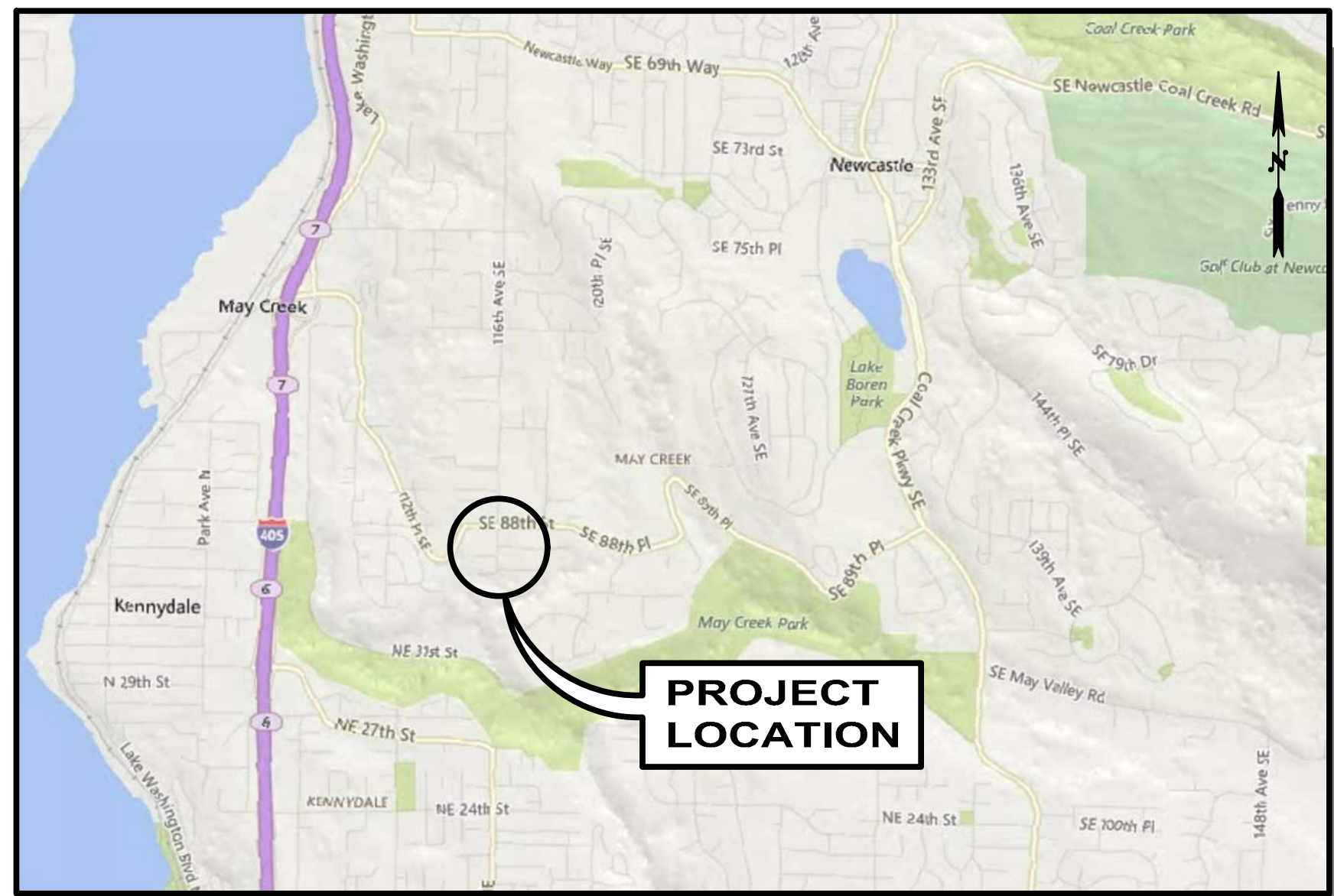
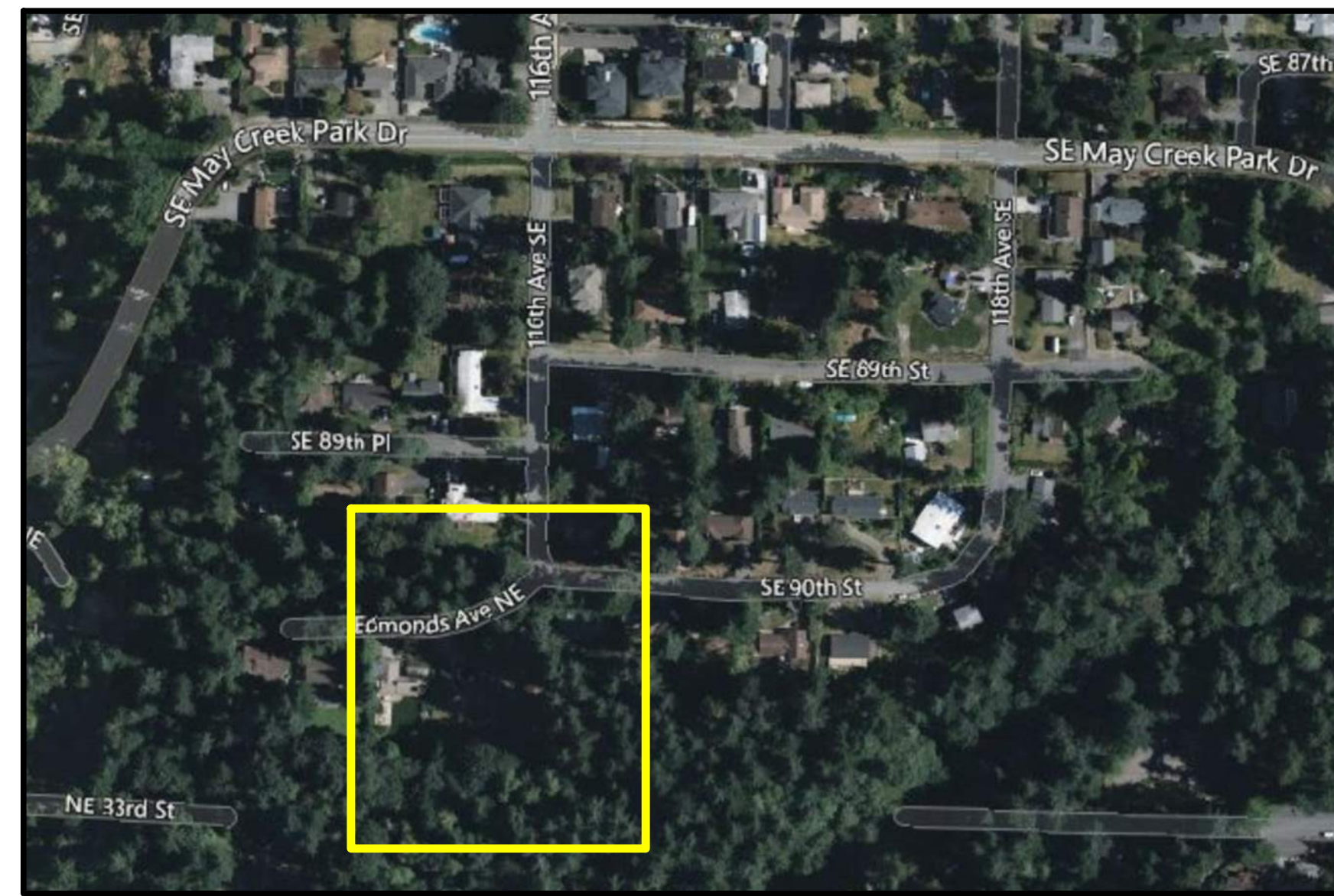


CITY OF NEWCASTLE

116TH AVENUE SE FLOW CONTROL FACILITIES



VICINITY MAP
N.T.S.



PROJECT LOCATION
N.T.S.

CITY OFFICIALS:

LINDA NEWING - MAYOR
 ARIANA SHERLOCK - DEPUTY MAYOR
 TOM GRIFFIN - COUNCIL MEMBER
 PRATIMA LAKHOTIA - COUNCIL MEMBER
 PAUL CHARBONNEAU - COUNCIL MEMBER
 ROBERT CLARK - COUNCIL MEMBER
 CHRIS VILLASEÑOR - COUNCIL MEMBER

CITY OF NEWCASTLE:

PROJECT MANAGER
 BRIAN MILLER
 12835 NEWCASTLE WAY, SUITE 200
 NEWCASTLE, WA 98056
 (425) 386-4111

SURVEYOR:

AXIS SURVEY AND MAPPING
 ZANE L. NALL, PLS
 15241 NE 90TH ST.
 REDMOND, WA 98052
 (425) 823-5700
 1-800-933-AXIS

ENGINEERING:

OSBORN CONSULTING, INC.
 LAURA RUPPERT, PE
 1800 112TH AVE. NE, SUITE 220E
 BELLEVUE, WA 98004
 (425) 451-4009

SHEET INDEX

SHT NO	SHEET TITLE
1	COVER SHEET, VICINITY MAP, AND SHEET INDEX
2	LEGEND, GENERAL NOTES, AND ABBREVIATIONS
3	SITE PREP AND TESC PLAN
4	DRAINAGE IMPROVEMENTS PLAN
5	DRAINAGE IMPROVEMENTS PROFILE
6	DRAINAGE & ANCHOR DETAILS
7	RESTORATION PLAN
8	DETAILS

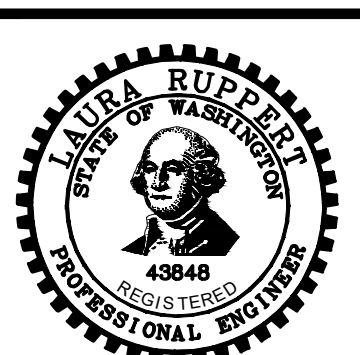
PROJECT ENGINEER _____ DATE _____

PUBLIC WORKS DIRECTOR _____ DATE _____

THE SIGNATURE OF THE PUBLIC WORKS DIRECTOR IN THESE CONTRACT PROVISIONS SHALL SERVE AS WRITTEN APPROVAL FOR ALL VARIATIONS TO THE NEWCASTLE PUBLIC WORKS STANDARDS.



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5/9/2022

DESIGNED BY
KJ
 DRAWN BY
HDO
 CHECKED BY
LRR

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116TH AVENUE SE FLOW CONTROL FACILITIES
 CITY OF NEWCASTLE
 COVER SHEET, VICINITY MAP, AND SHEET INDEX

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	H: N/A V: N/A	SHEET	1 of 8

FILE NAME: \\OC\LOCAL\NASUN\001\PROJECTS\PROJECTS\10-190001\NEWCASTLE SURFACE WATER ENGINEERING SERVICES 2019\10-190001-S041\NOTE.DWG
 PLOT TIME: 5/6/2022 5:05 PM
 USER NAME: HUE ONG

GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NEWCASTLE MUNICIPAL CODE (NMC), NEWCASTLE PUBLIC WORKS STANDARDS, AND THE CITY OF NEWCASTLE'S CONDITIONS OF APPROVAL.
- THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THE NEWCASTLE DEPARTMENT OF PUBLIC WORKS ENGINEERING REVIEW CHECKLIST. SOME ELEMENTS MAY HAVE BEEN OVERLOOKED OR MISSED BY THE PLAN REVIEWER. ANY VARIANCE FROM ADOPTED STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
- A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- CONSTRUCTION HOURS SHALL BE LIMITED IN ACCORDANCE WITH NMC; NORMALLY THIS IS 7 A.M. TO 7 P.M. ON WEEKDAYS AND 9 A.M. TO 6 P.M. ON WEEKENDS AND LEGAL HOLIDAYS.
- DATUM SHALL BE NAVD 1988 UNLESS OTHERWISE APPROVE BY THE CITY.
- APPLICANT IS REQUIRED TO SEND OUT "CONSTRUCTION NOTICES" TO RESIDENTS FIVE (5) DAYS PRIOR TO START OF WORK.
- SEDIMENT AND EROSION CONTROL SHALL MEET THE REQUIREMENTS OF MOST RECENT NEWCASTLE PUBLIC WORKS STANDARDS, THE 2016 KING COUNTY SURFACE WATER DESIGN MANUAL, AND THE CITY ADDENDUM TO THE 2016 KCSWDM. CONTRACTOR IS REQUIRED TO PROVIDE PROTECTION OF THE CITY STORM DRAIN SYSTEM.
- ALL WORK SHALL BE SUBJECT TO THE INSPECTION OF THE CITY ENGINEER OR DESIGNATED REPRESENTATIVE.
- PRIOR TO ANY SITE CONSTRUCTION INCLUDING CLEARING OR GRADING, THE SITE CLEARING LIMITS SHALL BE LOCATED AND FIELD IDENTIFIED.
- NON COMPLIANCE WITH THE REQUIREMENTS FOR EROSION CONTROLS, WATER QUALITY AND CLEARING LIMITS MAY RESULT IN REVOCATION OF PROJECT PERMITS, PLAN APPROVAL AND BOND FORECLOSURES.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER WHEN CONFLICTS EXIST BETWEEN THE PLANS AND FIELD CONDITIONS. CONFLICTS SHALL BE RESOLVED AND APPROVED BY THE CITY ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- THE CONTRACTOR SHALL KEEP TWO (2) SETS OF PLANS ONSITE AT ALL TIMES FOR RECORDING AS-BUILT INFORMATION; BOTH SETS SHALL BE SUBMITTED TO THE CITY ENGINEER AT COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF WORK. ENGINEERED AS-BUILT DRAWINGS IN ACCORDANCE WITH THE CURRENT ADOPTED INTERNATIONAL BUILDING CODE SHALL BE REQUIRED PRIOR TO SITE APPROVAL.
- SITE DISTURBANCE ON PRIVATE PROPERTY SHALL BE MINIMIZED TO THE EXTENT FEASIBLE.
- CONSTRUCTION LIMITS AND STORM CONVEYANCE SYSTEM GRADES SHALL BE LOCATED BY SURVEY.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ANY AND ALL PERMITS AND REGULATIONS RELATED TO THIS PROJECT AND ANY RELEVANT CITY, STATE, AND FEDERAL PERMITS AND/OR WATER QUALITY REGULATIONS.
- TRAFFIC CONTROL SHALL BE PROVIDED BY THE CONTRACTOR.
- CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL.
- REQUIREMENTS FOR TYPE AND PLACEMENT OF STEEL SHEETS: MINIMUM SIZE IS 1" THICK BY 8' WIDE BY 20' LONG WITH SKID PROOF SURFACE. SHEETS ARE NOT PINNED AND COLD MIX PLACED ON EDGES. PLATES SHALL NOT BE STACKED OR HAVE EDGES GREATER THAN 1/4" VERTICALLY BETWEEN PLATES WHEN PLACED IN BIKE LANES. AREA IS TO BE KEPT CLEAN AT ALL TIMES. "STEEL PLATES AHEAD" WARNING SIGNS REQUIRED.
- RESTORATION OF OPEN-CUT PAVEMENT SECTIONS SHALL MEET ALL REQUIREMENTS OF CITY OF NEWCASTLE STANDARD SPECIFICATIONS & STANDARD DETAIL DRAWING & AS DIRECTED BY CITY INSPECTION.
- CONTRACTOR SHALL NOT BLOCK DRIVEWAY AND MAINTAIN ACCESS AT ALL TIME.
- DRIVEWAY SHALL BE PROTECTED FROM EQUIPMENT AND MATERIAL STORAGE DAMAGE.

ABBREVIATIONS:

IE	INVERT ELEVATION
NMC	NEWCASTLE MUNICIPAL CODE
TCE	TEMPORARY CONSTRUCTION EASEMENT
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL

LEGEND:

	FOUND MONUMENT IN CASE		EXISTING RETAINING WALL
	FOUND REBAR AND CAP AS NOTED		ROCKERY
	GAS METER		CMU RETAINING WALL
	SIGN		CONCRETE PAVING
	POST		ASPHALT PAVING
	CULVERT		BUILDINGS
	IRRIGATION CONTROL VALVE		GRAVEL SURFACE
	WATER METER		
	POWER METER		
	TELECOMMUNICATIONS RISER		
	GUY ANCHOR		
	UTILITY POLE W/UNDERGROUND CONDUIT		
	UTILITY POLE		
	12" A ALDER		
	12" DT DECIDUOUS		
	12" C CEDAR		
	12" F FIR		
	DITCH LINE		
	SANITARY SEWER LINE		
	STORM DRAIN LINE		
	OVERHEAD POWER LINE		
	WOOD FENCE LINE (BFNC)		
	WIRE FENCE LINE (HWFNC)		
	GUARD RAIL LINE		
	STORM LINE (PER AS-BUILTS)		
	SEWER LINE (PER DRAINFIELD AS-BUILTS)		

DRAINAGE NOTES:

- ALL FEES, BONDING, AND PROOF OF LIABILITY INSURANCE SHALL BE SUBMITTED TO THE CITY PRIOR TO CONSTRUCTION.

STANDARD CLEARING, GRADING AND TEMPORARY EROSION CONTROL PLAN NOTES:

- APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
- THE BOUNDARIES OF THE CONSTRUCTION LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF ORANGE PROTECTION FENCING PRIOR TO CONSTRUCTION. DURING CONSTRUCTION, NO DISTURBANCE BEYOND THE CONSTRUCTION LIMITS SHALL BE PERMITTED. THE CONSTRUCTION LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS PREVENTED.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE COURSE OF CONSTRUCTION, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES DURING THE WET SEASON (OCTOBER 1 TO APRIL 30) AND OF MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30).
- ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
- ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
- THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.
- PRIOR TO SEPTEMBER 15, ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED PRIOR TO OCTOBER 1. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE CITY INSPECTOR. THE CITY INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.
- ESC AND WATER POLLUTION CONTROL IS REQUIRED FOR THIS PROJECT PER SECTION 8-01.
- ALL WORK AND MATERIALS TO BE PER CITY OF NEWCASTLE STANDARDS DETAILS.
- KEEP OFF-SITE STREETS CLEAN AT ALL TIMES. FLUSHING STREETS SHALL NOT BE ALLOWED. ALL STREETS SHOULD BE SWEEPED.
- ADDITIONAL ESC MEASURES MAY BE REQUIRED BY CITY INSPECTOR OR ENGINEER.
- PREVENT UNFILTERED SEDIMENT LADEN WATER FROM CONSTRUCTION ACTIVITIES FROM ENTERING STORM DRAINAGE STRUCTURES OR LEAVING THE PROJECT LIMITS.
- ENSURE ALL CHEMICAL OR HAZARDOUS MATERIALS ARE CONTAINED AND HANDLED APPROPRIATELY. NO CHEMICAL OR HAZARDOUS MATERIAL SHALL BE DISCHARGED TO THE STORM DRAINAGE SYSTEM.
- ALL GROUND COVER IS TO REMAIN UNDISTURBED OUTSIDE OF CLEARING AREAS.
- REMOVE ALL ESC AND WATER POLLUTION CONTROL BMPs AFTER THE PROJECT IS COMPLETED AND ACCEPTED BY THE CITY ENGINEER.
- WHEN WORK IS STOPPED/COMPLETED IN AN AREA, THE CITY INSPECTOR MAY REQUIRE POST-CONSTRUCTION ESC MEASURES INCLUDING SEEDING OR OTHER MEASURES.
- FILL OR TEMPORARY FILL, INCLUDING COIR LOGS AND SANDBAGS, SHALL NOT BE PLACED WITHIN THE PROPOSED OHWM OF THE POND.
- LOCATION OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONFIRMED BY THE INSPECTOR OR ENGINEER PRIOR TO INSTALLATION.
- HEAVY EQUIPMENT SHALL NOT BE USE ON STEEP SLOPES FOR CLEARING AND GRUBBING.

SURVEY NOTES:

BASIS OF BEARINGS

HELD A BASIS OF BEARING OF NORTH 01°07'04" EAST ALONG THE CENTERLINE OF 116TH AVE SE

HORIZONTAL DATUM

NAD '83/11 GPS HXGN SMARTNET

VERTICAL DATUM

NAVD '88 PER GPS HXGN SMARTNET AS VERIFIED TO CITY OF BELLEVUE CONTROL POINT 0189

BENCHMARKS

ORIGINATING BENCHMARK:

CITY OF BELLEVUE CONTROL POINT 0189. FOUND CONCRETE MONUMENT 1' DEEP WITH 3/8" BRASS PLUG WITH PUNCHMARK IN CASE, TOP MONUMENT TO TOP RIM CASE 1.40 FEET.

ELEVATION: 326.703'

TEMPORARY BENCHMARKS:

TBM 'A' SET RAILROAD SPIKE ON NORTHWEST FACE OF UTILITY POLE WITH UNDERGROUND CONDUIT 5.3' NORTH OF PROPERTY LINE & 8.7'NE OF 12" FIR TREE, NEAR NORTHEAST CORNER OF SITE.

ELEVATION: 314.37'

TBM 'B' USED EXISTING 5/8" REBAR & CAP STAMPED "PACE LS 32429" AT GRADE, LOCATED AT THE SECTION LINE AND SOUTH LINE OF SE 91ST ST INTERSECTION.

ELEVATION: 360.65'

EQUIPMENT NOTES

PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING LEICA GS14 GPS/GNSS EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING LEICA ELECTRONIC 1201 TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WACS 332-130-080/090.

NOTES

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON NOVEMBER, 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

THIS SURVEY DISCLOSES FACTORS OF RECORD AND ON THE GROUND AFFECTING THE SUBJECT PROPERTY BOUNDARY, BUT IT DOES NOT PURPORT TO LEGALLY RESOLVE RELATED PROPERTY LINE DISPUTES. WHERE AMBIGUITIES ARE NOTED, AXIS RECOMMENDS THAT THE OWNER CONSULT WITH LEGAL COUNSEL TO DETERMINE HOW BEST TO INTERPRET THEIR PROPERTY RIGHTS AND ADDRESS ANY POTENTIAL PROPERTY LINE DISPUTES.

UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON ASBUILT FIELD LOCATION OF EXISTING STRUCTURES. FIELD LOCATION OF UTILITIES BASED ON LOCATOR PAINT MARKINGS AND LOCATIONS BASED ON UTILITY MAPS FROM CITY AND UTILITY DRAWINGS INDICATING REPORTED UTILITY INSTALLATIONS. OTHER UTILITIES MAY EXIST. NO SUB-SURFACE EXPLORATION WAS MADE TO VERIFY UTILITY ROUTINGS AND THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO DESIGN FOR VERIFICATION.

2' CONTOURS INTERVAL DERIVED FROM DIRECT FIELD OBSERVATION.

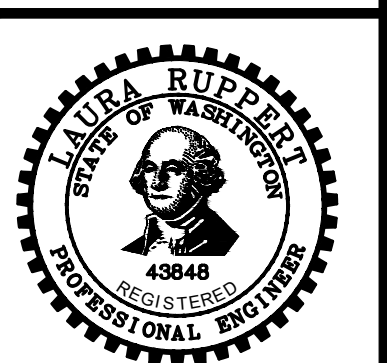
THIS SURVEY MEETS UNITED STATES NATIONAL MAP ACCURACY STANDARDS FOR VERTICAL ACCURACY OF ONE HALF THE CONTOUR INTERVAL.

REFERENCES

- R1 THE PLAT OF C.D. HILLMAN'S LAKE WASHINGTON GARDEN OF EDEN ADDITION TO SEATTLE DIVISION NO. 6, AS RECORDED UNDER VOLUME 11 OF PLATS, PAGE 84 UNDER RECORDING NUMBER 313827.
- R2 THE PLAT OF BREWER ADDITION, AS RECORDED UNDER VOLUME 56 OF PLATS, PAGES 53 AND 54 UNDER RECORDING NUMBER 4627689.
- R3 THE RECORD OF SURVEY FOR THE CITY OF RENTON, AS RECORDED UNDER VOLUME 334, PAGES 1 AND 2 UNDER RECORDING NUMBER 20151124900031.
- R4 THE RECORD OF SURVEY FOR DANA SORUM, AS RECORDED UNDER BOOK 11, PAGE 133 UNDER RECORDING NUMBER 197907239003.



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 DRAWN BY: HDO
 CHECKED BY: LRR

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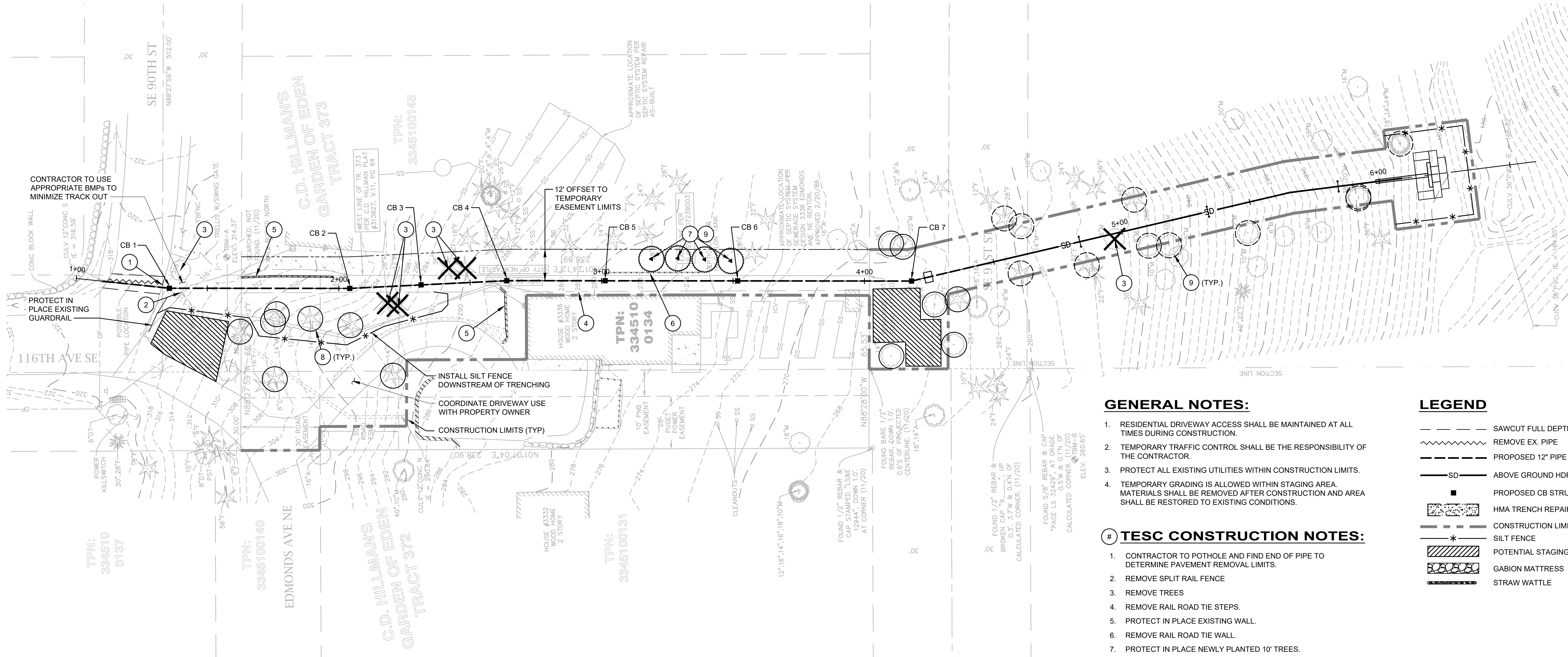
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116TH AVENUE SE FLOW CONTROL FACILITIES
 CITY OF NEWCASTLE
 LEGEND, GENERAL NOTES, AND ABBREVIATIONS

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	H: N/A V: N/A	SHEET	2 of 8



GENERAL NOTES:

1. RESIDENTIAL DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
2. TEMPORARY TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. PROTECT ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS.
4. TEMPORARY GRADING IS ALLOWED WITHIN STAGING AREA. MATERIALS SHALL BE REMOVED AFTER CONSTRUCTION AND AREA SHALL BE RESTORED TO EXISTING CONDITIONS.

LEGEND

- SAWCUT FULL DEPTH
- ~ ~ ~ REMOVE EX. PIPE
- PROPOSED 12" PIPE
- SD --- ABOVE GROUND HDPE
- PROPOSED CB STRUCTURE
- ▨ HMA TRENCH REPAIR
- CONSTRUCTION LIMITS
- * SILT FENCE
- ▨ POTENTIAL STAGING AREA
- ▨ GABION MATTRESS
- STRAW WATTLE

TESC CONSTRUCTION NOTES:

1. CONTRACTOR TO POTHOLE AND FIND END OF PIPE TO DETERMINE PAVEMENT REMOVAL LIMITS.
2. REMOVE SPLIT RAIL FENCE
3. REMOVE TREES
4. REMOVE RAIL ROAD TIE STEPS.
5. PROTECT IN PLACE EXISTING WALL.
6. REMOVE RAIL ROAD TIE WALL.
7. PROTECT IN PLACE NEWLY PLANTED 10' TREES.
8. TREE PROTECTION, INSTALL HI-VIZ AROUND TREE 6' OUTSIDE OF THE TREE DRIPLINE.
9. TREE PROTECTION, SEE DETAIL 1 ON SHEET 8 (ONLY NEEDED IF CONSTRUCTION EQUIPMENT IS USED WITHIN 10' OF DRIP LINE)



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FILE NAME: \\OC\LOCAL\NASUN\OC\PROJECTS\PROJECTS\10-190001 NEWCASTLE SURFACE WATER ENGINEERING SERVICES 2019\NS-041 116TH AVE PIPE\3 CADD\SHEETS\10-190001-S041_TESC.DWG
PLOT TIME: 5/6/2022 5:05 PM
USER NAME: HUE ONG

DESIGNED BY: KJ
DRAWN BY: HDO
CHECKED BY: LRR

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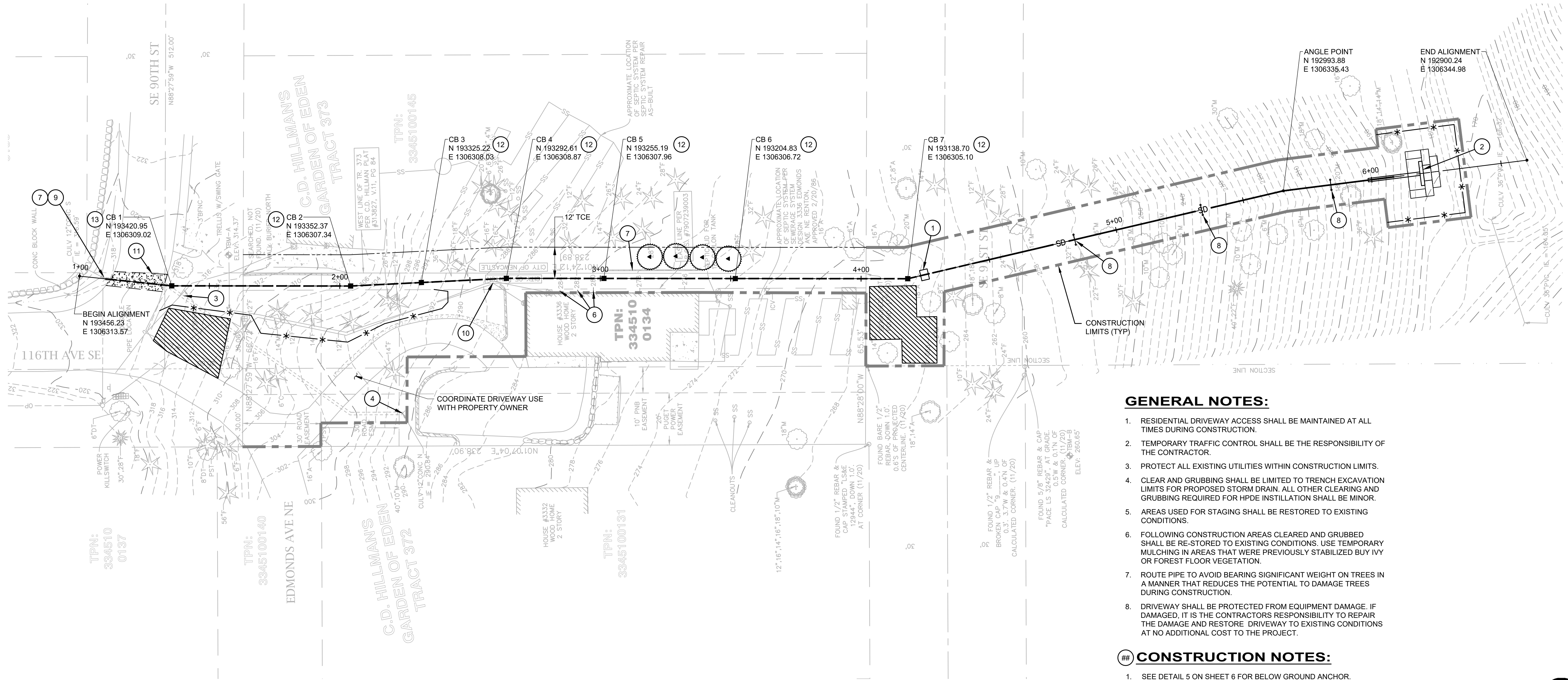
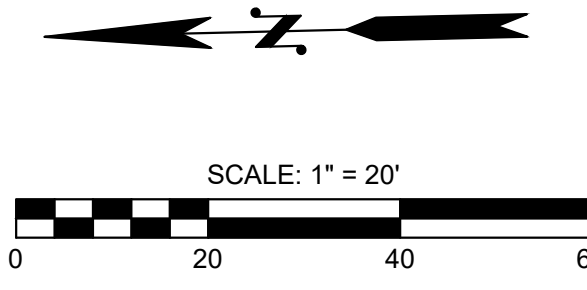
NO.	DATE	REVISION	BY



116TH AVENUE SE FLOW CONTROL FACILITIES
CITY OF NEWCASTLE
SITE PREP AND TESC PLAN

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	H: 1"=20' V: N/A	SHEET	3 of 8

SEC. 27, T. 24 N, R. 05 E, W.M.



GENERAL NOTES:

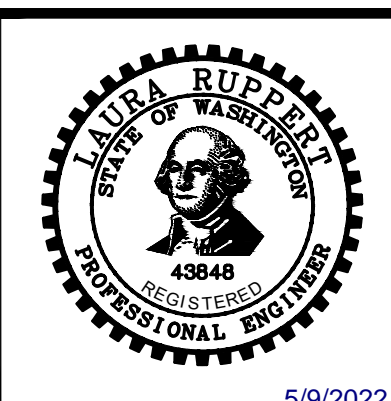
1. RESIDENTIAL DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
2. TEMPORARY TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. PROTECT ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS.
4. CLEAR AND GRUBBING SHALL BE LIMITED TO TRENCH EXCAVATION LIMITS FOR PROPOSED STORM DRAIN. ALL OTHER CLEARING AND GRUBBING REQUIRED FOR HPDE INSTILLATION SHALL BE MINOR.
5. AREAS USED FOR STAGING SHALL BE RESTORED TO EXISTING CONDITIONS.
6. FOLLOWING CONSTRUCTION AREAS CLEARED AND GRUBBED SHALL BE RE-STORED TO EXISTING CONDITIONS. USE TEMPORARY MULCHING IN AREAS THAT WERE PREVIOUSLY STABILIZED BUY IVY OR FOREST FLOOR VEGETATION.
7. ROUTE PIPE TO AVOID BEARING SIGNIFICANT WEIGHT ON TREES IN A MANNER THAT REDUCES THE POTENTIAL TO DAMAGE TREES DURING CONSTRUCTION.
8. DRIVEWAY SHALL BE PROTECTED FROM EQUIPMENT DAMAGE. IF DAMAGED, IT IS THE CONTRACTORS RESPONSIBILITY TO REPAIR THE DAMAGE AND RESTORE DRIVEWAY TO EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE PROJECT.

CONSTRUCTION NOTES:

1. SEE DETAIL 5 ON SHEET 6 FOR BELOW GROUND ANCHOR.
2. SEE DETAILS 1, 2, & 4 ON SHEET 6 FOR ENERGY DISSIPATOR AND GABION MATTRESS.
3. PLUG EXISTING PIPE PER WSDOT SPEC 7-08.3(4).
4. REMOVE 2 PIPE SECTIONS, PLUG PER WSDOT STANDARD SPEC 7-08.3(4), AND RESTORE AREA TO MATCH SURROUNDING AREA.
5. REPLACE IN KIND RAIL ROAD TIE STEPS.
6. REPLACE IN KIND WITH RAIL ROAD TIE WALL.
7. RE-GRADE DITCH TO OBTAIN POSITIVE FLOW INTO REPLACED PIPE. RE-SEED DITCH LINE AFTER GRADING IS COMPLETE.
8. ABOVE GRADE ANCHOR. SEE DETAIL 6 ON SHEET 6.
9. BEVELED END PIPE PER DETAIL 6 ON SHEET 8.
10. CONTRACTOR TO LOCATE UTILITY PRIOR TO TRENCHING.
11. REPAIR PER DETAIL 2 ON SHEET 8.
12. CB TYPE 1 WITH CHANNELED BOTTOM, SEE DETAIL ON SHEET 5.
13. CB TYPE 1 PER CITY OF NEWCASTLE STANDARD DETAIL SW-1.



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FILE NAME: \\OC\LOCAL\NASUN\OC\PROJECTS\PROJECTS\10-190001 NEWCASTLE SURFACE WATER ENGINEERING SERVICES 2019\NS-041 116TH AVE PIPE\3 CADD\SHEETS\10-190001-S041_PLAN.DWG
 PLOT TIME: 5/6/2022 5:06 PM
 USER NAME: HUE ONG

DESIGNED BY
KJ
DRAWN BY
HDO
CHECKED BY
LRR



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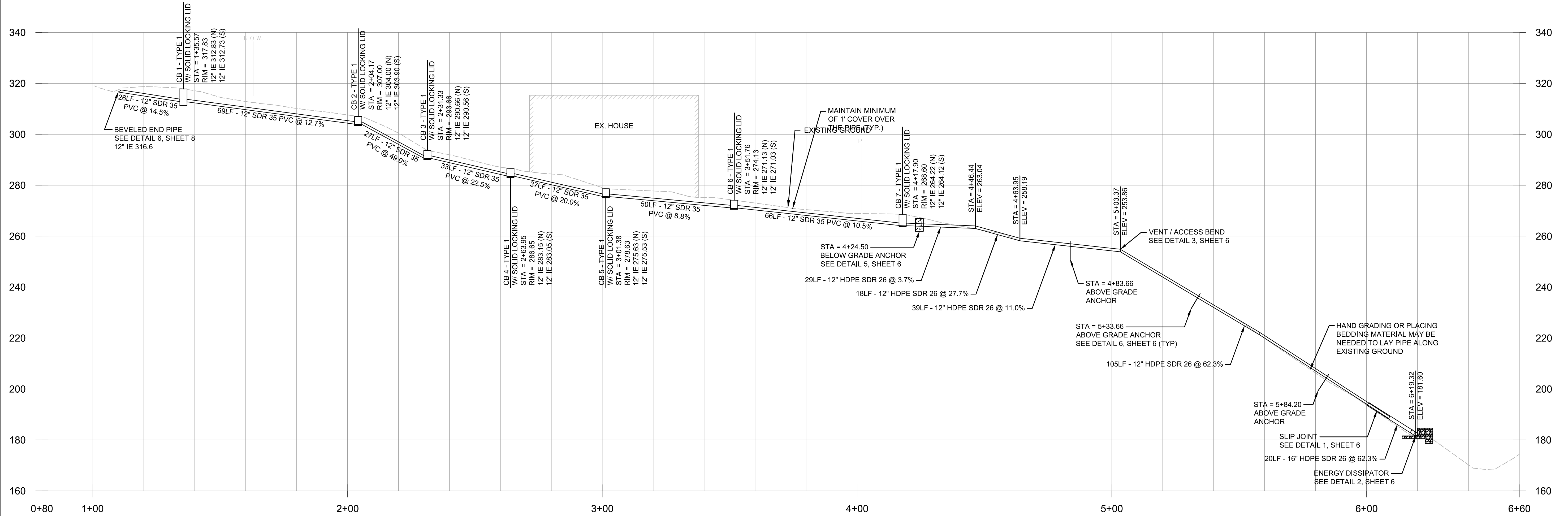
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116TH AVENUE SE FLOW CONTROL FACILITIES
CITY OF NEWCASTLE
DRAINAGE IMPROVEMENTS PLAN

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	H: 1"=20' V: N/A	SHEET	4 of 8

SEC. 27 , T.24 N, R.05 E, W.M.



PROFILE VIEW

NOTES:

- CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (ASHTO M 199) & C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
- AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (ASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
- ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
- PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUDED IF WALL IS LEFT INTACT.
- KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS.
- ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES, WITH MAX. DIAM. OF 20". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE.
- THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
- THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/27/FT.
- CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
- FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
- FOR CATCH BASINS IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG. 81-1-b.
- EDGE OF RISER OR BIRK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN WALL.

FRAME AND GRATE SEE SEC. 7.05 AND APPLICABLE DWGS.

1" RISER SECTION
1 #3 BAR HOOP

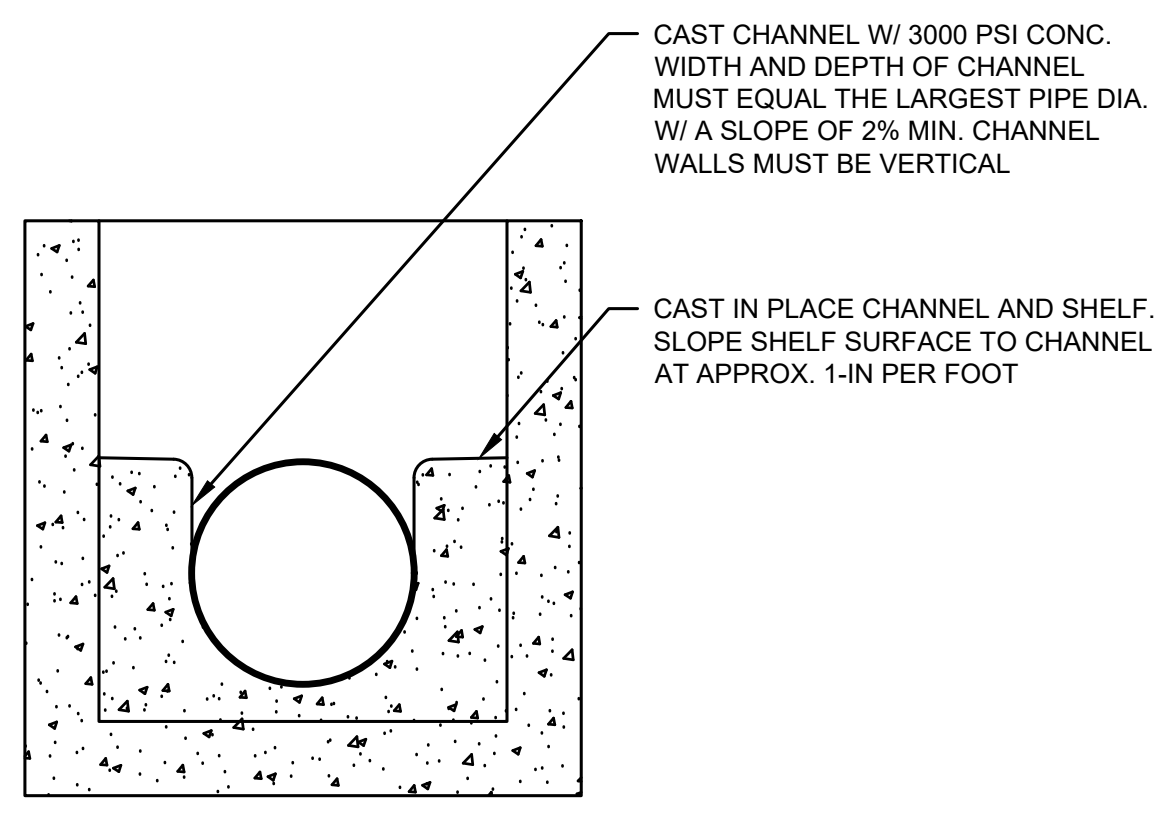
12" RISER SECTION
2 #3 BAR HOOPS

PRECAST BASE SECTION (MEASUREMENT AT THE TOP OF THE BASE)
#3 BAR EACH CORNER
#3 BAR EACH SIDE
#3 BAR EACH WAY

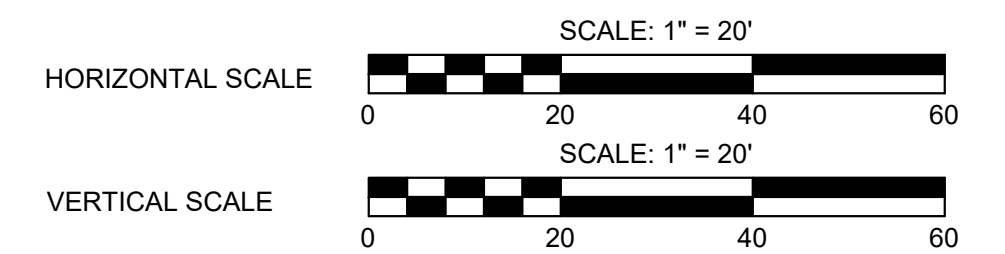
CITY OF NEWCASTLE
CATCH BASIN - TYPE 1

APPROVED:
ROGER KUYKENDALL, P.E. 8/1/2000
BY CITY DATE

DWG. NO.
SW-1



SECTION A-A
CB TYPE 1 W/ CHANNELED BOTTOM
NTS



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FILE NAME: \\OC\LOCAL\NASUN\OC\PROJECTS\PROJECTS\10-190001 NEWCASTLE SURFACE WATER ENGINEERING SERVICES 2019\NS-041 116TH AVE PIPE\3 CADD\SHEETS\10-190001-S041-PLAN.DWG
PLOT TIME: 5/6/2022 5:06 PM
USER NAME:HUE ONG

DESIGNED BY: KJ
DRAWN BY: HDO
CHECKED BY: LRR

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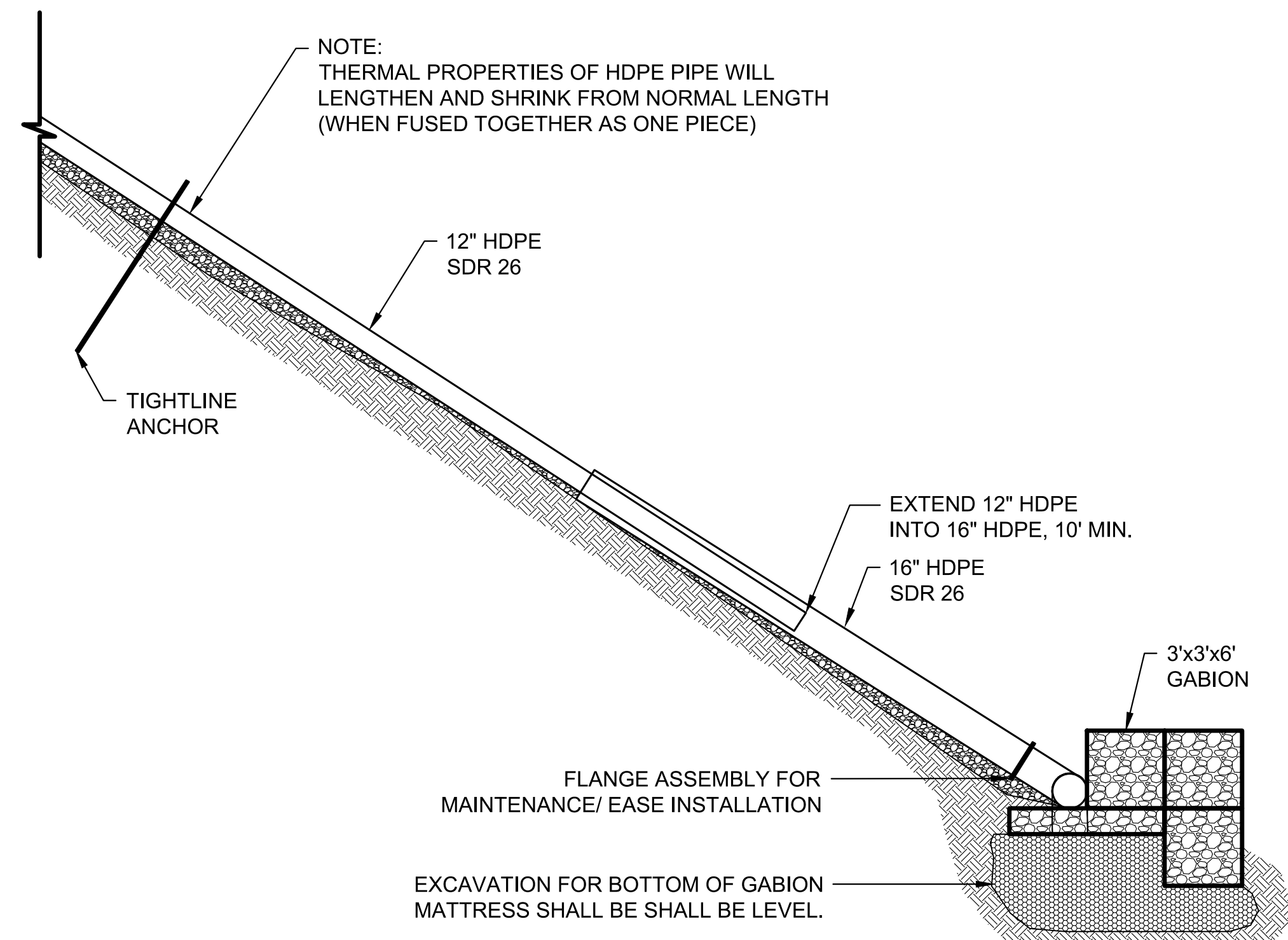
NO.	DATE	REVISION	BY



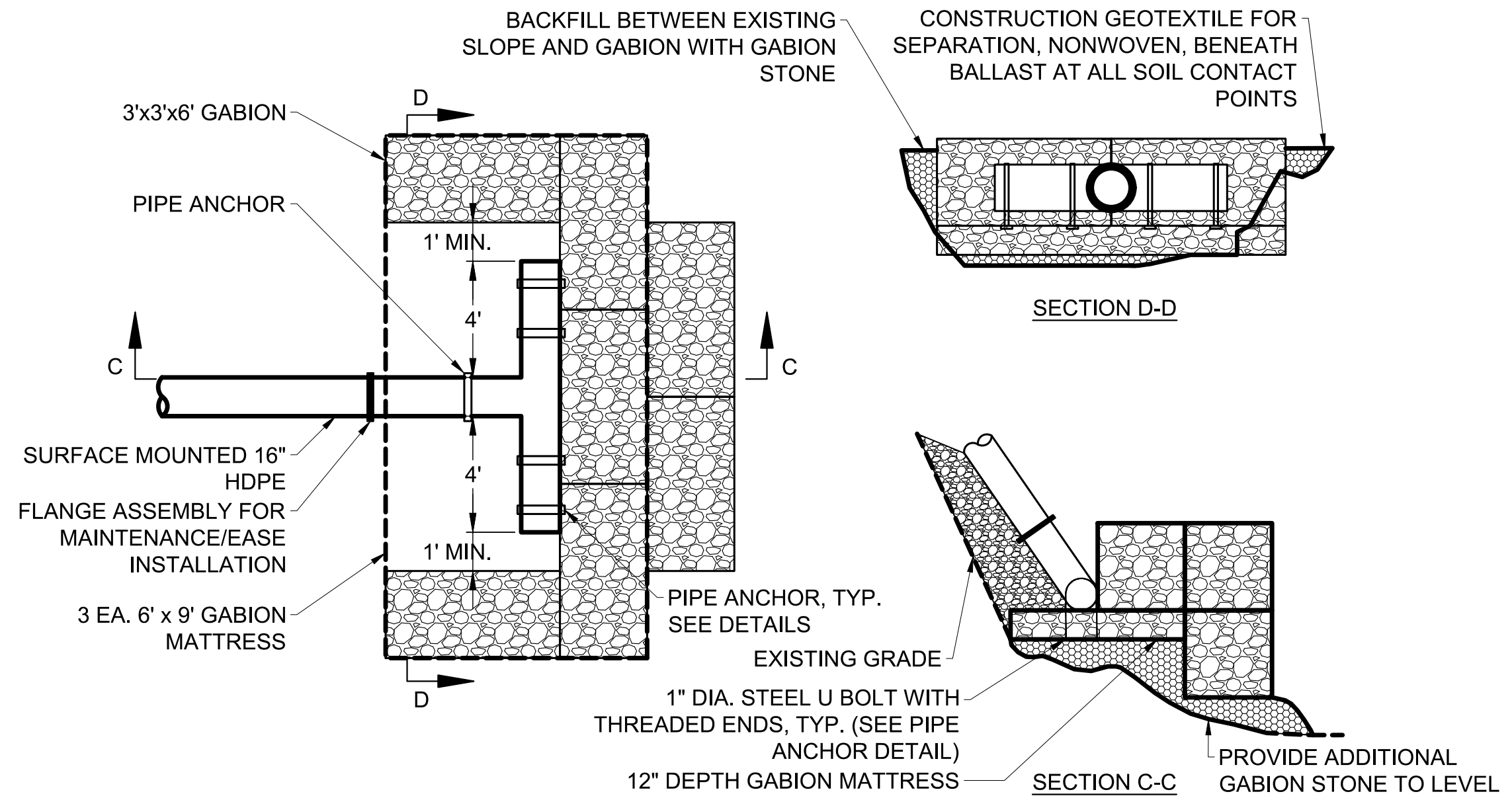
116TH AVENUE SE FLOW CONTROL FACILITIES
CITY OF NEWCASTLE
DRAINAGE IMPROVEMENTS PROFILE

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	H: 1"=20' V: 1"=20'	SHEET	5 of 8

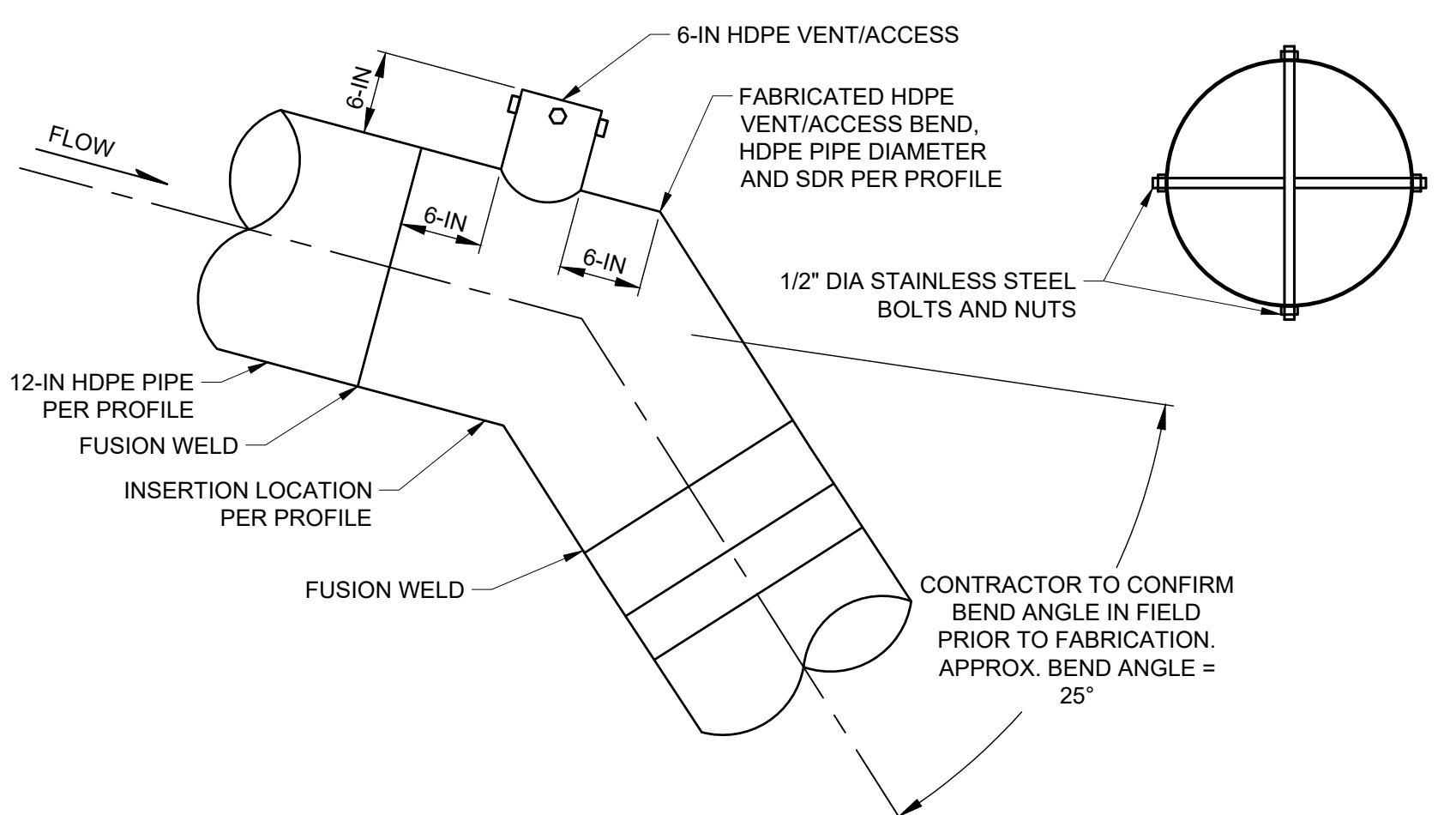
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 PLOT TIME: 5/6/2022 5:06 PM
 USER NAME: HUE ONG



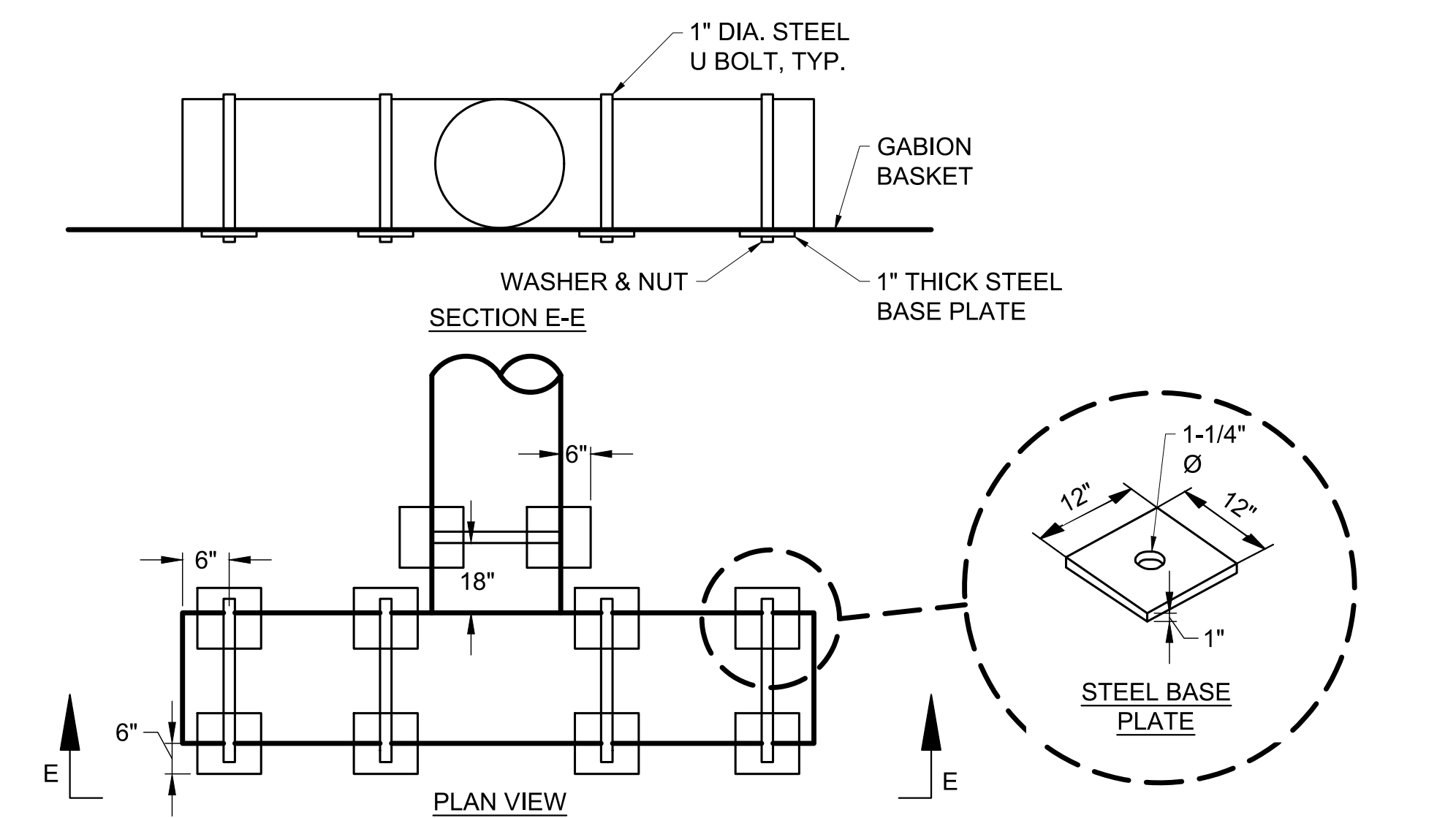
1 SLIP JOINT DETAIL N.T.S.



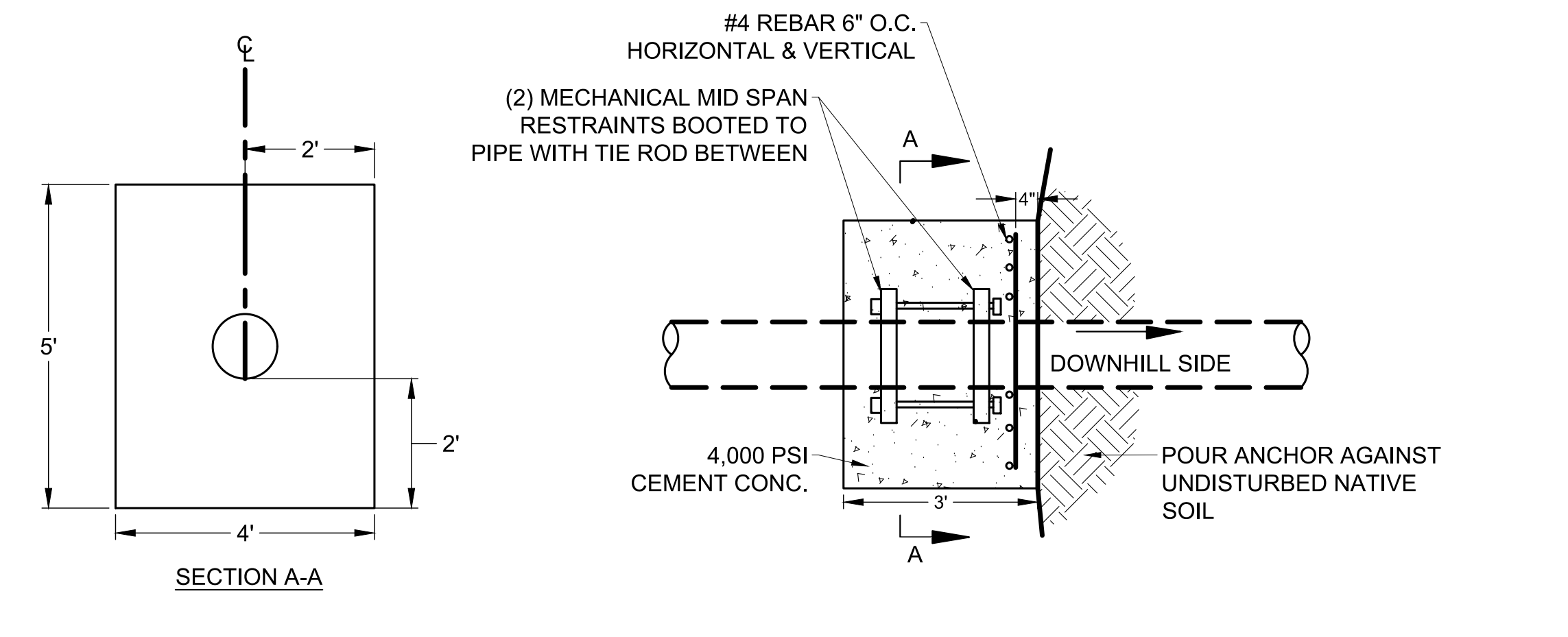
2 GABION OUTFALL ENERGY DISSIPATOR N.T.S.



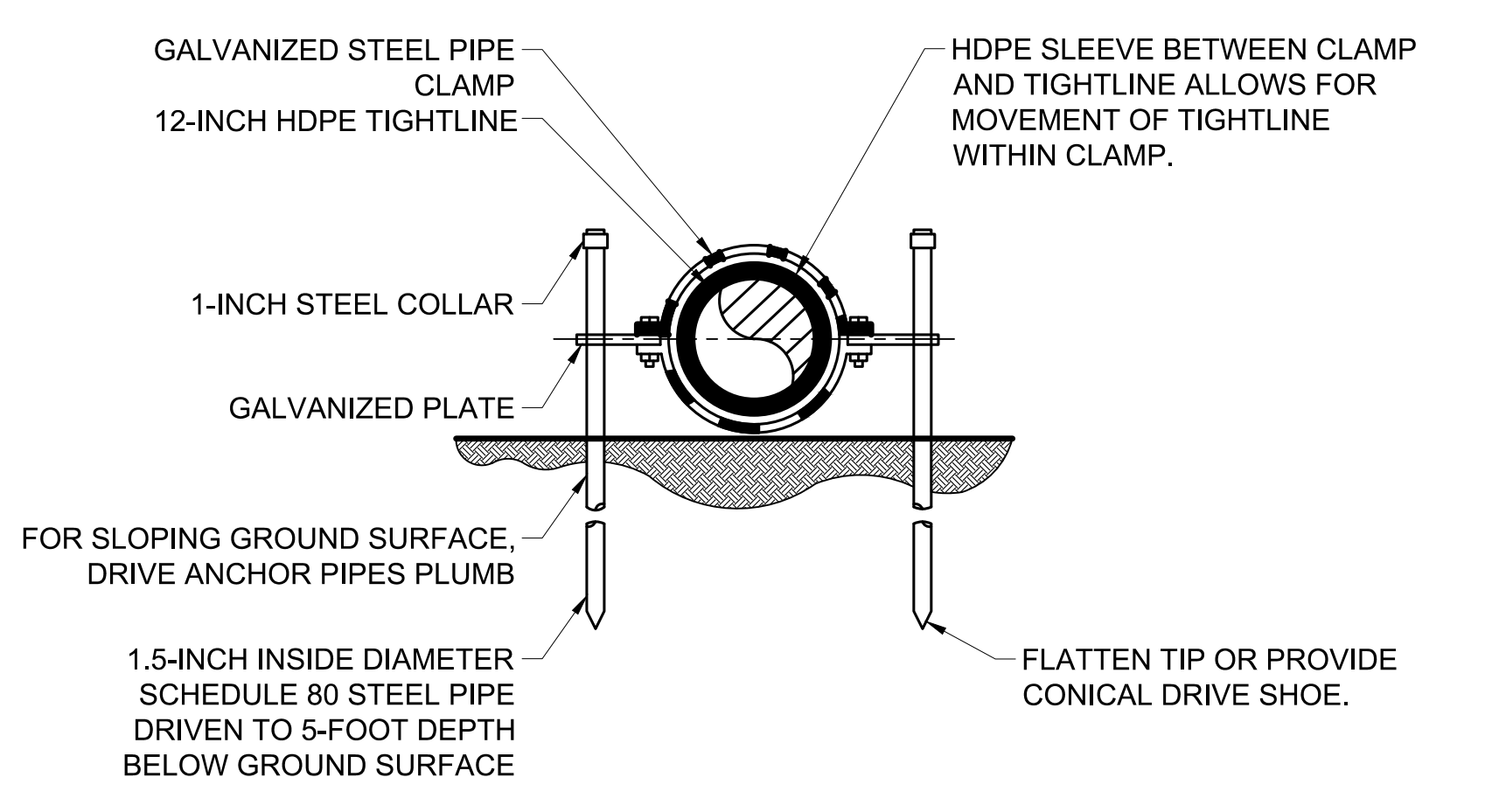
3 VENT ACCESS/BEND DETAIL N.T.S.



4 GABION BASKET ANCHOR DETAIL N.T.S.



5 TIGHTLINE BELOW GRADE ANCHOR DETAIL N.T.S.



6 ABOVE GRADE ANCHOR DETAIL N.T.S.

NOTES:

1. ALL GABION CAGES TO BE WIRED TOGETHER PER MANUFACTURER'S REQUIREMENTS.
2. ADJUST LOCATION OF OUTFALL IN THE FIELD TO ACCOMMODATE TOPOGRAPHY. THE ENGINEER SHALL APPROVE THE FINAL LOCATION PRIOR TO BEGINNING OUTFALL CONSTRUCTION.

811
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LAUREL RUPPEL
 STATE OF WASHINGTON
 REGISTERED PROFESSIONAL ENGINEER
 43848

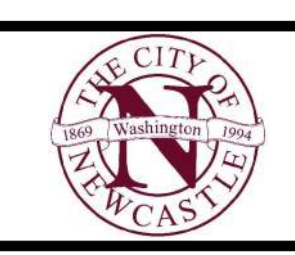
5/9/2022

DESIGNED BY: KJ
 DRAWN BY: HDO
 CHECKED BY: LRR

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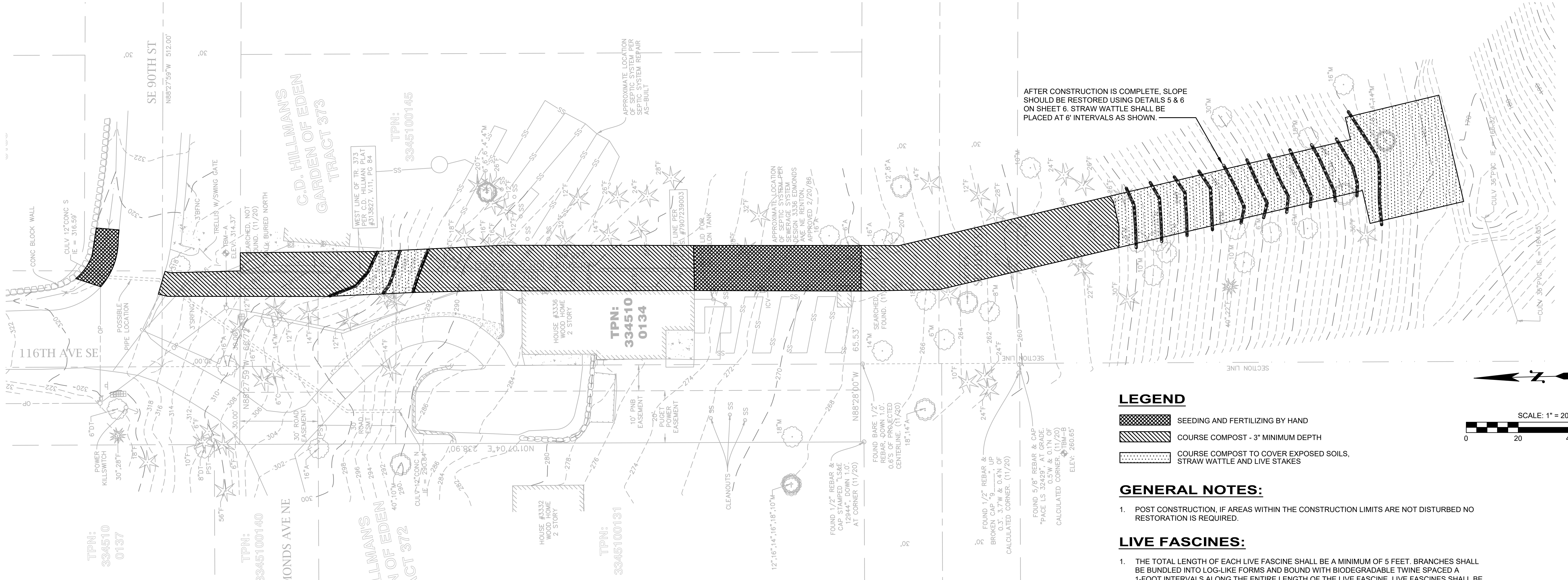
NO.	DATE	REVISION	BY



116TH AVENUE SE FLOW CONTROL FACILITIES
 CITY OF NEWCASTLE
 DRAINAGE & ANCHOR DETAILS

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	H: N/A V: N/A	SHEET	6 of 8

SEC. 27, T. 24 N, R. 05 E, W.M.



AFTER CONSTRUCTION IS COMPLETE, SLOPE SHOULD BE RESTORED USING DETAILS 5 & 6 ON SHEET 6. STRAW WATTLE SHALL BE PLACED AT 6' INTERVALS AS SHOWN.

LEGEND

- SEEDING AND FERTILIZING BY HAND
- COURSE COMPOST - 3" MINIMUM DEPTH
- COURSE COMPOST TO COVER EXPOSED SOILS, STRAW WATTLE AND LIVE STAKES

GENERAL NOTES:

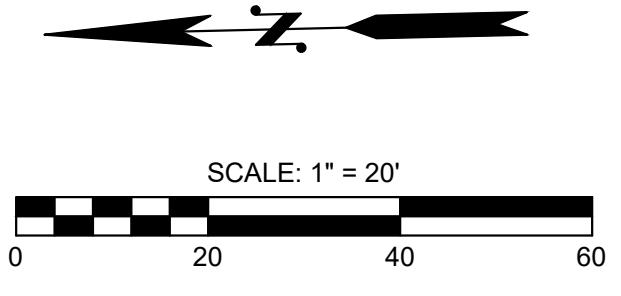
1. POST CONSTRUCTION, IF AREAS WITHIN THE CONSTRUCTION LIMITS ARE NOT DISTURBED NO RESTORATION IS REQUIRED.

LIVE FASCINES:

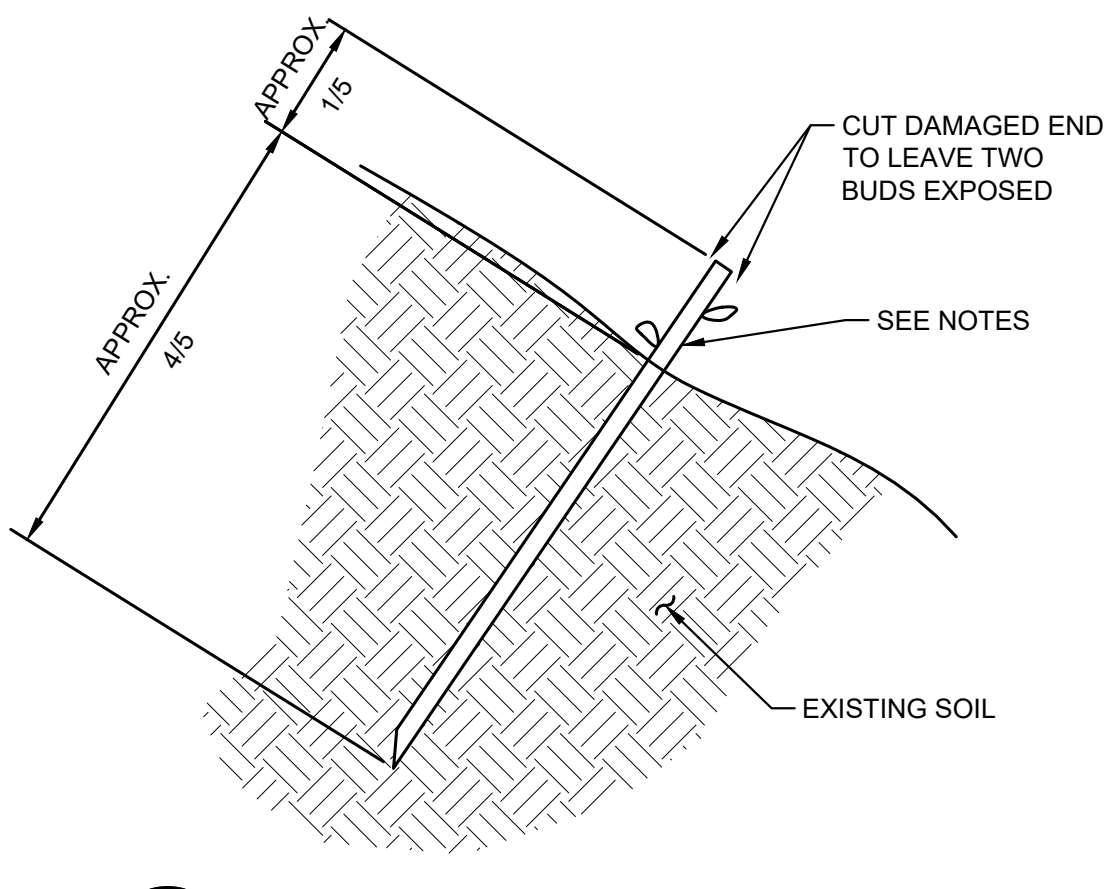
1. THE TOTAL LENGTH OF EACH LIVE FASCINE SHALL BE A MINIMUM OF 5 FEET. BRANCHES SHALL BE BUNDLED INTO LOG-LIKE FORMS AND BOUND WITH BIODEGRADABLE TWINE SPACED A 1-FOOT INTERVALS ALONG THE ENTIRE LENGTH OF THE LIVE FASCINE. LIVE FASCINES SHALL BE INSTALLED HORIZONTALLY IN A TRENCH WHOSE DEPTH SHALL BE 1/2 THE DIAMETER OF THE LIVE FASCINE. SECURE THE LIVE FASCINE WITH LIVE STAKES 3 FEET IN LENGTH AND 3/4 INCH IN DIAMETER PLACED AT 18-INCH INTERVALS. A MINIMUM OF THREE LIVE STAKES SHALL BE USED PER FASCINE. THE LIVE STAKES SHALL BE DRIVEN THROUGH THE LIVE FASCINE VERTICALLY INTO THE SLOPE. THE ENDS OF LIVE FASCINES SHALL BE WOVEN TOGETHER SO THAT NO GAP REMAINS BETWEEN THE TWO SECTIONS OF THE LIVE FASCINE.
2. WHEN USED TO REMEDY EROSION AREAS, LIVE FASCINES SHALL EXTEND A MINIMUM OF TWO FEET BEYOND THE VISIBLE AREA OF EROSION AND SOIL DISTURBANCE. THE LOCATIONS OF LIVE FASCINES AND LIVE STAKE ROWS SHALL BE IDENTIFIED IN THE FIELD FOR REVIEW AND ACCEPTANCE BY THE ENGINEER. THE ENGINEER MAY REQUIRE ADJUSTMENT OF FASCINE LOCATIONS PRIOR TO INSTALLATION IN ORDER TO BEST ACCOMPLISH THE INTENDED FUNCTIONS.

SPECIES LIST:

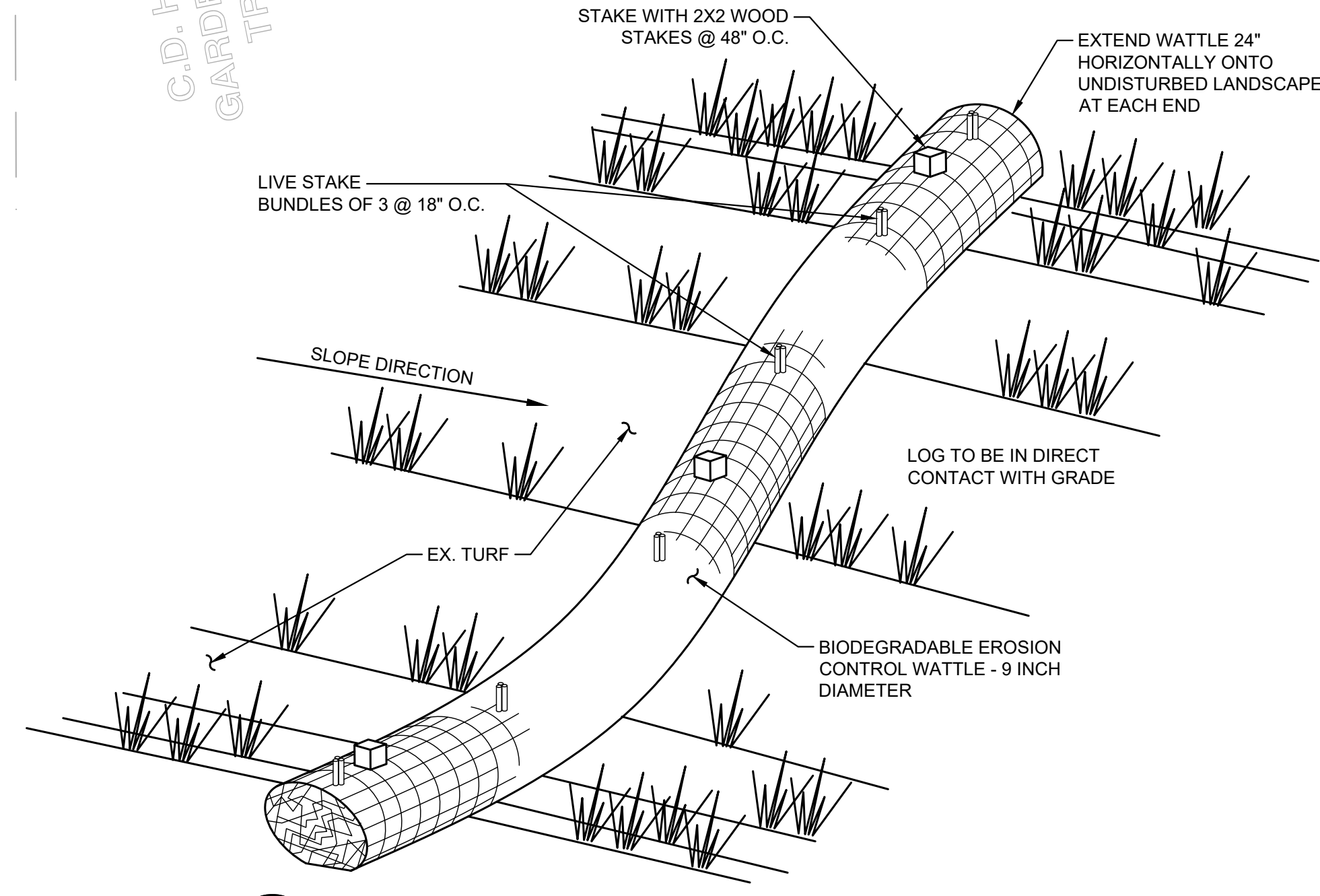
- RIBES SANGUINEUM - RED FLOWERING CURRANT; QTY - 25%
- CORNUS SERICEA 'SANTI' - ISANTI RED TWIG DOGWOOD; QTY - 25%
- VACCINIUM OVATUM - EVERGREEN HUCKLEBERRY; QTY - 15%
- RUBUS SPECTABILIS - SALMONBERRY; QTY - 20%
- OEMLARIA CERASIFORMIS - INDIAN PLUM; QTY - 15%



- NOTES:**
1. SEE PLANT MATERIAL LIST FOR SIZE AND TYPE OF LIVE STAKE.
 2. DO NOT USE AXE OR SLEDGE FOR DRIVING STAKES.
 3. IN HARD GROUND USE AN IRON BAR OR STAR DRILL TO PREPARE THE HOLES FOR THE STAKE.
 4. AVOID STRIPPING BARK OR BRUISING STAKES DURING INSTALLATION.
 5. FILL VOID AROUND CUTTING WITH SOIL.



1 **LIVE STAKE DETAIL**
N.T.S.



2 **SLOPE STABILIZATION WATTLE**
N.T.S.

FILE NAME: \\OC\LOCAL\NASUN\001\PROJECTS\PROJECTS\10-190001\NEWCASTLE SURFACE WATER ENGINEERING SERVICES 2019\NS-041\116TH AVE PIPE\3 CADD\SHEETS\10-190001-S041_RESTR.DWG
PLOT TIME: 5/6/2022 5:06 PM
USER NAME: HUE ONG

DESIGNED BY: KJ
DRAWN BY: HDO
CHECKED BY: LRR

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116TH AVENUE SE FLOW CONTROL FACILITIES
CITY OF NEWCASTLE
RESTORATION PLAN

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	H: N/A V: N/A	SHEET	7 of 8

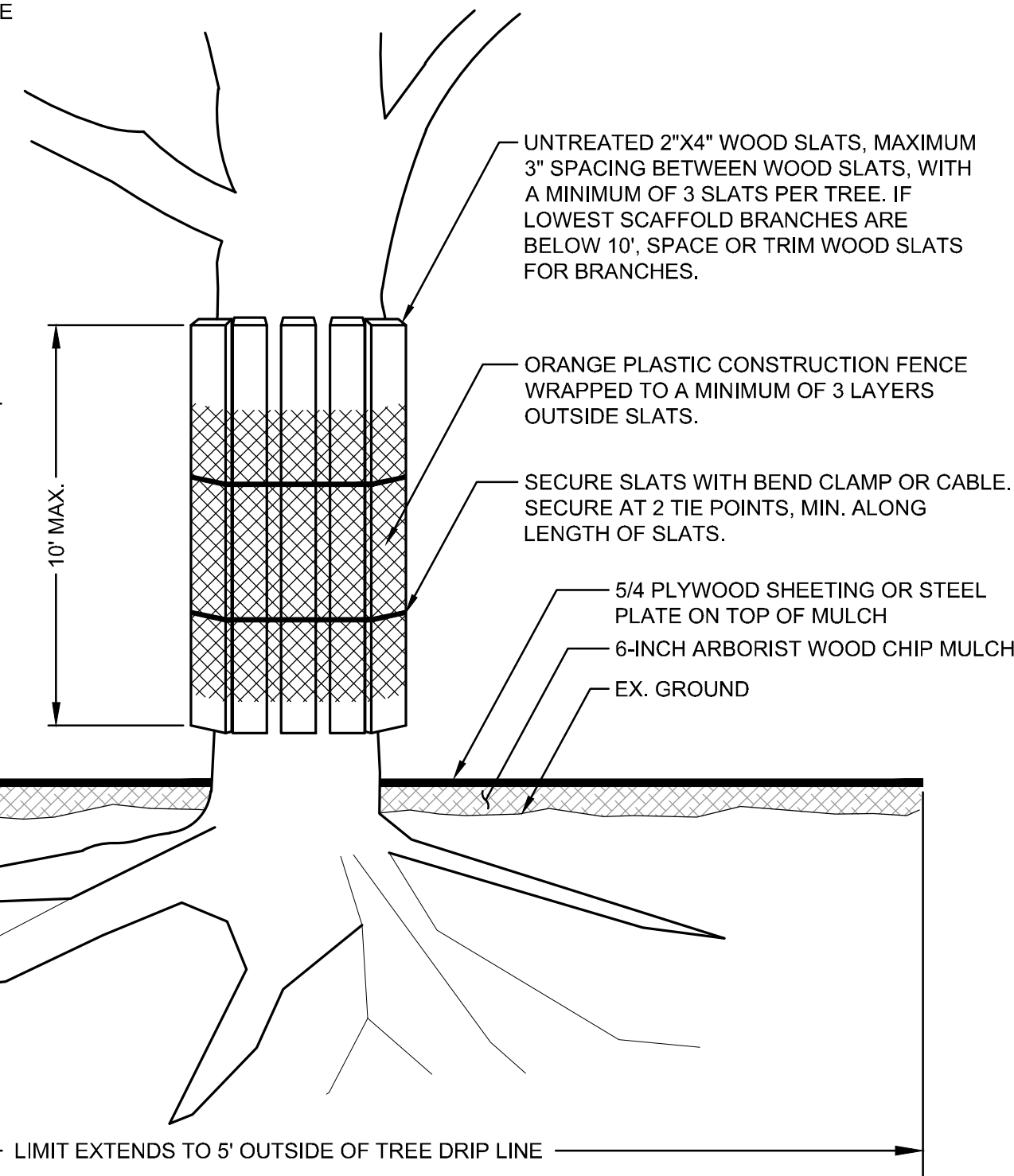
811

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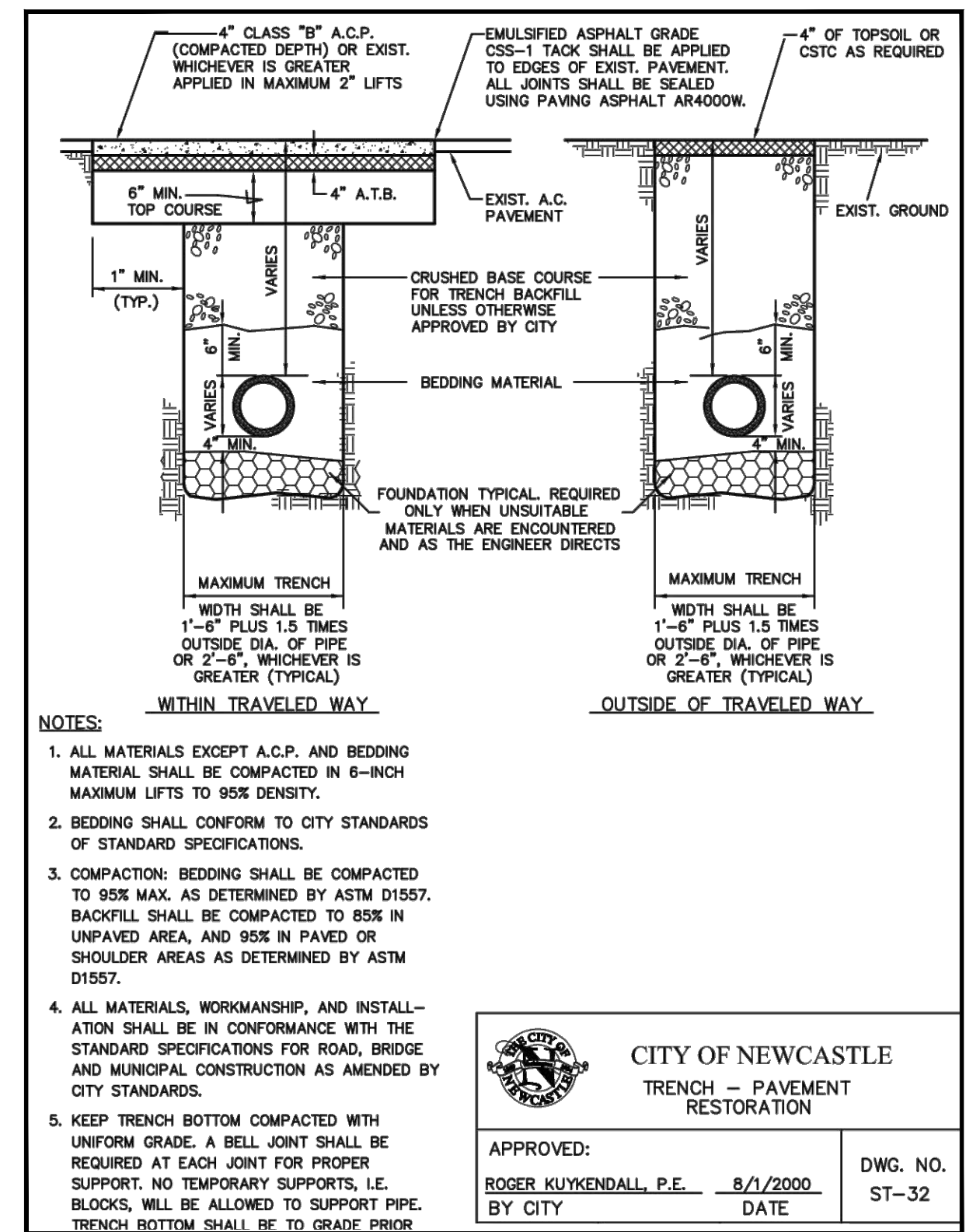
NOTES:

1. WRAP ORANGE PLASTIC CONSTRUCTION FENCE ON TOP OF WOOD SLATS WITH AN OVERLAP OF 12" AND TIE WITH WIRE.
2. TRUNK WRAP SHALL BE IN PLACE NO MORE THAN 5 WORKING DAYS BEFORE WORK ADJACENT TO TREE, AND REMOVED NO MORE THAN 5 WORKING DAYS AFTER WORK ADJACENT TO TREE, UNLESS OTHERWISE DIRECTED BY THE CITY.
3. FOR PROJECT DURATIONS LASTING MORE THAN 4 MONTHS, PROJECT ARBORIST TO INSPECT AND DETERMINE IF PROTECT NEEDS TO BE ADJUSTED.
4. REDUCE ROOT ZONE COMPACTION: ARBORIST WOOD CHIP MULCH (AWCM) SHALL BE APPLIED TO A SIX-INCH DEPTH, WITH 5/4 PLYWOOD SHEETING OR A STEEL PLATE ON TOP. AWCM TO SIX-INCH DEPTH WITH 5/4 PLYWOOD SHEETING SHALL BE TEMPORARILY UTILIZED, WHEN HEAVY MACHINERY AND EQUIPMENT, ARE WITHIN THE DRIPLINE OF TREE WITHIN THE PROJECT LIMITS. ONCE ASSOCIATED CONSTRUCTION WORK ENDS, AWCM AND PLYWOOD/STEEL PLATE SHALL BE REMOVED.
5. THIS DETAIL TO BE ALLOWED ONLY WITH PRIOR APPROVAL OF THE ENGINEER.



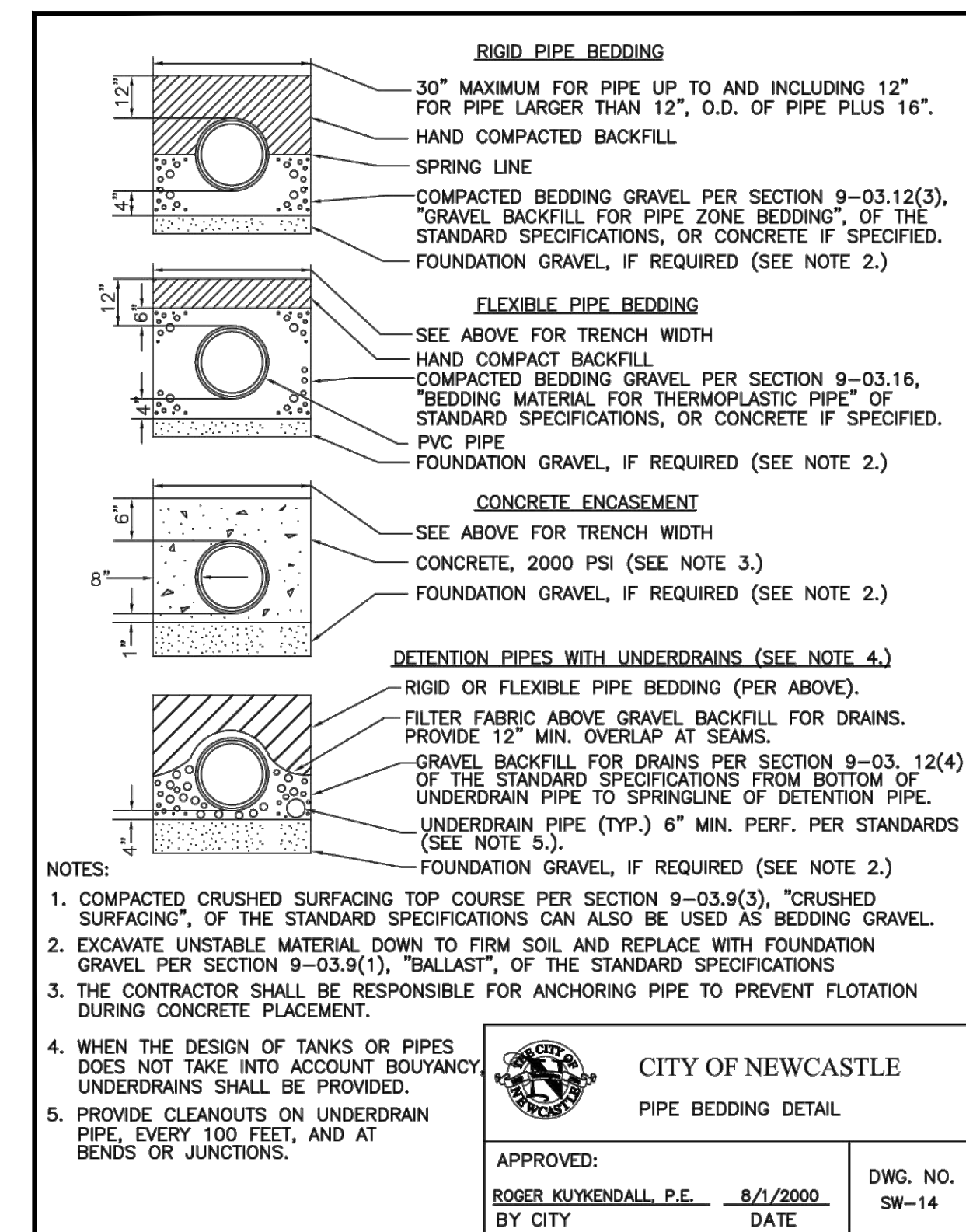
TRUNK WRAP DETAIL

N.T.S.



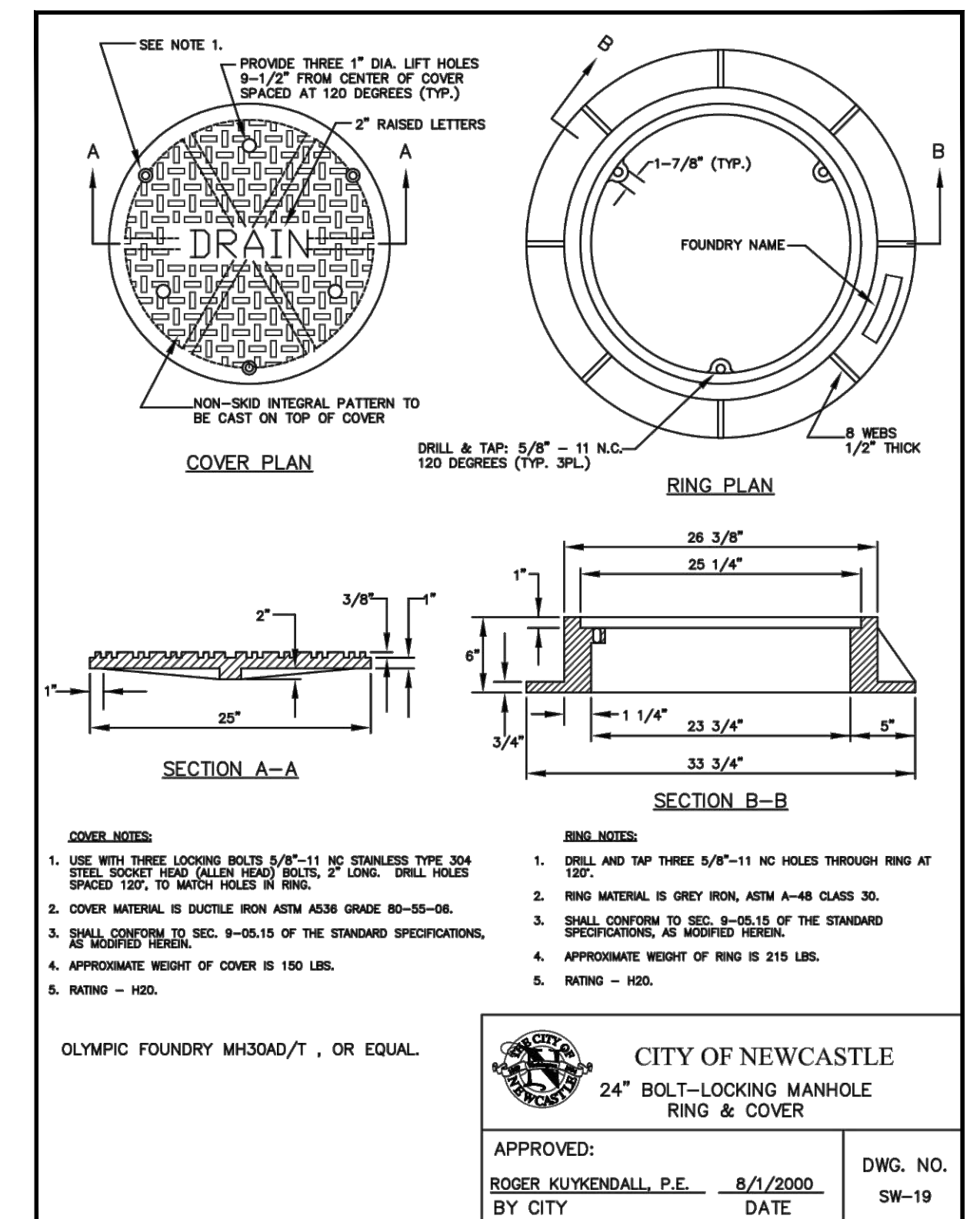
TRENCH DETAIL

N.T.S.



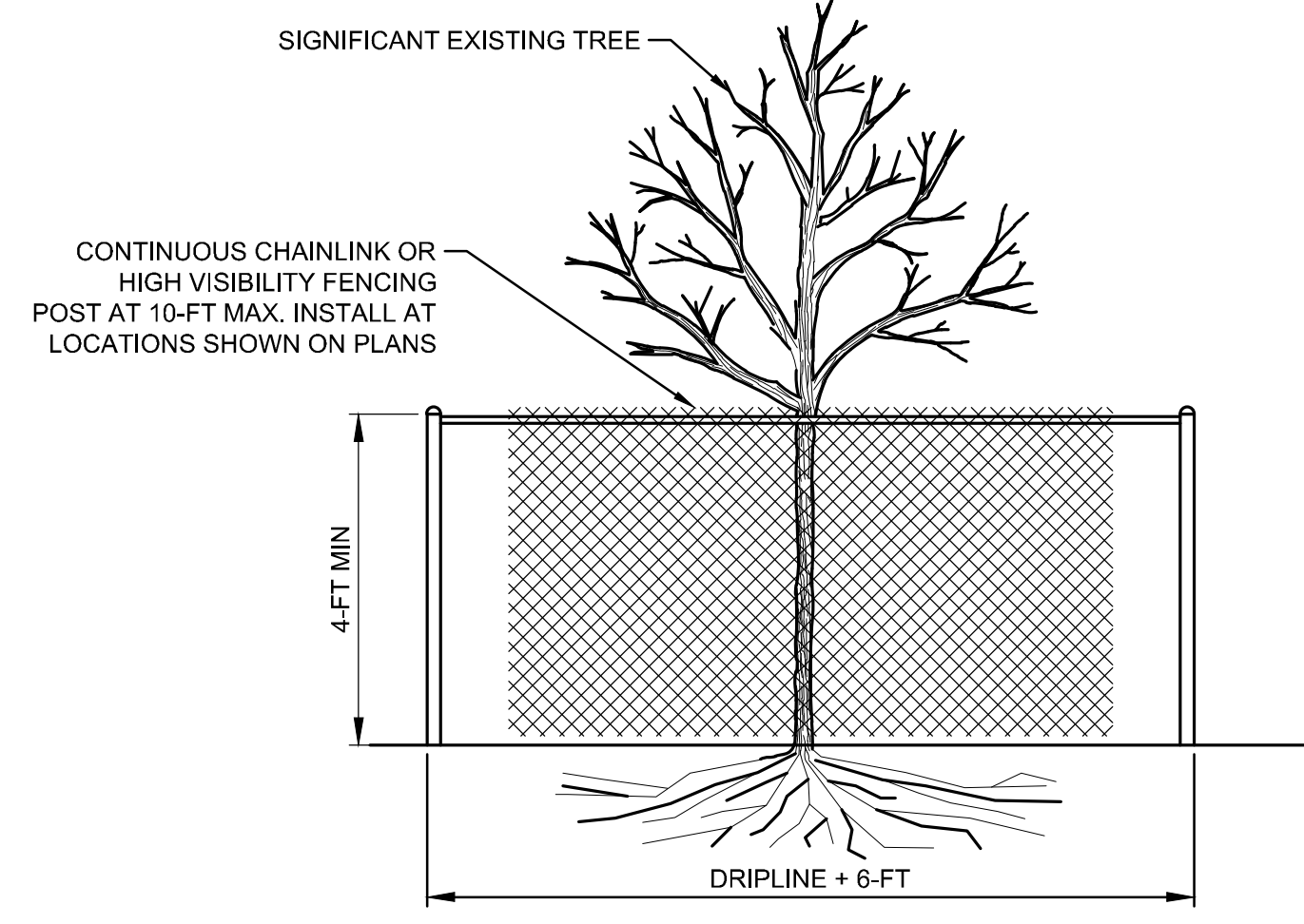
PIPE BEDDING DETAIL

N.T.S.



24\"/>

N.T.S.

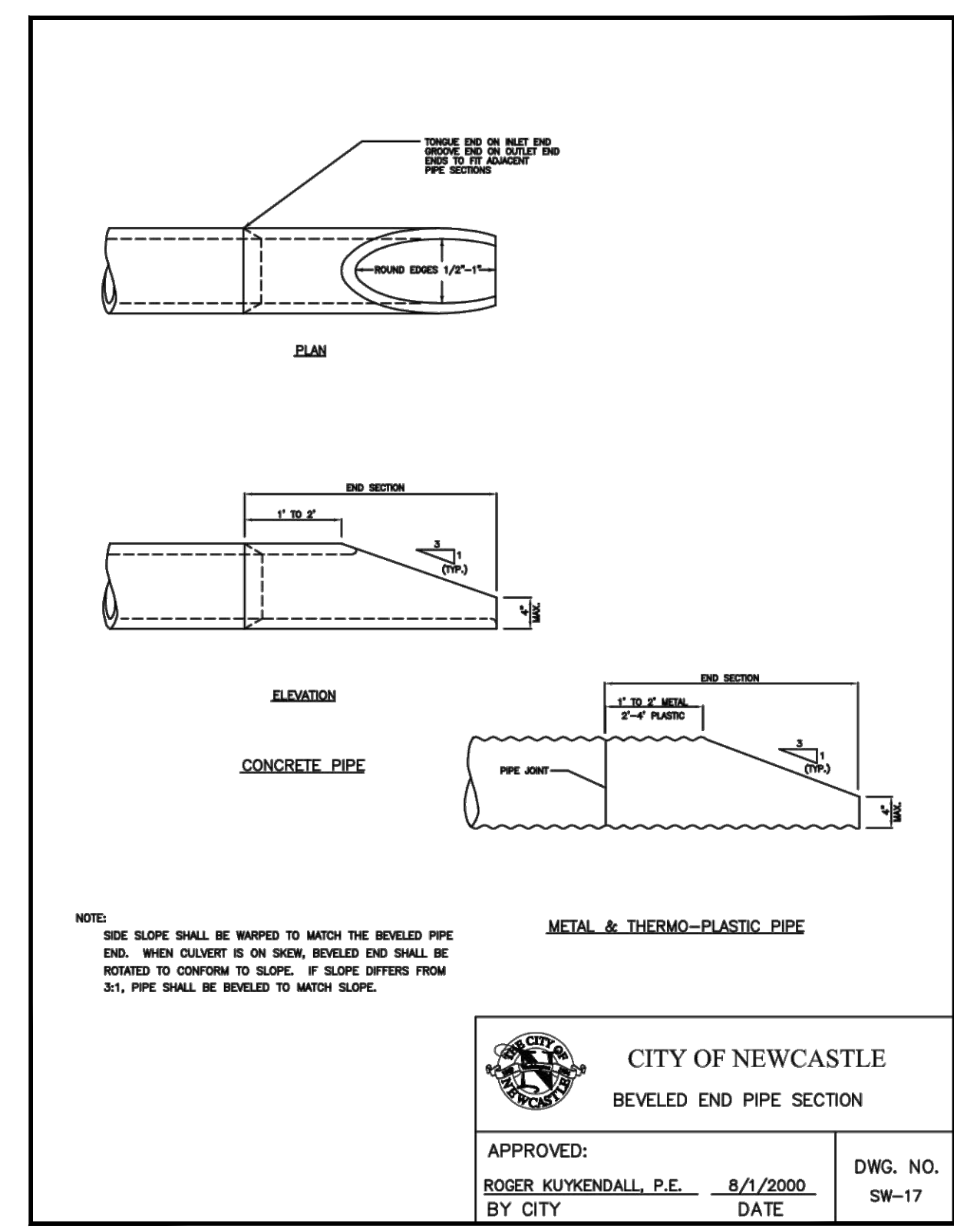


NOTES:

1. MINIMUM FOUR (4) FOOT HIGH TEMPORARY FENCING SHALL BE INSTALLED SIX (6) FEET BEYOND THE DRIPLINE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL FENCE POSTS USING PIER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.
2. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND COVERED WITH SOIL AS SOON AS POSSIBLE.
3. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.

TREE PROTECTION FENCE DETAIL

N.T.S.



BEVELED END PIPE SECTION

N.T.S.

DESIGNED BY
KJ
DRAWN BY
HDO
CHECKED BY
LRR

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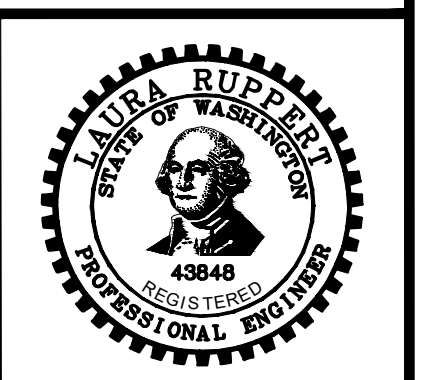


116TH AVENUE SE FLOW CONTROL FACILITIES
CITY OF NEWCASTLE
DETAILS

JOB# / DWG	10-190001	DATE	05/06/2022
SCALE	h: N/A v: N/A	SHEET	8 of 8



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FILE NAME: P:\10-190001\NEWCASTLE SURFACE WATER ENGINEERING SERVICES 2019\10-190001-041_116TH AVE PIPE\3_CADD\SHEETS\10-190001-041_DET.DWG
PLOT TIME: 5/6/2022 5:24 PM
USER NAME: HUE ONG