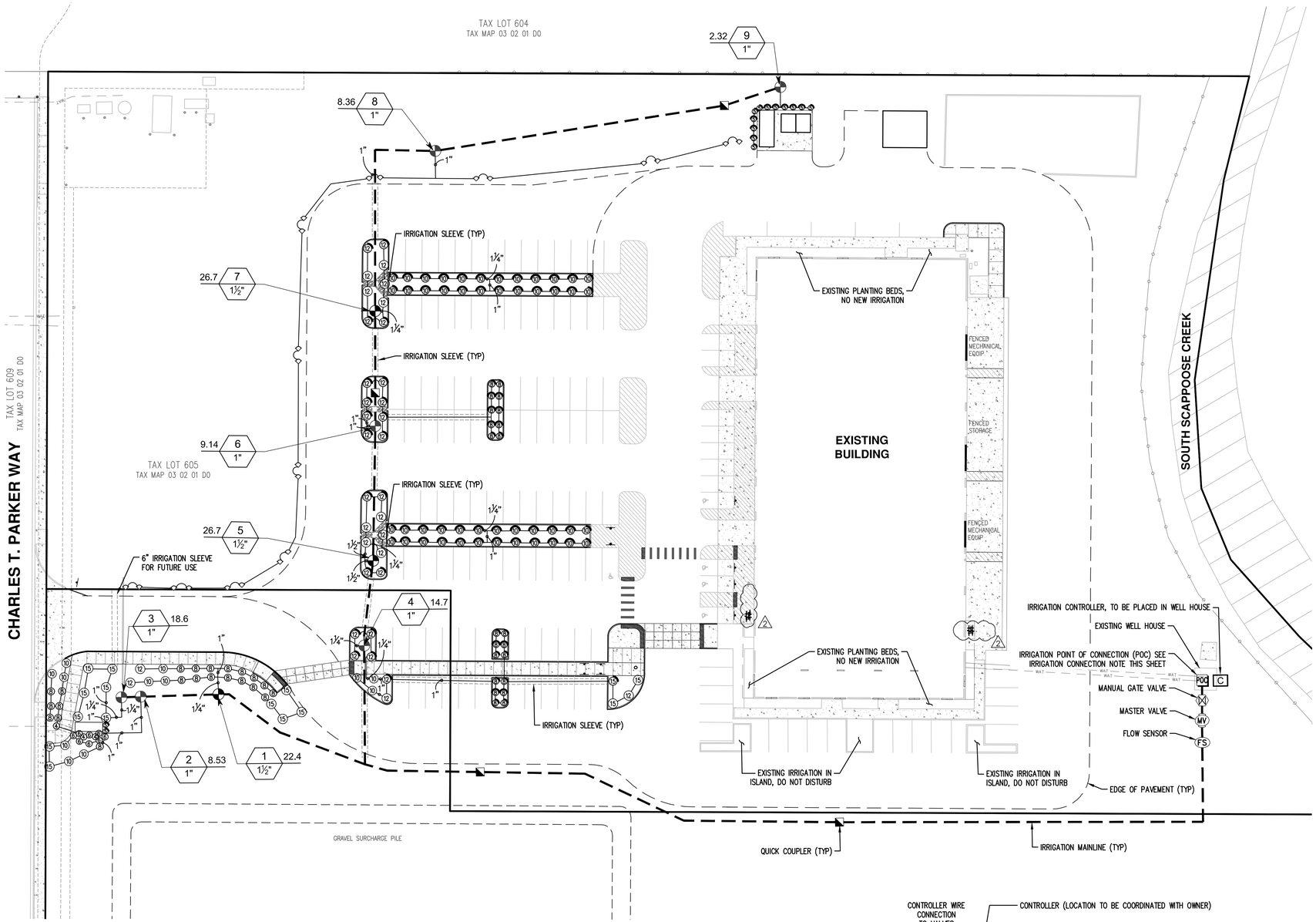
L101

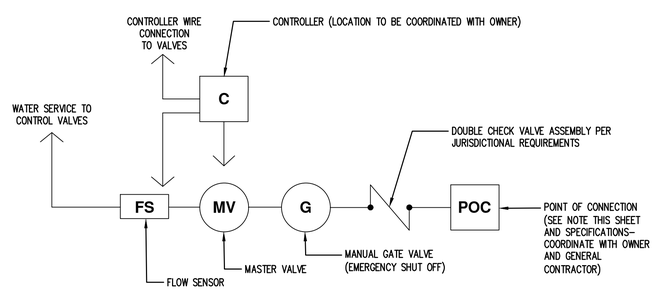


IRRIGATION SYSTEM LAYOUT

DUE TO THE SCALE OF THESE DRAWINGS THE CONTRACTOR SHOULD BE AWARE OF THE POSSIBILITY THAT THE NEED FOR MINOR ADJUSTMENTS TO THE IRRIGATION SYSTEM MAY BE NECESSARY TO PROVIDE PROPER COVERAGE. THESE ADJUSTMENTS COULD INCLUDE NOZZLE CHANGES AND/OR ADDITION OR DELETION OF INDIVIDUAL HEADS TO COMPENSATE FOR CHANGES MADE ON THE SITE. FURTHERMORE, THE IRRIGATION DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN SHRUB AREAS WHEREVER POSSIBLE. DO NOT PLACE IN PAVED AREAS. PROPOSED CONTROL VALVE LOCATIONS ARE DIAGRAMMATIC. CONTRACTOR SHALL GROUP VALVES TOGETHER AND PLACE IN SHRUB BEDS WHERE POSSIBLE, AVOIDING DAMAGE TO TREE ROOTS. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION. MAINLINES AND LATERAL LINES SHALL BE PLACED WHERE POSSIBLE TO MINIMIZE OVERALL LENGTH OF PIPE AND SITE DISTURBANCE.

IRRIGATION CONNECTION

EXISTING IRRIGATION SYSTEMS ARE ASSUMED TO BE PRESENT ON SITE AND TO HAVE A DEDICATED IRRIGATION SERVICE AND DOUBLE CHECK VALVE FROM THE WELL HOUSE WITH ITS OWN CONTROLLER. THIS SYSTEM SHALL BE MAINTAINED AND PRESERVED FOR ALL EXISTING IRRIGATION ON SITE. NEW IRRIGATION SYSTEM SHALL BE SEPARATELY SOURCED FROM THE VACATED DOMESTIC WATER SERVICE LINE FROM THE WELL HOUSE AND A NEW DOUBLE CHECK VALVE AND CONTROLLER SHALL BE INSTALLED IN THE WELL HOUSE TO SERVE THE NEW SYSTEM. FINAL EXACT LOCATION SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OWNER. BEFORE BEGINNING INSTALLATION OF THE NEW IRRIGATION SYSTEM, CONTRACTOR SHALL COORDINATE A PRE-INSTALLATION MEETING WITH THE OWNER AND GENERAL CONTRACTOR TO TEST THE EXISTING SYSTEM FOR FUNCTIONALITY AND TO DETERMINE AREA OF SERVICE. CONTRACTOR SHALL ALSO TEST AND VERIFY AVAILABLE PRESSURE AND FLOW RATES. ADJUSTMENTS AND/OR REPAIRS TO THE IRRIGATION SYSTEMS MAY BE REQUIRED BASED ON THE FINDINGS OF THESE TESTS. AFTER COMPLETION OF IRRIGATION WORK, CONTRACTOR SHALL AGAIN TEST EXISTING AND NEW IRRIGATION SYSTEMS TO ENSURE FUNCTIONALITY.



1 L200 **IRRIGATION CONNECTION DIAGRAM**

NTS

NOTE:
1. DIAGRAM IS SCHEMATIC. FINAL LOCATIONS TO BE DETERMINED IN THE FIELD.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
Q H F	HUNTER PROS-06-CV 5' RADIUS SHRUB SPRAY, 6.0" POP-UP. WITH DRAIN CHECK VALVE. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.
Q T H F	HUNTER PROS-06-CV 8' RADIUS SHRUB SPRAY, 6.0" POP-UP. WITH DRAIN CHECK VALVE. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.
Q T H F	HUNTER PROS-06-CV 10' RADIUS SHRUB SPRAY, 6.0" POP-UP. WITH DRAIN CHECK VALVE. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.
Q T H TT TQ F	HUNTER PROS-06-CV 12' RADIUS SHRUB SPRAY, 6.0" POP-UP. WITH DRAIN CHECK VALVE. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.
Q T H TT TQ F	HUNTER PROS-06-CV 15' RADIUS SHRUB SPRAY, 6.0" POP-UP. WITH DRAIN CHECK VALVE. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.
4 6 8 10 12 15 17	HUNTER PROS-06-CV ADJUSTABLE ARC SHRUB SPRAY, 6.0" POP-UP. WITH DRAIN CHECK VALVE. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.
CST	HUNTER PROS-06-CV-5-CST-B DUAL-STREAM BUBBLER, 6" POP-UP, FACTORY INSTALLED DRAIN CHECK VALVE. (2 PER TREE WHERE SHOWN).

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	HUNTER ICV-G-BSP-DC 1", 1-1/2", 2", AND 3" PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH BSP THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE. WITH DC LATCHING SOLENOID FACTORY INSTALLED OPTION.
	MANUAL GATE VALVE
	HUNTER HQ-33DLRC QUICK COUPLER VALVE, YELLOW LOCKING RUBBER COVER, RED BRASS AND STAINLESS STEEL, WITH 3/4" NPT INLET, 2-PIECE BODY.
MV	MASTER VALVE
C	HUNTER IC-1200-M MODULAR CONTROLLER, 12 STATIONS, SOLAR SYNC, METAL CABINET. COMMERCIAL USE. WITH ONE ICM-600 MODULE INCLUDED. INSTALL SOLAR SYNC EQUIPMENT TO OUTSIDE OF PUMP HOUSE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATION.
FS	FLOW SENSOR
POC	IRRIGATION POINT OF CONNECTION (POC) - EXISTING WELL, REFER TO ENGINEERING PLANS. REFER TO IRRIGATION CONNECTION NOTE THIS SHEET AND SPECIFICATIONS.
	IRRIGATION LATERAL LINE: 3/4" PVC CLASS 200 UNLESS OTHERWISE SPECIFIED
	IRRIGATION MAINLINE: 2" PVC SCHEDULE 40
	PIPE SLEEVE: 6" PVC SCHEDULE 80

Valve Callout
- Valve Number
- Valve Flow
- Valve Size

SCALE: 1"=30 FEET
30 0 6 15 30
ORIGINAL PAGE SIZE: 22" x 34"

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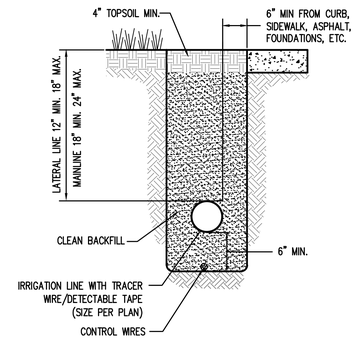
CONTENTS:
IRRIGATION PLAN

SHEET NO:

L200

IRRIGATION NOTES

1. THE ENTIRE IRRIGATION SYSTEM SHALL BE GUARANTEED TO BE COMPLETE AND PERFECT IN EVERY DETAIL FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY SUCH DEFECTS OCCURRING WITHIN THAT YEAR, AT NO COST TO THE OWNER, EXCEPT IN CASES OF GROSS NEGLECT OR VANDALISM.
2. EXISTING IRRIGATION MAY BE PRESENT ON SITE. COORDINATE WITH OWNER AND GENERAL CONTRACTOR AND SHALL PROTECT AND REPLACE AND/OR REPAIR WHERE NECESSARY TO ENSURE CONTINUOUS IRRIGATION CONTROL TO ALL AREAS AFFECTED BY WORK PERFORMED UNDER THIS SCOPE OF WORK. REFER ALSO TO SPECIFICATIONS AND IRRIGATION PLAN.
3. IRRIGATION WATER SOURCE SHALL COME FROM EXISTING WELL. COORDINATE WITH OWNER AND GENERAL CONTRACTOR FOR EXACT CONNECTION LOCATION SOURCE (CURRENT IRRIGATION WATER SOURCE OR VACATED DOMESTIC SOURCE) AND VERIFY SUITABILITY OF EXISTING DOUBLE CHECK VALVE (IF PRESENT) OR INSTALL NEW DOUBLE CHECK VALVE PER JURISDICTIONAL STANDARDS. IRRIGATION WORK SHALL NOT BLOCK OR OTHERWISE INTERFERE WITH OTHER SYSTEMS OR OPERATIONS LOCATED IN THE WELL PUMP HOUSE.
4. EXTENDED WARRANTIES FROM MANUFACTURERS SHALL BE THE OWNER'S RESPONSIBILITY AFTER THE ONE-YEAR WARRANTY FROM THE DATE OF ACCEPTANCE HAS EXPIRED.
5. ALL MATERIALS AND EQUIPMENT INCORPORATED INTO THE IRRIGATION SYSTEM SHALL BE NEW AND SHALL BE OF RECOGNIZED STANDARD QUALITY MANUFACTURED BY REPUTABLE MANUFACTURERS. WHERE SPECIFIED, PRODUCT MANUFACTURER SHALL NOT BE SUBSTITUTED WITHOUT APPROVAL FROM THE OWNER.
6. IRRIGATION SYSTEM TO BE INSTALLED BY AN IRRIGATION OR LANDSCAPE CONTRACTING FIRM LICENSED AND BONDED IN THE STATE OF OREGON AND EXPERIENCED IN PROJECTS OF SIMILAR SCOPE. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, FEES, AND JURISDICTIONAL APPROVALS PRIOR TO INSTALLATION OF THE IRRIGATION SYSTEM.
7. THE IRRIGATION SYSTEM SHALL BE INSTALLED AFTER SOIL PREPARATION AND PRIOR TO PLANT MATERIAL INSTALLATION WITH THE EXECUTION OF TREE BUBBLERS WHICH SHALL BE INSTALLED WITH TREE PLANTINGS.
8. EXCAVATED MATERIAL FROM THE SITE MAY BE USED AS BACKFILL FOR ALL PIPING IF FREE FROM GRAVEL, ROOTS, ORGANIC MATTER, DEBRIS, AND OTHER MATERIALS.
9. GRAVEL FOR MANUAL DRAIN SUMPS AND UNDER CONTROL VALVES SHALL BE 3/4-INCH WASHED GRAVEL, MINIMUM DEPTH 4-INCHES.
10. THE CONTRACTOR SHALL PERFORM ALL EXCAVATIONS REQUIRED FOR THE INSTALLATION OF FACILITIES TO PROSECUTE WORK TO COMPLETION. WATERLINES FROM ZONE CONTROL VALVES TO SPRINKLER HEADS (LATERAL LINES) SHALL BE INSTALLED AT A DEPTH NOT LESS THAN 12-INCHES. ALL MAIN WATER SUPPLY LINES AND LINES TO ZONE CONTROL VALVES AND QUICK-COUPLING VALVES (MAIN LINES) SHALL BE INSTALLED AT A DEPTH NOT LESS THAN 18-INCHES BELOW GRADE (24-INCHES BELOW PAVING). MEASUREMENTS OF DEPTH ARE FROM TOP OF PIPE TO FINISHED GROUND SURFACE. ALL EXCAVATIONS SHALL BE HELD TO THE NARROWEST PRACTICABLE WIDTHS. EXCAVATED MATERIALS NOT DESIRABLE FOR BACKFILLING SHALL BE DISPOSED OF IN AN APPROPRIATE MANNER. LINE LOCATIONS ARE DIAGRAMMATIC, RUN PARALLEL TO PAVING AND SIDEWALK WHERE POSSIBLE. EXCAVATED MATERIAL FROM SITE MAY BE USED AS BACKFILL FOR ALL PIPING IF FREE FROM GRAVEL, ROOTS, ORGANIC MATTER, DEBRIS, AND OTHER DELETERIOUS MATERIALS.
11. ALL PIPING SHALL BE PROPERLY GRADED SO THAT THE ENTIRE SYSTEM MAY BE COMPLETELY DRAINED. PROVIDE DRAIN PITS AT LOW POINTS OF LINES OR SYSTEMS. DRAIN PITS SHALL CONSIST OF AN EXCAVATION APPROXIMATELY 3' IN DEPTH BELOW THE LOW POINT OF THE LINE OR SYSTEM DRAINED WITH A MINIMUM VOLUME OF 8-CUBIC FEET OF ROCK OR GRAVEL.
12. PLASTIC PIPE: UNTHREADED PLASTIC PIPE AND PLASTIC FITTINGS SHALL BE JOINED BY SOLVENT CEMENTING. THREADED JOINTS SHALL BE MADE WITH TEFLON TAPE OR TEFLON SPRAY. ONLY STRAP WRENCHES SHALL BE USED FOR TIGHTENING THREADED PLASTIC JOINTS AND CARE SHALL BE TAKEN NOT TO OVER-TIGHTEN THESE FITTINGS. SOLVENT CEMENTING OF PVC PIPE SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SNAKE ALL PIPES IN TRENCHES.
13. ALL IRRIGATION MAINLINES SHALL BE SCHEDULE 40 PVC OR APPROVED EQUAL AND SHALL HAVE DETECTABLE MARKING TAPE.
14. BACKFLOW PREVENTION SHALL BE DOUBLE CHECK VALVE ASSEMBLY OF A TYPE APPROVED FOR USE MEETING LOCAL AND STATE REQUIREMENTS. CONFIRM LOCATION AND TEST EXISTING DOUBLE CHECK VALVE (IF PRESENT) OR INSTALL NEW DOUBLE CHECK VALVE MEETING JURISDICTIONAL STANDARDS.
15. ALL SPRINKLER HEADS AND QUICK-COUPLING VALVES SHALL BE SET PERPENDICULAR TO FINISH GRADES. SPRINKLER HEADS ADJACENT TO WALKS, CURBS, WALLS, AND OTHER PAVED AREAS SHALL BE SET TO GRADE AND A MINIMUM OF 6-INCHES FROM PAVING. THE TOPS OF QUICK COUPLING VALVES WITHIN SHRUB BEDS SHALL BE 2-INCHES ABOVE THE FINISHED GRADE OF THE SHRUB BED.
16. INSTALLED PIPE SHALL NOT CREATE WATER VELOCITY GREATER THAN 5 FEET PER SECOND.
17. CONTRACTOR TO FIELD VERIFY AVAILABLE STATIC WATER PRESSURE PRIOR TO CONSTRUCTION.
18. PRIOR TO THE INSTALLATION OF VALVES, ALL FITTINGS AND WATER LINES, INCLUDING SUPPLY MAINS FROM THE METER AND LATERALS TO SPRINKLER HEADS, SHALL BE THOROUGHLY FLUSHED FREE OF DIRT, SAND, OR OTHER FOREIGN MATTER. PIPE JOINTS SHALL NOT BE SUBJECTED TO HYDROSTATIC PRESSURE AFTER BEING INSTALLED. EACH ZONE SHALL BE TESTED TO 60 PSI PRESSURE. THE MAINLINE SHALL BE TESTED TO 80 PSI PRESSURE. AT THE TIME OF TESTING, CENTER LOADING OF THE SECTION OF PIPE SHALL BE DONE AS NECESSARY TO PREVENT ARCHING OR WHIPPING. TESTS AND SUBSEQUENT REPAIRS SHALL BE MADE UNTIL THE SYSTEM IS COMPLETELY WATERTIGHT. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL LEAKS HAVE BEEN REPAIRED. TESTING AND REPAIRS SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE. LATERAL LINES FROM THE SECTION CONTROL VALVES TO THE SPRINKLER HEADS SHALL BE TESTED UNDER PRESSURE FOR A MINIMUM OF 2-HOURS. THE MAIN LINE SHALL BE TESTED UNDER PRESSURE FOR A MINIMUM OF 4-HOURS. LOSSES FOR EACH TEST SHALL NOT EXCEED 10% OF THE MAXIMUM PRESSURE.
19. VALVE BOXES SHALL HAVE LOCKING, VANDAL RESISTANT LIDS AND BE GROUPED TOGETHER WHERE PRACTICABLE. VALVE BOX COVERS SHALL HAVE GREEN LIDS IN LAWN AREAS AND BROWN/TAN LIDS IN SHRUB BED AREAS. USE AN 18" VALVE BOX WHEN COMBINING VALVES. CONTRACTOR SHALL USE UNIONS ON BOTH SIDES OF CONTROL VALVES.
20. ALL VALVES WITH HANDLES SHALL BE SET AT SUFFICIENT DEPTH TO PROVIDE CLEARANCE BETWEEN THE TOP OF THE HANDLE AND THE COVER OR CAP OF THE BOX OR SLEEVE IN WHICH THEY ARE PLACED WHEN THE VALVE IS IN FULLY OPEN POSITION AND THE COVER OR CAP IS CLOSED. ALL VALVES SHALL BE INSTALLED WITH A UNION. ALL OTHER VALVES SHALL HAVE 3-INCHES MINIMUM CLEARANCE FROM BOTTOM OF COVER.
21. TOP OF IRRIGATION SLEEVES SHALL BE A MINIMUM OF 18-INCHES UNDER SURFACE OF ALL SIDEWALKS AND A MINIMUM OF 24-INCHES BELOW ALL VEHICULAR ACCESS WAYS.
22. CONTRACTOR SHALL PROVIDE THE OWNER WITH AN AS-BUILT RECORD DRAWING OF ZONING, MAINLINE ROUTING, AND SLEEVING, AS WELL AS A LAMINATED ZONING DIAGRAM IN THE CONTROLLER CABINET.



1 / L201 IRRIGATION LINE TRENCH DETAIL

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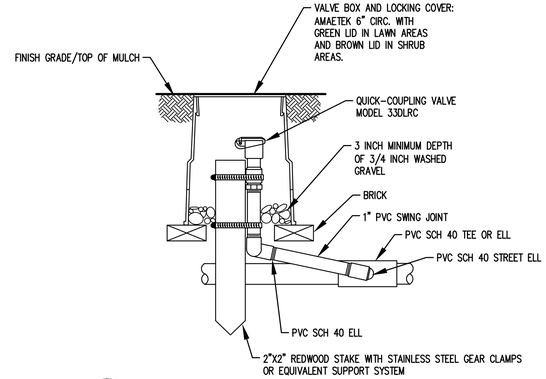
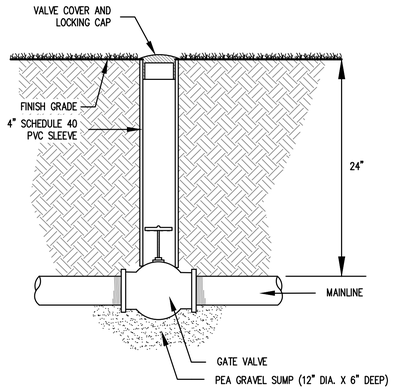
NOTE:
1. ALL LINES TO HAVE 14 GAUGE BLUE TRACER WIRE OR DETECTABLE TAPE (MAINLINE AND LATERALS).



2 / L201 QUICK COUPLING VALVE

NTS

NOTES:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.
2. PROVIDE 1" SWING JOINTS WITH ALL QUICK COUPLERS.



3 / L201 IRRIGATION MANUAL GATE VALVE

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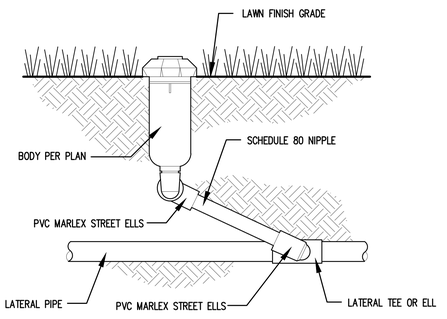

4 / L201 SPRAY HEAD SPRINKLER

NTS

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SCALE:	AS NOTED
DRAWN BY:	WJD
CHECKED BY:	CEG
AKS JOB NO:	7245
DATE:	JAN. 24, 2020

REVISIONS

△	DATE	DESCRIPTION

CONTENTS:
IRRIGATION DETAILS

SHEET NO:

L201