

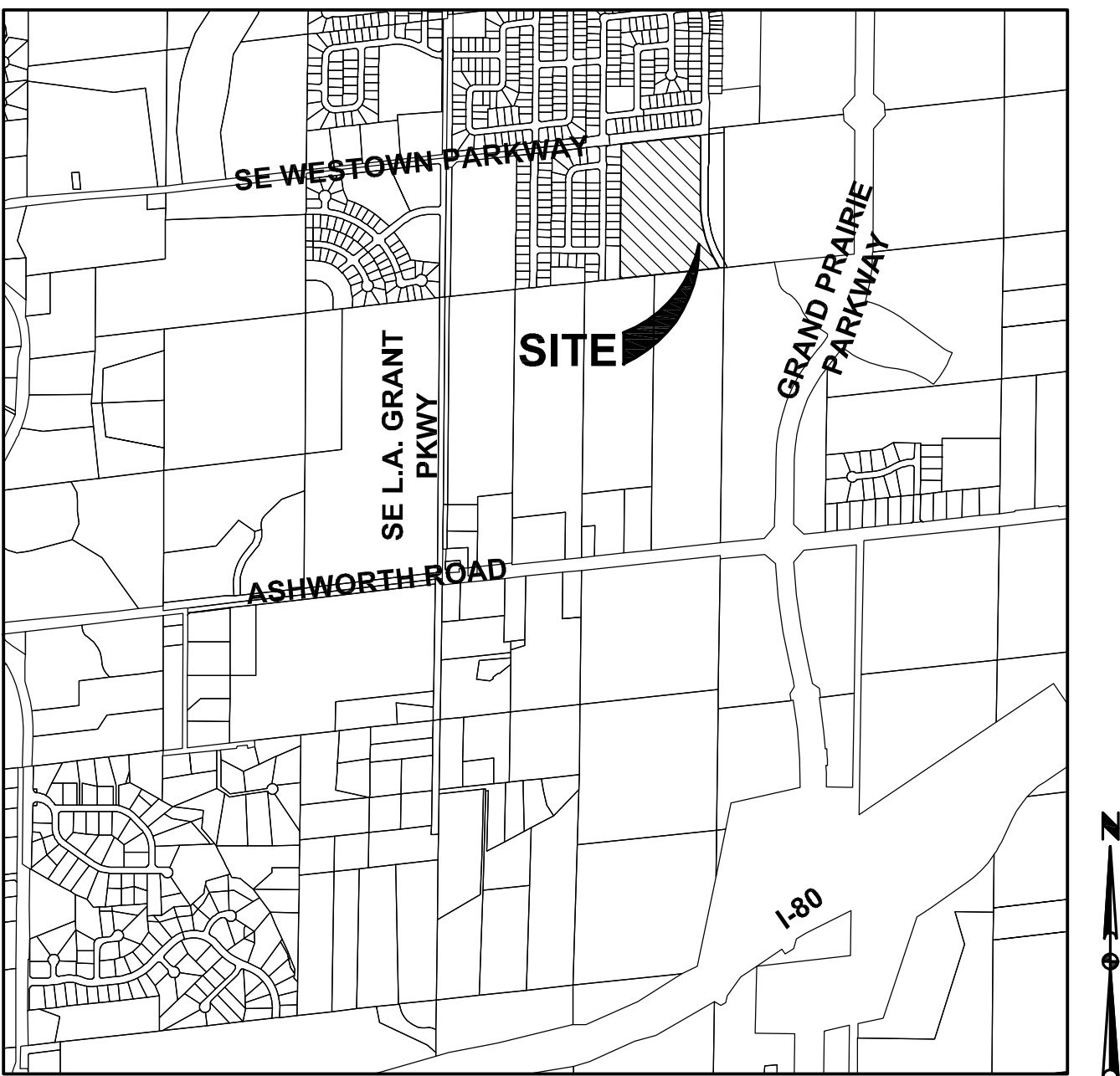
CONSTRUCTION PLANS FOR:

KETTLESTONE HEIGHTS PLAT 1

WAUKEE, IOWA

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

OWNER/DEVELOPER

TRIPLE T DEVELOPMENT LLC
CONTACT: TOBY TORSTENSON
33082 UTE AVENUE
WAUKEE, IA 50263
PH. (515) 244-3111

PROJECT MANAGER

TRIPLE T DEVELOPMENT LLC
CONTACT: TOBY TORSTENSON
33082 UTE AVENUE
WAUKEE, IA 50263
PH. (515) 244-3111

ENGINEER/ SURVEYOR

CIVIL DESIGN ADVANTAGE
CONTACT: ERIN OLLENDIKE
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

DATE OF SURVEY

MAY 19, 2016

BENCHMARKS

DALLAS COUNTY GPS MONUMENT G120 @ SE CORNER OF U PLACE AND 300TH STREET.
ELEVATION=1011.79

BURY BOLT ON HYDRANT @ NW CORNER OF WESTOWN PARKWAY & PARKVIEW CROSSING.
ELEVATION=1130.23

BURY BOLT ON HYDRANT @ NE CORNER OF WESTOWN PARKWAY & WILLOW BROOKE.
ELEVATION=1011.80

SUBMITTAL DATES

FIRST SUBMITTAL:	09/16/2016
SECOND SUBMITTAL:	10/13/2016
THIRD SUBMITTAL:	11/03/2016
FOURTH SUBMITTAL:	11/30/2016
FINAL SUBMITTAL:	02/01/2017
REVISED STORM SEWER:	05/25/2017
AS-BUILTS:	09/19/2018

NOTES

1. ANY CHANGES PROPOSED TO THE CONSTRUCTION DRAWINGS DURING CONSTRUCTION SHALL BE APPROVED IN WRITING BY THE CITY OF WAUKEE ENGINEERING DEPARTMENT.

2. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT BEEN GRANTED APPROVAL IN WRITING BY THE CITY OF WAUKEE ENGINEERING DEPARTMENT.

LEGAL DESCRIPTION

PARCEL 'AA', GOVERNMENT LOT 14 IN SECTION 4, TOWNSHIP 78 NORTH, RANGE 26 WEST OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF WAUKEE, DALLAS COUNTY, IOWA AND RECORDED IN BOOK 2013, PAGE 20096

ZONING

PLANNED DEVELOPMENT (PD) WITH UNDERLYING R-2 RESIDENTIAL AND K-MF-ROWHOUSE DISTRICT

BULK REGULATIONS

R-2 RESIDENTIAL (SINGLE FAMILY)
DENSITY: FOUR (4) DWELLING UNITS/AC MAXIMUM

MINIMUM FLOOR AREA: SINGLE STORY - 1,200 SF
TWO STORY - 1,400 SF

LOT WIDTH: 60' (MIN)
MINIMUM LOT SIZE: 7,500 SF

SETBACKS:

FRONT: 25'
SIDE: 5'
REAR: 25'

MAXIMUM NUMBER OF STORIES: 2
OFF-STREET PARKING: TWO STALL ATTACHED GARAGE MINIMUM

K-MF-ROWHOUSE (TOWNHOMES)
BUFFER REQUIREMENT: 25' BETWEEN SINGLE FAMILY AND TOWNHOMES
BUFFER PLANTING REQUIREMENTS: 1.5 OVERSTORY TREE, 2.5 EVERGREENS, 2.5 ORNAMENTAL TREES AND 15 SHRUBS FOR EVERY 50 FEET.
MINIMUM LANDSCAPING: TWO OVERSTORY TREES MINI AND ONE UNDERSTORY TREE PER LOT

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2-4	TYPICAL SECTIONS AND DETAILS
5	QUANTITIES AND REFERENCE NOTES
6	HYDRANT COVERAGE PLAN
7-8	GRADING PLAN
9-10	EROSION & SEDIMENT CONTROL PLAN
11-20	STORM AND SANITARY SEWER PLAN AND PROFILE
21-24	WATERMAIN PLAN AND PROFILE
25-27	INTERSECTION DETAILS
28	LANDSCAPE PLAN

AS-BUILT DRAWINGS

AS-BUILT PLANS ARE BASED ON SURVEYED INVERT ELEVATIONS AND INFORMATION SUPPLIED BY THE CONTRACTOR. CIVIL DESIGN ADVANTAGE TAKES NO RESPONSIBILITY FOR UNAUTHORIZED CHANGES TO THE PLANS WITHOUT CITY/OWNER KNOWLEDGE. FIELD VERIFICATION OF UTILITIES OR OTHER PLAN ELEMENTS IS ALWAYS RECOMMENDED.

UTILITY NOTE

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN. A REQUEST WAS MADE TO IOWA ONE CALL FOR THE UTILITIES TO LOCATE THEIR UTILITIES IN THE FIELD.



GENERAL LEGEND

PROPOSED

SECTION LINE	---
CENTER LINE	---
RIGHT OF WAY	---R/W---
PERMANENT EASEMENT	---P/E---
TEMPORARY EASEMENT	---T/E---
TYPE SW-501 STORM INTAKE	
TYPE SW-503 STORM INTAKE	
TYPE SW-505 STORM INTAKE	
TYPE SW-506 STORM INTAKE	
TYPE SW-513 STORM INTAKE	
TYPE SW-401 STORM MANHOLE	
TYPE SW-402 STORM MANHOLE	
TYPE SW-301 SANITARY MANHOLE	
STORM/SANITARY CLEANOUT	
WATER VALVE	
FIRE HYDRANT ASSEMBLY	
SIGN	
DETECTABLE WARNING PANEL	
WATER CURB STOP	
STORM SEWER STRUCTURE NO.	
STORM SEWER PIPE NO.	
SANITARY SEWER STRUCTURE NO.	
SANITARY SEWER PIPE NO.	
SANITARY SEWER WITH SIZE	
SANITARY SERVICE	
STORM SEWER	
STORM SERVICE	
WATERMAIN WITH SIZE	
WATER SERVICE	
SAWCUT (FULL DEPTH)	
SILT FENCE	
USE AS CONSTRUCTED	(UAC)
MINIMUM PROTECTION ELEVATION	MPE
TOP OF PROPOSED GROUND	TG
MINIMUM OPENING ELEVATION	MOE
MINIMUM GRADE AT STRUCTURE	MGS

EXISTING

SANITARY MANHOLE	
WATER VALVE BOX	
FIRE HYDRANT	
WATER CURB STOP	
WELL	
STORM SEWER MANHOLE	
STORM SEWER SINGLE INTAKE	
STORM SEWER DOUBLE INTAKE	
FLARED END SECTION	
DECIDUOUS TREE	
CONIFEROUS TREE	
DECIDUOUS SHRUB	
CONIFEROUS SHRUB	
ELECTRIC POWER POLE	
GUY ANCHOR	
STREET LIGHT	
POWER POLE W/ TRANSFORMER	
UTILITY POLE W/ LIGHT	
ELECTRIC BOX	
ELECTRIC TRANSFORMER	
ELECTRIC MANHOLE OR VAULT	
TRAFFIC SIGN	
TELEPHONE JUNCTION BOX	
TELEPHONE MANHOLE/VAULT	
TELEPHONE POLE	
GAS VALVE BOX	
CABLE TV JUNCTION BOX	
CABLE TV MANHOLE/VAULT	
MAIL BOX	
BENCHMARK	
SOIL BORING	
UNDERGROUND TV CABLE	
GAS MAIN	
FIBER OPTIC	
UNDERGROUND TELEPHONE	
OVERHEAD ELECTRIC	
UNDERGROUND ELECTRIC	
FIELD TILE	
SANITARY SEWER W/ SIZE	
STORM SEWER W/ SIZE	
WATER MAIN W/ SIZE	

THIS PROJECT REQUIRES AN IOWA NPDES PERMIT #2. CIVIL DESIGN ADVANTAGE WILL PROVIDE THE PERMITS AND THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE CONTRACTORS USE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP THROUGHOUT CONSTRUCTION AND MEETING LOCAL, STATE AND FEDERAL REQUIREMENTS.

THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS.

THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2016 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

ERIN K. OLLENDIKE, P.E.

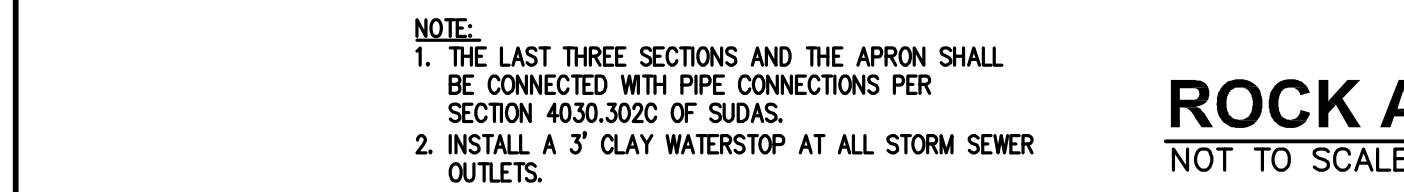
DATE

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2019
PAGES OR SHEETS COVERED BY THIS SEAL:

SHEETS 1-28



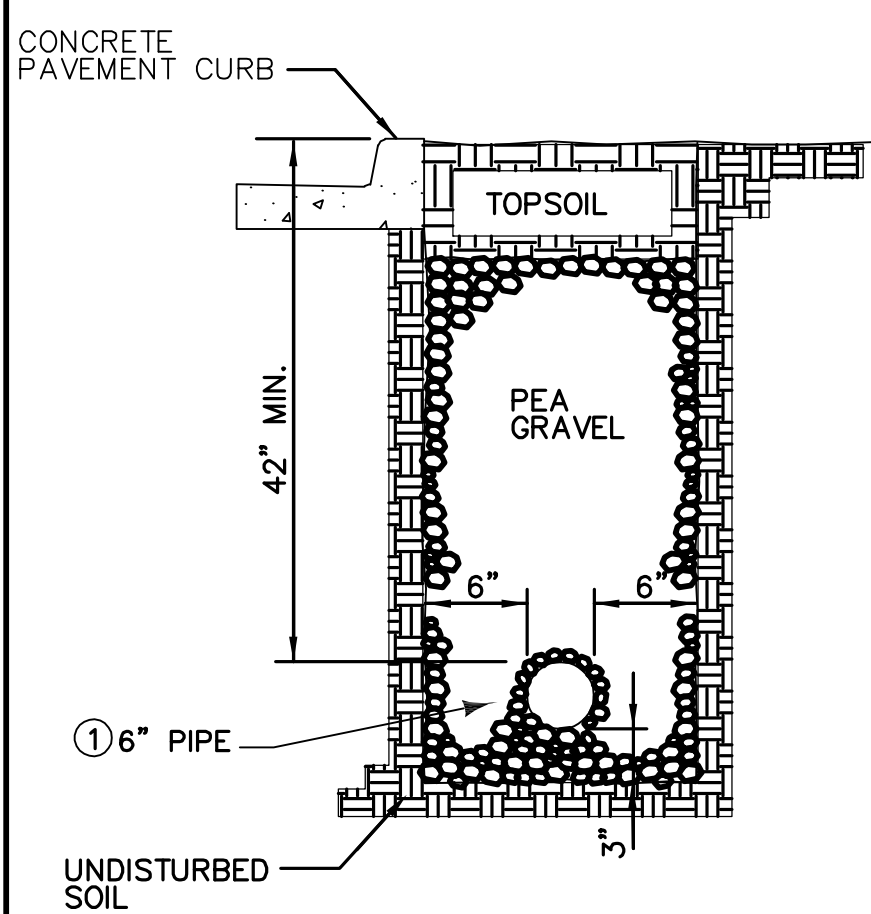
- ## MAILBOX PAD DETAIL
- NOT TO SCALE




KETTLESTONE HEIGHTS PLAT 1
TYPICAL SECTIONS AND DETAILS
 WAUKEE, IOWA
 1507.353

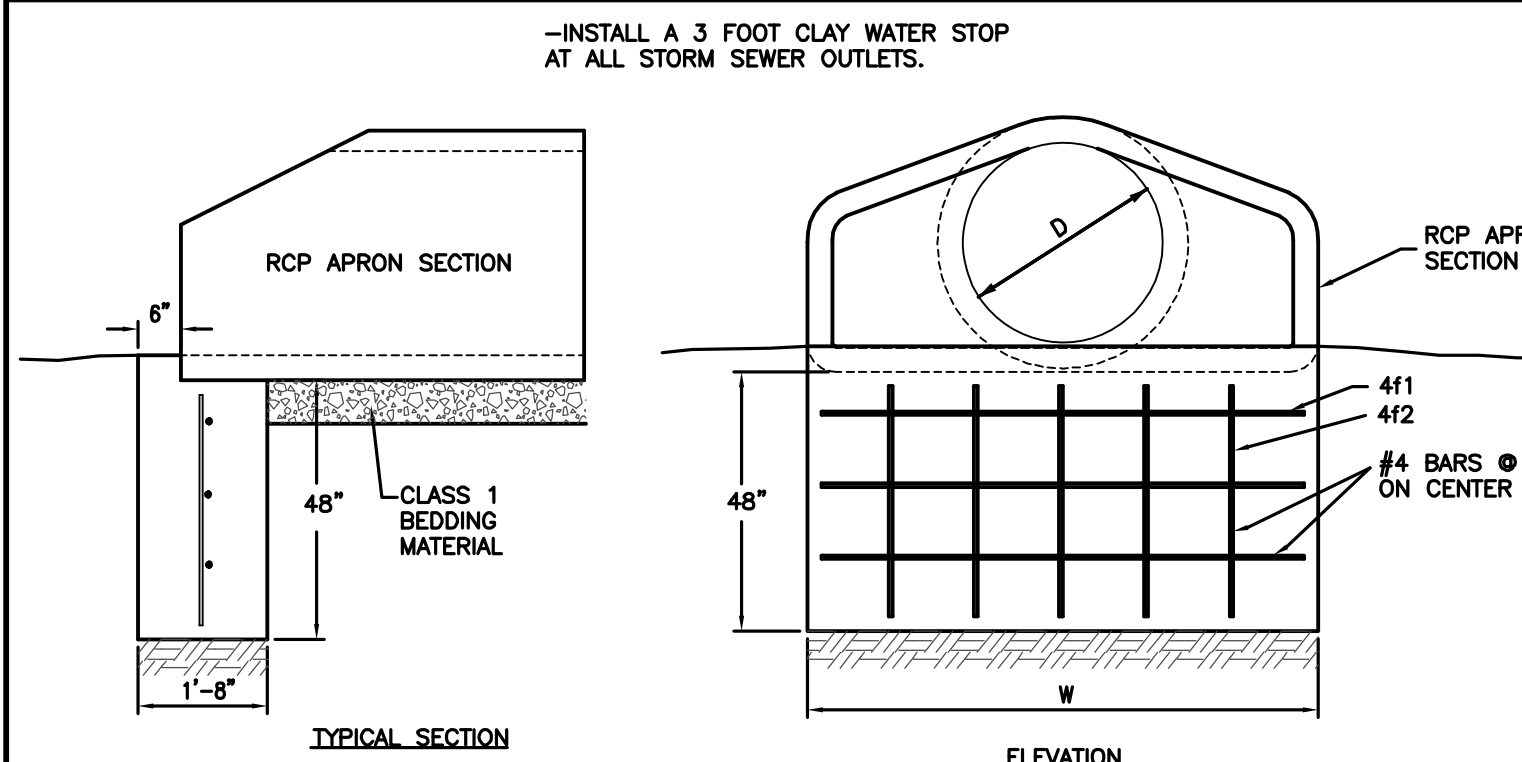
3405 S.E. CROSSROADS DRIVE, SUITE G GRIMES, IOWA 50111 PHONE: (515) 369-4400 FAX: (515) 369-4410	ENGINEER: EKO TECH: AS-BUILTS REVISED STORM SEWER FINAL SUBMITTAL FOURTH SUBMITTAL THIRD SUBMITTAL SECOND SUBMITTAL FIRST SUBMITTAL
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CIVIL DESIGN ADVANTAGE



6" PERFORATED SUBDRAIN
NOT TO SCALE

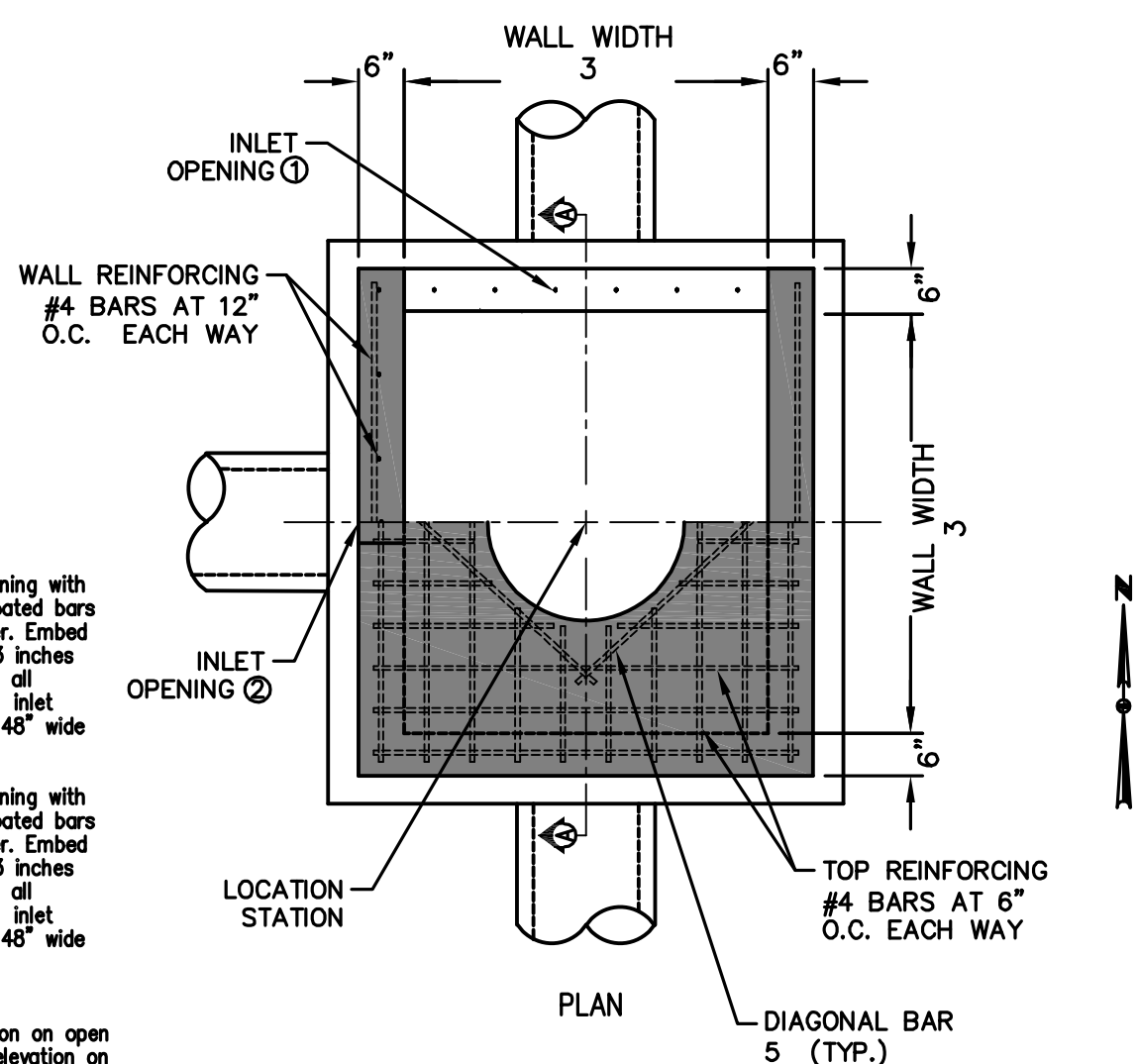
1. PLACE PERFORATIONS DOWN FOR ALL INSTALLATIONS.
2. ALL SUBDRAINS ARE TO BE TIED INTO STORM SEWER STRUCTURES AND THEIR LOCATIONS ARE TO BE INCLUDED IN THE AS-BUILTS FOR THE SUBDIVISION.
3. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT ONSITE DURING SUBGRADE PREPARATION AND PROOF ROLL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE GEOTECHNICAL ENGINEER IS PRESENT ONSITE AND A COPY OF ALL REPORTS AND FINDINGS REQUIRING ALTERATION FROM THE APPROVED PLAN SET BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT FOR REVIEW AND DISCUSSION PRIOR TO COMMENCING WITH PAVING WITHIN THE PROJECT.
4. CORE DRILL ALL STORM SEWER AND PLACE NON-SHRINK GROUT COLLAR AT CONNECTION.
5. RODENT GUARDS ARE TO BE INSTALLED WHERE THE PIPE TIES INTO THE STRUCTURE.



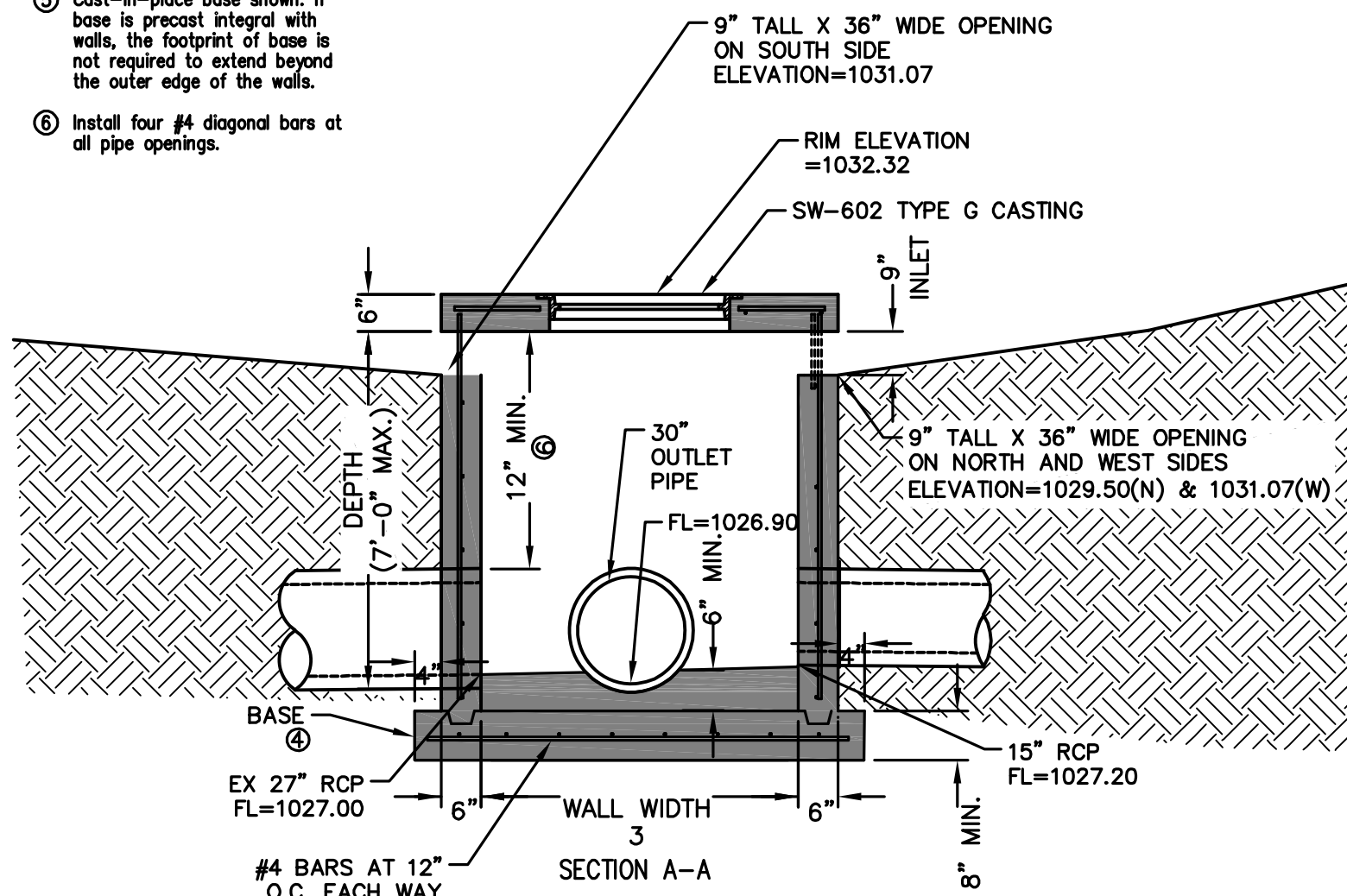
REINFORCING BAR LIST

D	W	Mark	Size	Length	Count
12"	2'-4"	4f1	4	2'-0"	3
		4f2	4	3'-8"	2
15"	2'-10"	4f1	4	2'-6"	3
		4f2	4	3'-8"	2
18"	3'-5"	4f1	4	3'-1"	3
		4f2	4	3'-8"	2
24"	4'-6"	4f1	4	4'-2"	3
		4f2	4	3'-8"	3
30"	5'-7"	4f1	4	5'-3"	3
		4f2	4	3'-8"	4
36"	6'-8"	4f1	4	6'-4"	3
		4f2	4	3'-8"	5
42"	7'-3"	4f1	4	6'-11"	3
		4f2	4	3'-8"	5

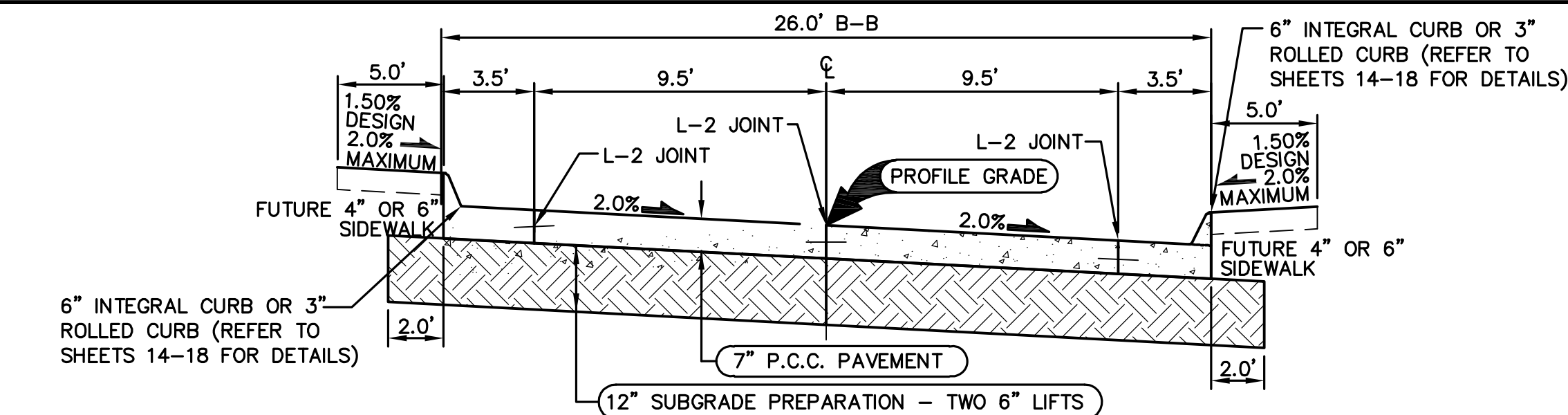
RCP APRON FOOTING DETAIL
NOT TO SCALE



1. Construct 1 inlet opening with 18-inch #4 epoxy-coated bars at 8 inches on center. Embed bars a minimum of 3 inches into walls and top at all openings. Construct 1 inlet opening 12" tall and 48" wide centered on the wall.
2. Construct 1 inlet opening with 18-inch #4 epoxy-coated bars at 8 inches on center. Embed bars a minimum of 3 inches into walls and top at all openings. Construct 1 inlet opening 18" tall and 48" wide centered on the wall.
3. Grade to inlet elevation on open sides. Grade to top elevation on closed side.
4. Wall widths are 60" X 60" for ST-XX and ST-XX. Provide 6 inches of wall width (minimum) each side of pipe opening.
5. Cast-in-place base shown. If base is precast integral with walls, the footprint of base is not required to extend beyond the outer edge of the walls.
6. Install four #4 diagonal bars at all pipe openings.



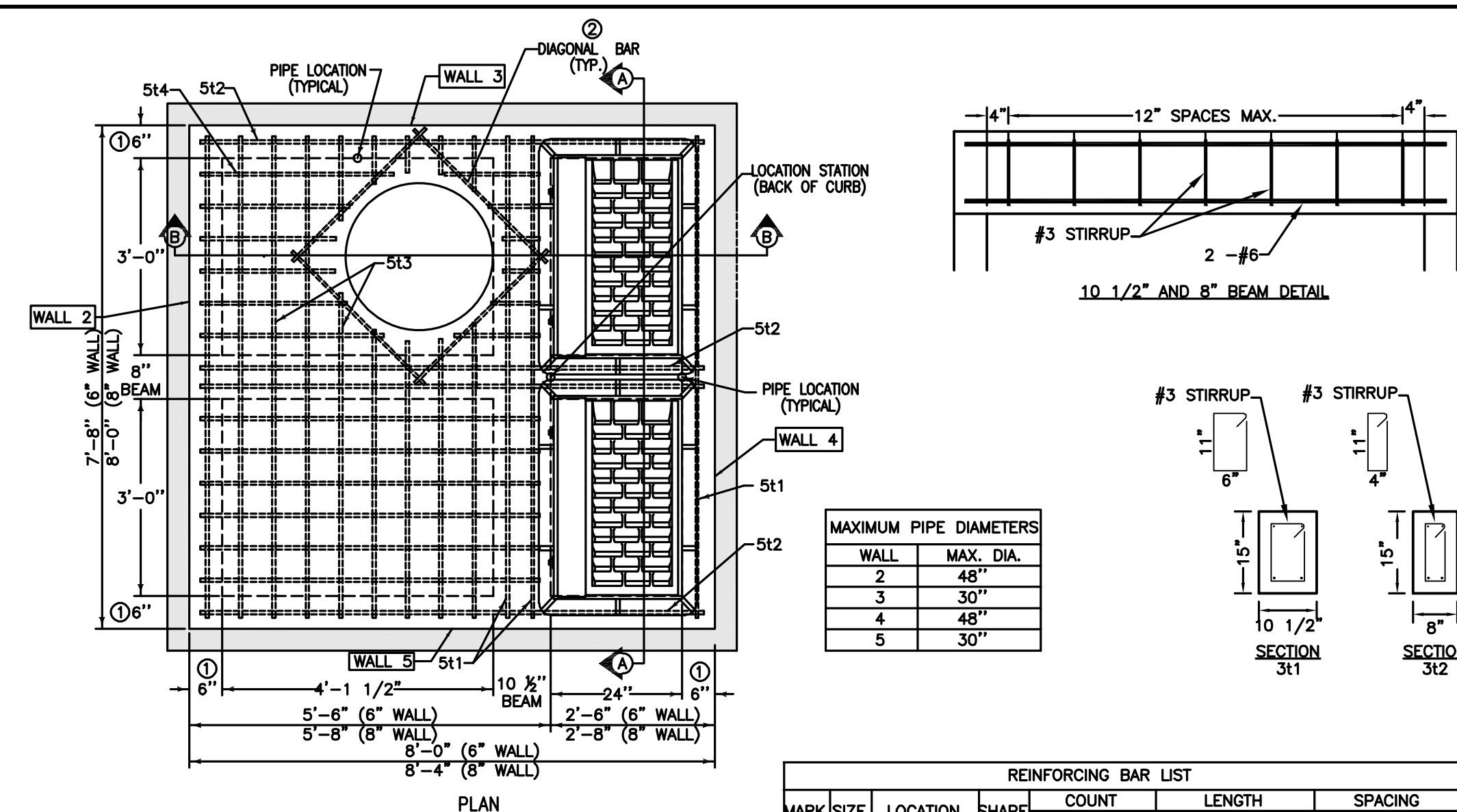
SW-513 INTAKE (ST-15)
NOT TO SCALE



- NOTES:
1. PREPARE SUBGRADE IN 2 - 6" LIFTS.
 2. MAXIMUM C JOINT SPACING IS 15'.
 3. PROVIDE 6" SIDEWALK ACROSS ALL DRIVEWAYS

26' B/B P.C.C. ROADWAY

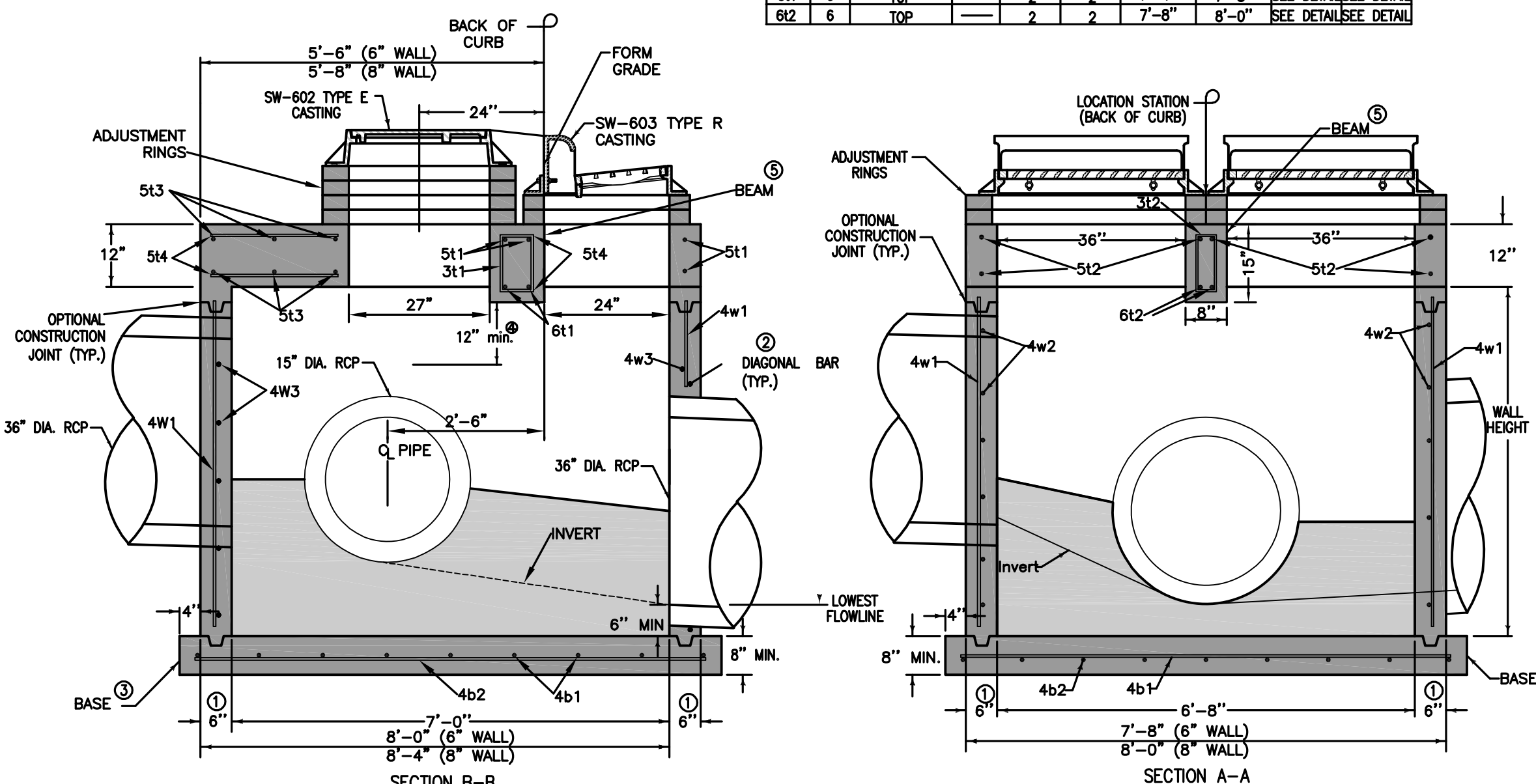
SE DAWSON LANE, SE CHAYSE LANE, SE GREYSON LANE AND SE SYDNEY LANE
NOT TO SCALE



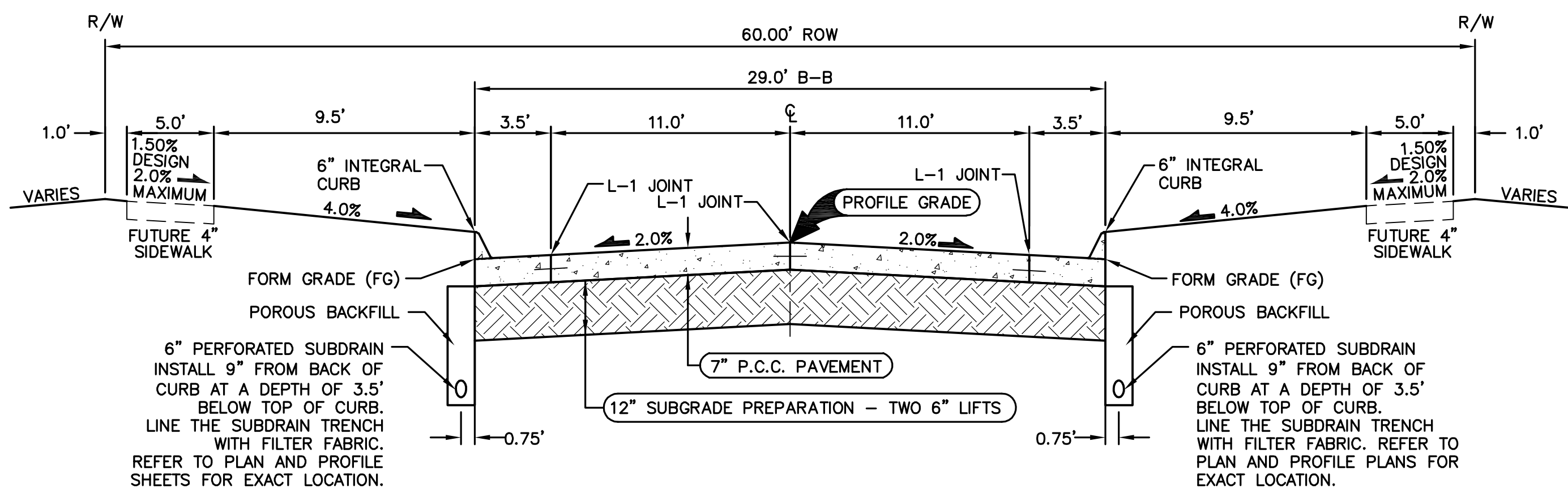
1. USE 8" WALL OPTION FOR INTAKE DEPTHS GREATER THAN 7'-0" AND LESS THAN 10'-0".
2. INSTALL FOUR #4 DIAGONAL BARS AT MANHOLE OPENING AND AT ALL PIPE OPENINGS.
3. CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
4. 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.
5. CONSTRUCT 8"x15" AND 10 1/2"x15" P.C. CONCRETE BEAMS INTEGRAL WITH 12" P.C. CONCRETE FLAT TOP.

REINFORCING BAR LIST

MARK	SIZE	LOCATION	SHAPE	COUNT	LENGTH	SPACING
3f1	3	TOP	7	7	3'-2"	12"
3f2	3	TOP	8	8	2'-10"	10 1/2"
4b1	4	BASE	9	9	7'-10"	12 1/2"
4b2	4	BASE	9	9	8'-2"	11 3/4"
4w1	4	WALLS	30	30	WALL HEIGHT MINUS 4"	12"
4w2	4	WALLS	VARIES	VARIES	7'-8"	12"
4w3	4	WALLS	VARIES	VARIES	7'-8"	12"
5f1	5	TOP	4	4	7'-4"	SEE DETAIL SEE DETAIL
5f2	5	TOP	6	6	7'-8"	SEE DETAIL SEE DETAIL
5f3	5	TOP	18	18	7'-4"	7'-8"
5f4	5	TOP	24	24	5'-2"	5'-4"
6f1	6	TOP	2	2	7'-4"	7'-8"
6f2	6	TOP	2	2	7'-8"	8'-0"



SW-506 MODIFIED DOUBLE GRATE INTAKE WITH MANHOLE (ST-13 & ST-27)
NOT TO SCALE



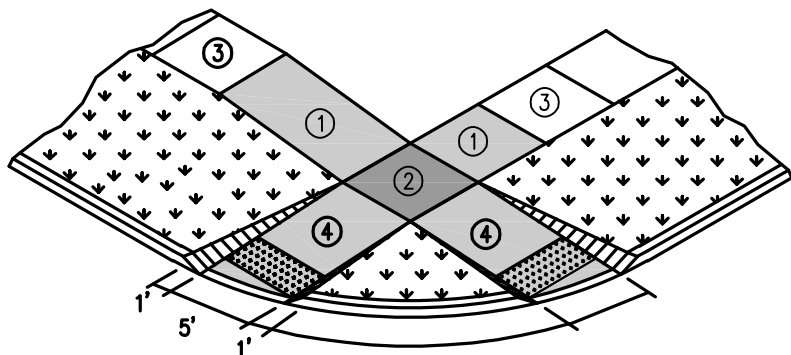
29' B/B P.C.C. ROADWAY WITH 60' R.O.W.

NOT TO SCALE SE MAXWELL LANE AND SE SAWYER POINTE

- NOTES:
1. PREPARE SUBGRADE IN 2 - 6" LIFTS.
 2. MAXIMUM C JOINT SPACING IS 15'.

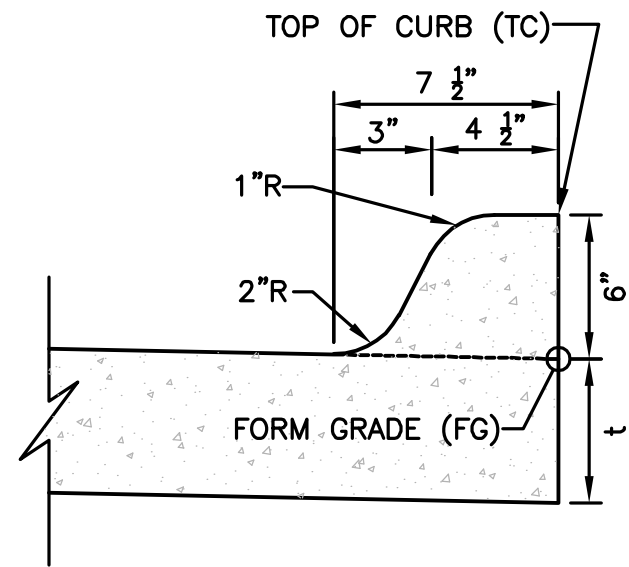
FILE: H:\2015\1507353\00\AS-BUILT - PLAT 1\1507353-COV-BET-TAB-AS-BUILTS-PLAT1.DWG
DATE: 10/4/2016 12:19 PM
PLOT BY: J. GAVATHON
MODIFIED BY: J. GAVATHON
TECH: ENG.

- Key
- CURB RAMP
 - TURNING SPACE
 - DETECTABLE WARNING

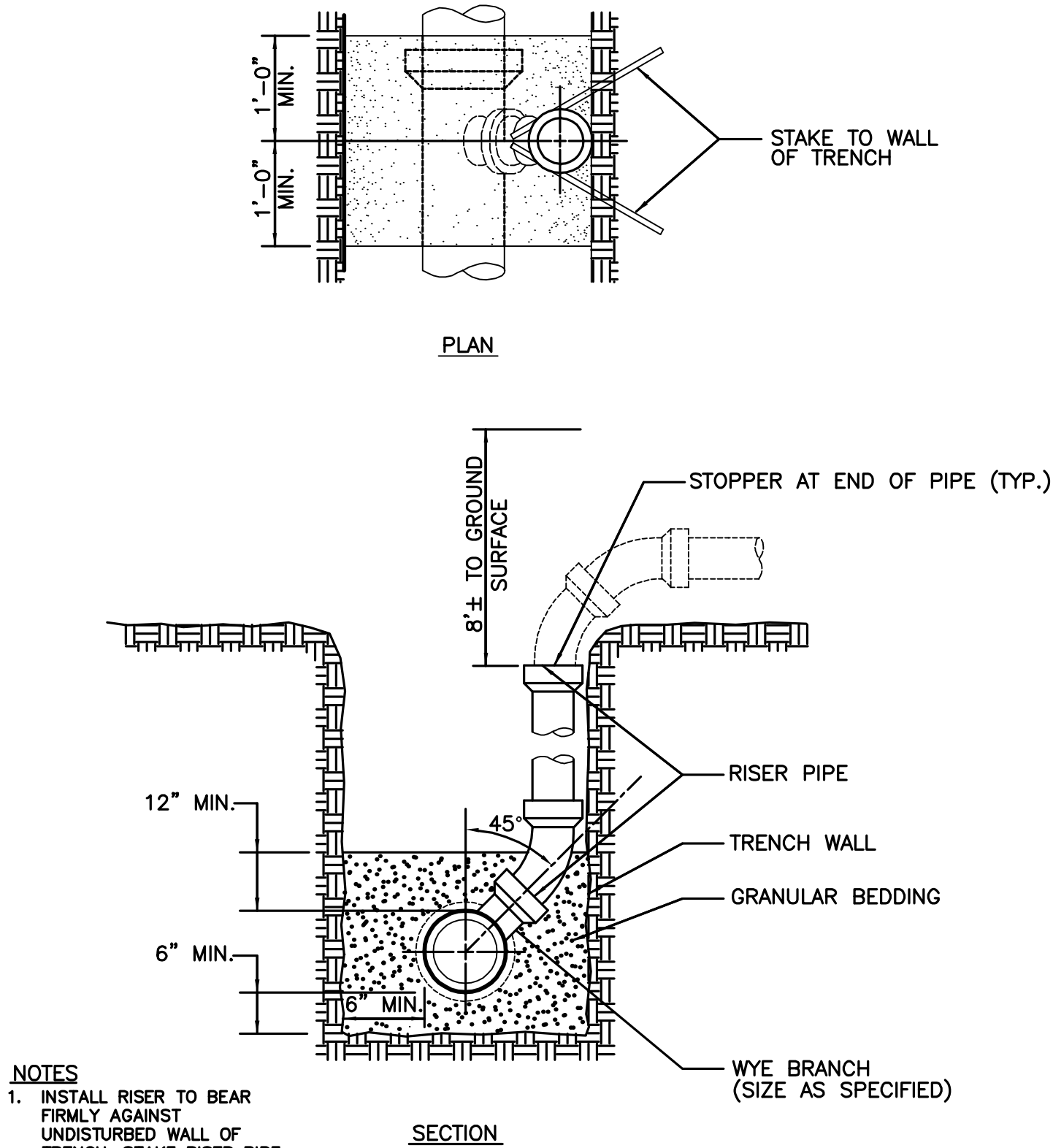


CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

INTEGRAL 6" STANDARD
SPOT ELEVATION REFERENCE
DETAIL
NOT TO SCALE



- ① Parallel Curb Ramp: Target cross slope of 1.5% with a maximum cross slope of 2.0%. The length of the parallel ramp is not to exceed 15 feet, regardless of resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.
- ② Turning Space: Target slope of 1.5% with a maximum slope perpendicular to the travel directions of 2.0%. At mid-block crossings, cross slope of landing may exceed 2.0% to match the roadway grade. Minimum 5 feet by 5 feet.
- ③ Target cross-slope of 1.5% with a maximum cross-slope of 2.0%.
- ④ Perpendicular curb ramp: Target running slope of 6.25% with maximum running slope of 8.3%.
- The minimum pavement depth for ramps and landings shall be 6-inches.



- NOTES
1. INSTALL RISER TO BEAR FIRMLY AGAINST UNDISTURBED WALL OF TRENCH. STAKE RISER PIPE IN PLACE PRIOR TO BACK-FILLING TO PREVENT MOVEMENT OF PIPE
 2. NOTCH WALL OF TRENCH TO RECEIVE PIPE WHERE POSSIBLE.

SANITARY SEWER SERVICE RISER
NOT TO SCALE

09/19/18	AS-BUILTS
05/25/17	REVISED STORM SEWER
02/01/17	FINAL SUBMITTAL
11/30/16	FOURTH SUBMITTAL
11/03/16	THIRD SUBMITTAL
10/13/16	SECOND SUBMITTAL
09/16/16	FIRST SUBMITTAL

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO TECH:



WAUKEE, IOWA

KETTLESTONE HEIGHTS PLAT 1
TYPICAL SECTIONS AND DETAILS

4
28
1507.353

FILE: H:\V015\1507253\DWG\AS-BUILT - PLAT 1\1507253-COV-BET-TAB-AS-BUILT5-PLAT1.DWG
DATE PLOTTED: 10/4/2016 12:19 PM
PLOTTER: HP DesignJet 2400
PLOTTED BY: J. WATSON MDO/NAID
TECH: ENG.

ESTIMATED PROJECT QUANTITIES		
ITEM NO.	ITEM DESCRIPTION	UNIT QUANTITY
1	COMBINED CLEARING AND GRUBBING	AC 24.0
2	STRIPPING, SALVAGING AND SPREAD TOPSOIL	LS 1
3	CLASS 10 EXCAVATION	LS 1
4	SUBGRADE PREPARATION	SY 13857
5	SANITARY SEWER GRAVITY MAIN, 8" DIA	LF 4373
6	SANITARY SEWER SERVICE STUB, 4" DIA	EA 143
7	SUBDRAIN, 6" PERFORATED PVC	LF 1836
8	STORM SEWER, 8" PERFORATED PVC	LF 1616
9	STORM SEWER, 12" HDPE	LF 148
10	STORM SEWER, 12" RCP	LF 87
11	STORM SEWER, 15" RCP	LF 1355
12	STORM SEWER, 18" RCP	LF 831
13	STORM SEWER, 24" RCP	LF 152
14	STORM SEWER, 30" RCP	LF 379
15	STORM SEWER, 36" RCP	LF 255
16	STORM SEWER SERVICE STUB, 4" DIA	EA 143
17	STORM SEWER, 12" RCP APRON W/FOOTING & APRON GUARD	EA 2
18	STORM SEWER, 15" RCP APRON W/FOOTING & APRON GUARD	EA 4
19	STORM SEWER, 18" RCP APRON W/FOOTING & APRON GUARD	EA 2
20	STORM SEWER, 24" RCP APRON W/FOOTING & APRON GUARD	EA 2
21	STORM SEWER, 30" RCP APRON W/FOOTING & APRON GUARD	EA 2
22	STORM SEWER, 36" RCP APRON W/FOOTING & APRON GUARD	EA 1
23	WATER MAIN, 8" DIA	LF 3716
24	WATER MAIN, DIRECTIONAL BORE, 8" DIA	LF 70
25	WATER SERVICE STUB, 1" DIA	EA 143
26	VALVE, 8" DIA	EA 13
27	TAPPING SLEEVE WITH VALVE, 8" DIA	EA 2
28	FIRE HYDRANT ASSEMBLY	EA 13
29	TEMPORARY FIRE HYDRANT ASSEMBLY	EA 1
30	MANHOLE, SW-301, 48" (SANITARY SEWER)	EA 22
31	STORM SEWER CLEANOUT	EA 9
32	MANHOLE, SW-401, 48" (STORM SEWER)	EA 17
33	MANHOLE, SW-401, 60" (STORM SEWER)	EA 1
34	MANHOLE, SW-401, 72" (STORM SEWER)	EA 2
35	INTAKE, SW-501	EA 1
36	INTAKE, SW-505	EA 6
37	INTAKE, SW-506	EA 4
38	INTAKE, MODIFIED SW-506	EA 2
39	INTAKE, SW-512	EA 2
40	INTAKE, SW-513	EA 1
41	PAVEMENT, 7" P.C.C.	SY 11792
42	PAVEMENT, 8" P.C.C.	SY 252
43	PAVEMENT, 9" P.C.C.	SY 193
44	PAVEMENT, 6" P.C.C. SIDEWALK RAMPS	SY 105
45	DETECTABLE WARNING PANELS	SF 260
46	PAVEMENT, 4" P.C.C. SIDEWALK	SY 1155
47	SEEDING, FERTILIZING, AND MULCHING	AC 21.2
48	TRAFFIC CONTROL	LS 1
49	EROSION CONTROL	LS 1
50	ROCK OUTLET PROTECTION, CLASS 'E' RIP RAP	TON 25
51	MAILBOX CLUSTER	EA 4
52	6" P.C.C. FLUME,	SY 70
53	LANDSCAPING	LS 1

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND TO THE 2016 EDITION OF SUDAS STANDARD SPECIFICATIONS. THE WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IF ANY DISCREPANCIES.
- WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.
- THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING HIS EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
- THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN ALL SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT. INCLUDING STAGING OF CONSTRUCTION DETAILS.
- THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE PROPOSED AND EXISTING RIGHT OF WAY, CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY (48 HRS NOTICE) THE FOLLOWING:
 - CITY OF WAUKEE ENGINEERING DEPARTMENT
 - APPROPRIATE UTILITY COMPANIES
 - OWNER
 - CIVIL DESIGN ADVANTAGE

* 48 HOUR NOTICE SHALL BE GIVEN TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO WEEKEND AND HOLIDAY WORK.

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
	THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2016 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.
	ALL REFERENCES TO SECTIONS AND FIGURES ARE TO THE SUDAS STANDARD SPECIFICATIONS. CITY OF WAUKEE STANDARD DETAILS SHALL GOVERN IF ANY DISCREPANCIES.
1	CLEAR AND GRUB ALL AREAS AFFECTED BY GRADING OPERATIONS. THE CONTRACTOR SHALL FIELD VERIFY CLEARING AND GRUBBING NEEDS PRIOR TO BIDDING. INCLUDES REMOVAL OF ANY EXISTING FIELD FENCE. ALL MATERIAL THAT IS REMOVED FROM THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. INCLUDED REMOVAL OF EXISTING CROPS FOR CONSTRUCTION OF TEMPORARY ACCESS. DO NOT DISTURB CROPS OUTSIDE OF THE PROJECT LIMITS.
2	STRIP, SALVAGE AND RE-SPREAD TOPSOIL PER SECTION 2010 OF SUDAS STANDARD SPECIFICATIONS OR PROVIDE THE CITY WITH A TOPSOIL PRESERVATION PLAN. TOPSOIL TO BE RESPREAD SHALL BE FREE OF ROCK AND DEBRIS AND BE SUITABLE FOR THE GROWTH OF GRASS. COORDINATE LOCATION OF STOCKPILE WITH OWNER.
3	EXCAVATION INCLUDES ALL WORK NECESSARY TO ACHIEVE PROPER GRADES AS SHOWN IN THE PLANS. NO PAYMENT FOR OVERHAUL SHALL BE ALLOWED.
4	REFER TO SHEET 3 FOR TYPICAL LOCATIONS AND THICKNESS.
5	SANITARY SEWER FOR 8" SHALL BE PVC TRUSS PIPE. ANY CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 3010.101 AND 3010.103 FOR PIPE EMBEDMENT DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. EXISTING SANITARY SEWER WILL NEED TO BE RETESTED AFTER SADDLE WYE INSTALLATION.
7	REFER TO SHEET 3 FOR DETAIL.
7-15	REFER TO FIGURE 3010.102 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. CONNECTIONS TO EXISTING STORM SEWER PIPE AND STRUCTURES SHALL BE CONSIDERED INCIDENTAL. WRAP ALL PIPE JOINTS IN ENGINEERING FABRIC. CLEAN AND TELEWISE STORM SEWER PRIOR TO PAVING AND PROVIDE TELEVISING REPORT TO CITY IN HARD COPY AND DISC FORMAT. TELEVISING SHALL BE CONSIDERED INCIDENTAL. IF STORM SEWER CROSSES ABOVE A WATER MAIN OR CROSSES LESS THAN 18 INCHES BELOW A WATER MAIN THEN STORM SEWER SHALL BE CONSTRUCTED OF REINFORCED CONCRETE WITH A FLEXIBLE O-RING GASKET JOINT RATED AT 13 PSI OR GREATER. O-RING GASKET JOINTS SHALL BE INSTALLED ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATER TO THE SEWER IS AT LEAST TEN FEET.
6, 16, 25	REFER TO SHEET 2 FOR SERVICE LOCATION DETAIL. STORM SEWER SERVICES TYING INTO EXISTING RCP PIPE ARE TO BE CORE DRILLED.
17-22	THE LAST THREE SECTIONS AND APRON SHALL BE CONNECTED WITH PIPE CONNECTORS. REFER TO FIG. 4030.221 - RCP APRON SECTION FOOTING FOR FOOTING CONSTRUCTION DETAILS. APRON GUARD REQUIRED ON ALL APRONS. RCP APRON FOOTING, PIPE APRON GUARD AND PIPE CONNECTORS TO BE CONSIDERED INCIDENTAL. INSTALL CLAY WATERSTOPS AT ALL RCP APRONS, MIN. 3' LONG.
23-25	REFER TO FIG. 3010.101 AND FIG. 3010.104 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 5010.101 FOR THRUST BLOCK DETAILS. REFER TO FIG. 5010.102 FOR TRACER SYSTEM DETAILS. ALL FITTINGS, POLYETHYLENE WRAP, THRUST BLOCKS, AND TRACER WIRE SYSTEM SHALL BE CONSIDERED INCIDENTAL.
28-29	REFER TO FIG. 5020.201 - FIRE HYDRANT ASSEMBLY FOR FIRE HYDRANT CONSTRUCTION DETAILS. INCLUDES ANCHORING TEE, ANCHORING ELBOW, GATE VALVE, VALVE BOX, ANCHORING PIPE, ANCHORING COUPLING, ELBOWS, STORZ FITTINGS, POLYETHYLENE WRAP, THRUST BLOCK AND TRACER WIRE SYSTEM AND FIRE HYDRANT.
30	REFER TO FIG. 6010.301 - CIRCULAR SANITARY SEWER MANHOLE (SW-301) FOR CONSTRUCTION DETAILS. CASTINGS IN PAVEMENT SHALL BE TYPE B RING AND COVER. WHEN CASTINGS ARE NOT IN PAVEMENT, INSTALL MANHOLE CONE SECTION, MANHOLE STEPS, AND RING/COVER CASTING SUCH THAT SEPARATION IS MAINTAINED BETWEEN MANHOLE COVERS AND PAVED AREAS (BACK OF CURB, SIDEWALK PAVEMENT, SIDEWALK APPROACHES/RAMPS). ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED.
31	ADD PVC THREADED CAP ON THE CLEAN OUTS (INSIDE CASTING)

- PRIOR TO CONSTRUCTION, THE PROJECT MANAGER SHALL CONTACT THE WAUKEE ENGINEERING DEPARTMENT AND SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST ONE WEEK PRIOR TO THE ANTICIPATED START OF CONSTRUCTION.
- SPECIAL CARE SHALL BE TAKEN WHEN FORMING AT INTERSECTIONS SO THE PROFILES SHOWN ON THE PLANS AND THE ELEVATIONS SHOWN ON THE INTERSECTION DETAILS ARE OBTAINED. SHORT LENGTHS OF FORMS OR FLEXIBLE FORMS MAY BE NECESSARY AT THESE LOCATIONS.
- TO OBTAIN THE CORRECT FORM GRADES AT LOW POINTS WHERE INTAKES ARE LOCATED, THE CONTRACTOR MUST EXERCISE ADDITIONAL CARE WHEN PAVING FULL WIDTH PAVEMENTS. THIS MAY REQUIRE POURING ONE HALF OF THE PAVEMENT AT A TIME OR OTHER METHODS APPROVED BY THE ENGINEER.
- THE CONTRACTOR MAY BE REQUIRED AS DIRECTED BY THE ENGINEER OR THE CITY, TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY. THIS WILL BE INCIDENTAL TO THE BID ITEM TRAFFIC CONTROL. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED.
- PLAN AND PROFILE SHEETS INCLUDED IN THE PROJECT ARE FOR THE PURPOSE OF ALIGNMENT, LOCATION AND SPECIFIC DIRECTIONS FOR WORK TO BE PERFORMED UNDER THIS CONTRACT. IRRELEVANT DATA ON THESE SHEETS IS NOT TO BE CONSIDERED A PART OF THIS CONTRACT.
- THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
- THE CONTRACTOR IS REQUIRED TO BE FAMILIAR WITH AND COMPLY WITH OSHA STANDARDS. NOTHING WITHIN THESE PLANS SHALL RELIEVE THE CONTRACTOR OF THIS REQUIREMENT.
- ALL MATERIAL TESTING SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.
- PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
- ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
- SIDEWALKS, ACCESSIBLE CURB RAMPS AND SIDEWALK RAMPS INCLUDING RAISED TRUNCATED DOME AND DETECTABLE WARNINGS AND WARNING PANELS SHALL BE DESIGNED AND INSTALLED TO THE LATEST P.R.O.W.A.G. AND A.D.A. REQUIREMENTS.
- PLACE 3/4" EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDINGS. PLACE 1/2" EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C PAVEMENT. THE PCC RAMP JOINT LOCATED AT THE BACK OF CURB AND ALL EXPANSION JOINTS SHALL BE SEALED.
- REMOVE DEBRIS AND MUD SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY AND BEFORE RAIN EVENTS.

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
32-34	REFER TO FIG. 6010.401 - CIRCULAR STORM SEWER MANHOLE (SW-401) FOR CONSTRUCTION DETAILS. MANHOLE INSIDE DIAMETERS GREATER THAN 48" SHALL BE CONSIDERED INCIDENTAL.
35-38	REFER TO FIG. 6010.514 - BOXOUTS FOR GRATE INTAKES. REFER TO FIG. 6010.603 - CASTINGS FOR GRATE INTAKES FOR TYPE R GRATE DETAILS AND FIG. 6010.602 - CASTINGS FOR STORM SEWER MANHOLES FOR TYPE E CASTING DETAILS. THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR INTAKE CASTINGS IS 6". THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR MANHOLE CASTINGS IS 12".
35	REFER TO FIG 6010.503 - SINGLE GRATE INTAKE WITH MANHOLE (SW-503) FOR CONSTRUCTION DETAILS.
36	REFER TO FIG 6010.505 - DOUBLE GRATE INTAKE (SW-505) FOR CONSTRUCTION DETAILS.
37	REFER TO FIG 6010.506 - DOUBLE GRATE INTAKE WITH MANHOLE (SW-506) FOR CONSTRUCTION DETAILS.
38	REFER TO SHEET 3 FOR CONSTRUCTION DETAILS.
39	REFER TO FIG 6010.512 - CIRCULAR AREA INTAKE (SW-512) FOR CONSTRUCTION DETAILS.
40	REFER TO SHEET 3 FOR CONSTRUCTION DETAILS.
41-43	REFER TO FIG. 7010.101 - JOINTS (PV-101) FOR JOINT DETAILS. MAXIMUM CD AND C JOINT SPACING IS 15 FEET.
44-45	REFER TO FIG. 7030.204 - GENERAL SIDEWALK AND ACCESSIBLE RAMP DETAILS AND FIG. 7030.208 - CURB RAMPS WITHIN INTERSECTION RADIUS FOR CLASS B OR C SIDEWALK FOR CONSTRUCTION DETAILS. DETECTABLE WARNING PANELS TO BE ARMOR TILE, ADA SOLUTIONS OR APPROVED EQUAL, BRICK RED IN COLOR. ACCESSIBLE CURB RAMPS INCLUDING TURNING SPACES SHALL BE 6" THICK P.C.C.
46	REFER TO SHEET 6 FOR LOCATION.
47	THE SITE SEEDING SHALL CONFORM TO THE SPECIFICATION FOR TYPE (4) URBAN TEMPORARY EROSION CONTROL SEED MIXTURE. <u>SEEDING QUANTITIES</u> -TYPE 1 PERMANENT LAWN MIXTURE = 1.85 AC -TYPE 4 URBAN TEMPORARY EROSION CONTROL MIXTURE = 19.36 AC
48	ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED..
49	REFER TO SHEETS 9 AND 10 OF THE CONSTRUCTION DRAWINGS FOR EROSION AND SEDIMENT CONTROLS. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR SPECIFIC DETAILS. <u>EROSION CONTROL QUANTITIES</u> - 1 CONCRETE WASH PIT - 4900 LF OF SILT FENCE - 21.5 ACRES OF SEEDING, FERTILIZING AND MULCHING. - 13 INLET PROTECTION DEVICES - 1 10" CMP/HDPE TEMPORARY STANDPIPE - 2 18" CMP/HDPE TEMPORARY STANDPIPE
50	INSTALL ENGINEERING FABRIC UNDER ALL RIP-RAP. ENGINEERING FABRIC SHALL BE CONSIDERED INCIDENTAL.
51	REFER TO SHEET 2 FOR CONSTRUCTION DETAILS. MAILBOX CLUSTERS ARE LOCATED BETWEEN LOTS 6/7, 18/19, 22/23 AND 44/45.
52	REFER TO SHEET 2 FOR CONSTRUCTION DETAILS AND SHEET 6 FOR LOCATION.
53	REFER TO LANDSCAPE PLAN ON SHEET 38.

- DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE R.O.W.
- ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
- IN THE EVENT OF A DISCREPANCY BETWEEN DETAILED PLANS AND QUANTITIES, THE DETAILED PLANS SHALL GOVERN.
- ALL FIELD TILES ENCOUNTERED SHALL BE REPAIRED AND CONNECTED TO STORM SEWERS WHERE POSSIBLE. LOCATIONS SHALL BE PROVIDED TO THE ENGINEER FOR NOTATION ON AS-BUILTS.
- ALL CONSTRUCTION STAKING TO BE COMPLETED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR. ALL CURB DROPS AND SIDEWALK/SHARED USE PATH SHALL ALSO BE STAKED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR
- THE CONTRACTOR SHALL SUBMIT A LIST OF CONSTRUCTION MATERIALS TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
- A GEOTECHNICAL ENGINEER SHALL BE ONSITE DURING CONSTRUCTION AND FOR PROOF ROLLING TO INSPECT SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE GEOTECHNICAL ENGINEER IS PRESENT. A COPY OF ALL REPORTS AND FINDINGS REQUIRING ALTERATION FROM THE APPROVED PLAN SET IS TO BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT FOR REVIEW AND DISCUSSION PRIOR TO COMMENCING WITH PAVING WITHIN THE PROJECT.
- THE CONTRACTOR SHALL COORDINATE ALL EXISTING PUBLIC UTILITY CONNECTIONS WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
- ALL TESTING SHALL BE COMPLETED ACCORDING TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE WAUKEE ENGINEERING DEPARTMENT SHALL BE PRESENT TO WITNESS ALL TESTING.
- AS-BUILTS SHALL BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT INCLUDING ALL UTILITIES AND AS-BUILT GRADES FOR DRAINAGE SWALES, OVERFLOWS, ACCESSIBLE RAMPS AND DETENTION FACILITIES. THE CONTRACTOR SHALL PROVIDE INFORMATION TO THE DESIGN ENGINEER FOR INCLUSION ON THE RECORD AS-BUILT DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR CLEANING AND TELEVISING ALL STORM AND SANITARY SEWERS. ALL CLEANING AND TELEVISING SHALL BE APPROVED BY THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO PAVING. A COPY OF THE VIDEOS AND A HARD COPY OF THE INSPECTION REPORT SHALL BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. ALL SANITARY MANHOLES SHALL BE VACUUM TESTED.
- ALL FIRE HYDRANTS INCLUDING ANY RELOCATED HYDRANTS SHALL HAVE STORZ FITTINGS.
- ALL PROPOSED PEDESTRIAN CROSSINGS SHALL BE INSTALLED AS PART OF THE PLAT IMPROVEMENTS.
- ALL CONNECTIONS TO EXISTING MANHOLES ARE TO BE CORE DRILLED AND USE A LINK SEAL.
- ALL MANHOLES SHALL HAVE A MINIMUM OF 1 - 4" ADJUSTING RING TO ALLOW FOR FUTURE ADJUSTMENT SHOULD THE STRUCTURE END UP IN A DRIVEWAY.

09/19/18
05/25/17
02/01/17
11/30/16
11/03/16
11/03/16
09/16/16

AS-BUILTS
REVISED STORM SEWER
FINAL SUBMITTAL
FOURTH SUBMITTAL
THIRD SUBMITTAL
SECOND SUBMITTAL
FIRST SUBMITTAL

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TECH:
ENGINEER: EKO

KETTLESTONE HEIGHTS PLAT 1

QUANTITIES AND REFERENCE NOTES

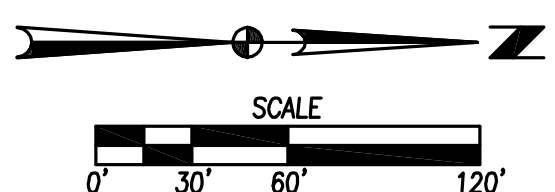
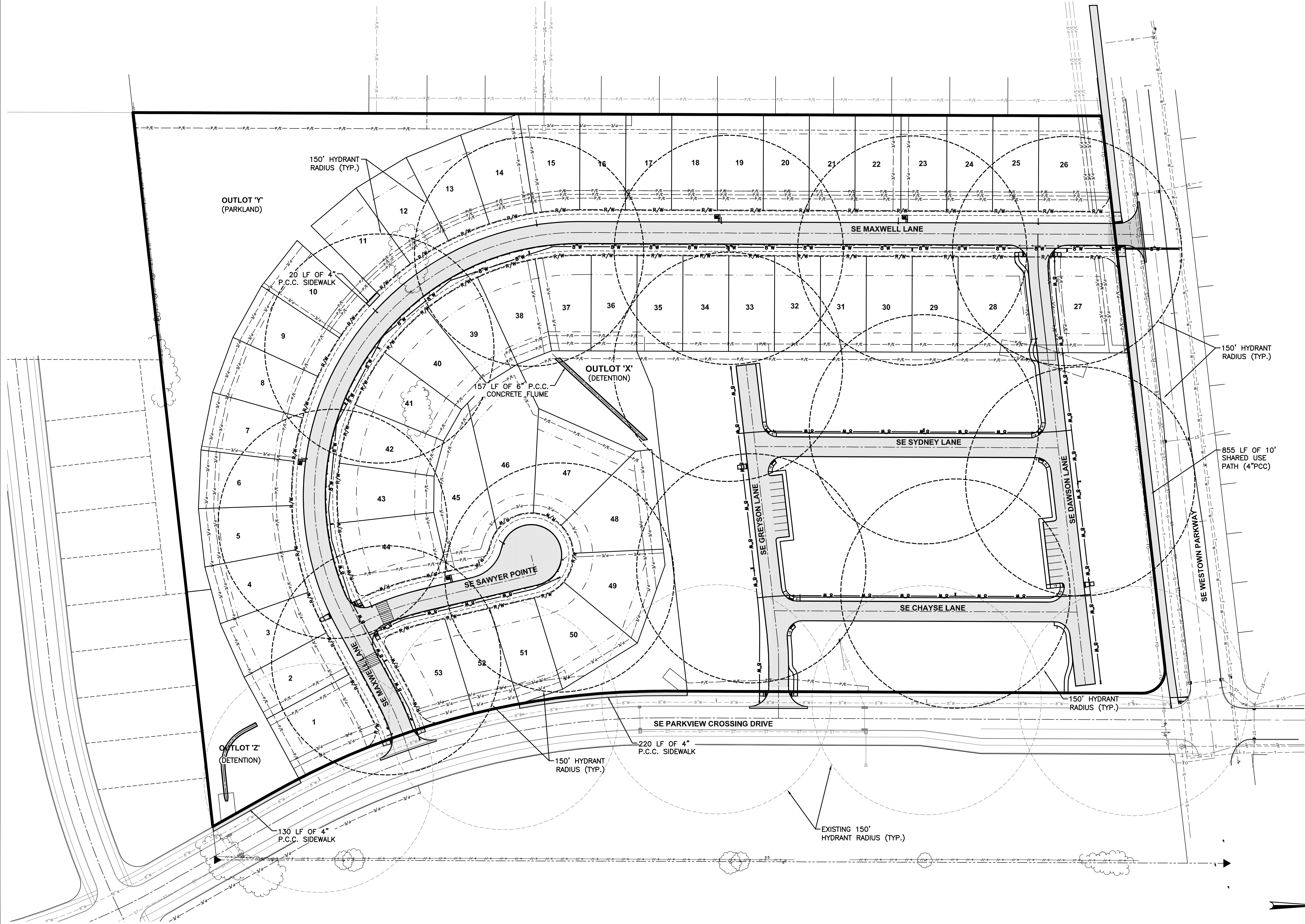
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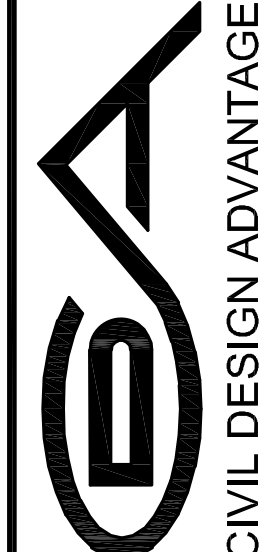
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WAUKEE, IOWA

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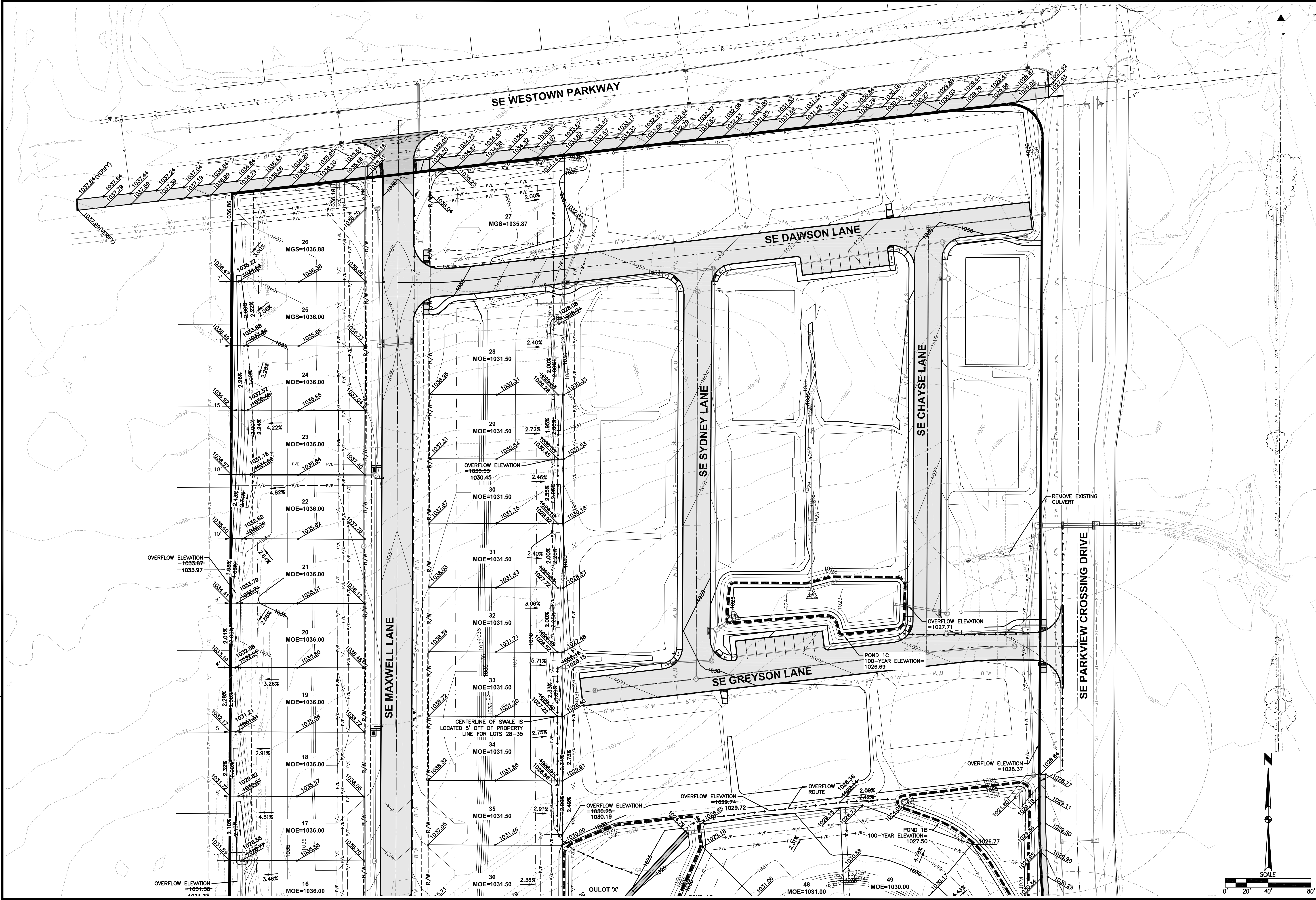
KETTLESTONE HEIGHTS PLAT 1
HYDRANT COVERAGE PLAN



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ENGINEER: EKO

AS-BUILTS	09/19/18
REVISED STORM SEWER	05/25/17
FINAL SUBMITTAL	02/01/17
FOURTH SUBMITTAL	11/30/16
THIRD SUBMITTAL	11/03/16
SECOND SUBMITTAL	10/13/16
FIRST SUBMITTAL	09/16/16

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09/19/18

AS-BUILTS

05/25/17

REVISED STORM SEWER

02/01/17

FINAL SUBMITTAL

11/30/16

FOURTH SUBMITTAL

11/03/16

THIRD SUBMITTAL

10/13/16

SECOND SUBMITTAL

09/16/16

FIRST SUBMITTAL

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ENGINEER: EKO

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KETTLESTONE HEIGHTS PLAT 1

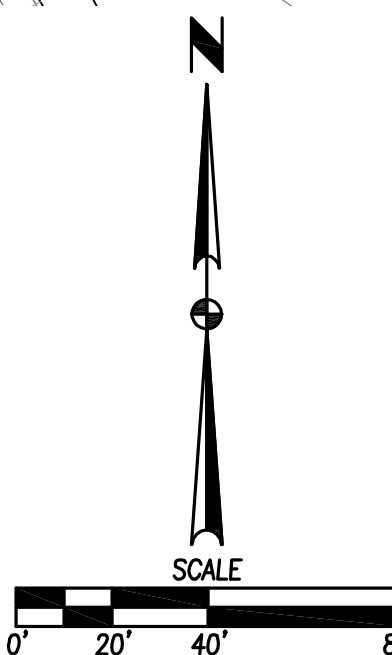
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GRADING PLAN

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WAUKEE, IOWA

CIVIL DESIGN ADVANTAGE



AS-BUILTS	09/19/18
REVISED STORM SEWER	05/25/17
FINAL SUBMITTAL	02/01/17
FOURTH SUBMITTAL	11/30/16
THIRD SUBMITTAL	11/03/16
SECOND SUBMITTAL	10/13/16
FIRST SUBMITTAL	09/16/16

TECH:

WALKEE IOWA

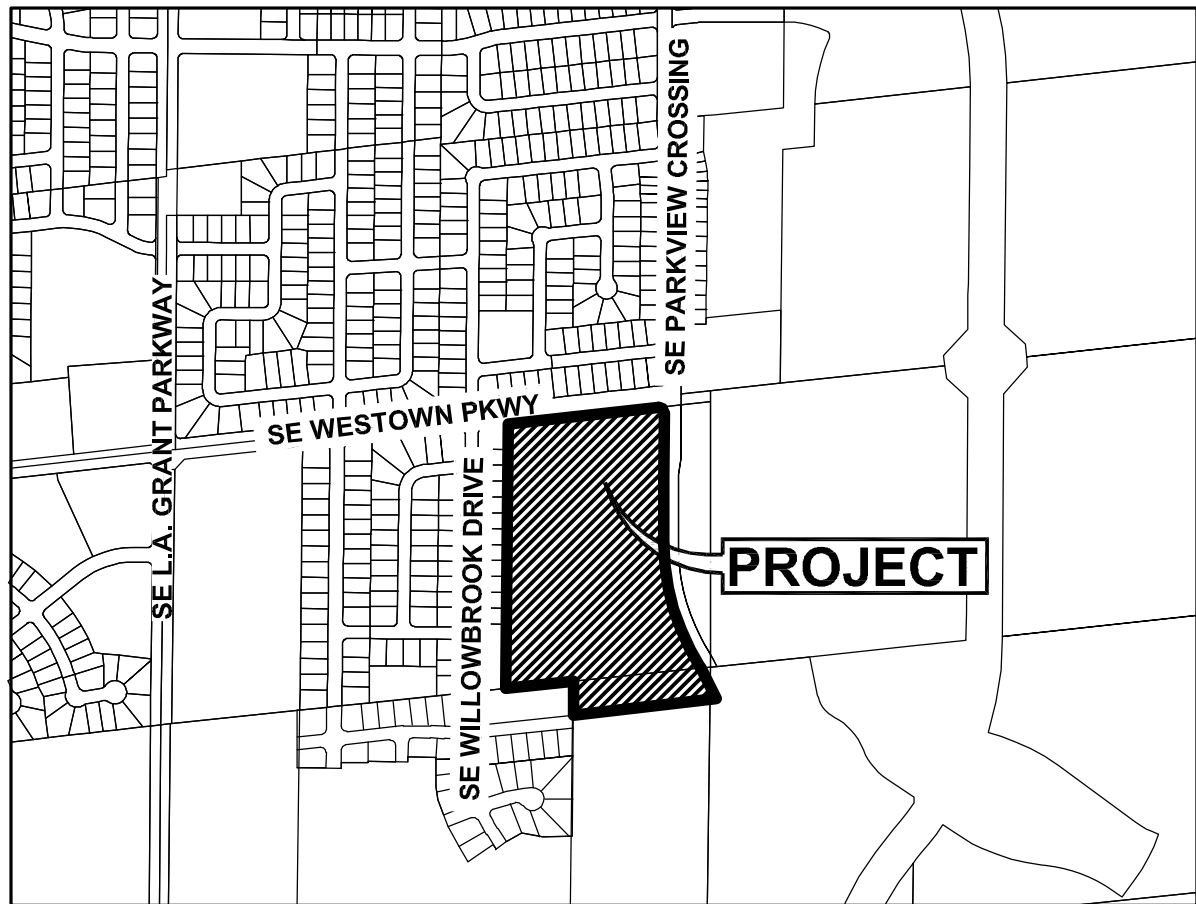
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KETTLESTONE HEIGHTS

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	4900
2	SEEDING, FERTILIZING, AND MULCHING	AC	21.5
3	INLET PROTECTION DEVICES	EA	13
4	CONCRETE WASHOUT PIT	EA	1
5	10" CMP/HDPE TEMPORARY STANDPIPE	EA	1
6	18" CMP/HDPE TEMPORARY STANDPIPE	EA	2

DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO FOX CREEK ±700 FT
TOTAL AREA DISTURBED TO DISCHARGE POINT 12.7 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT) 45,720 CU FT

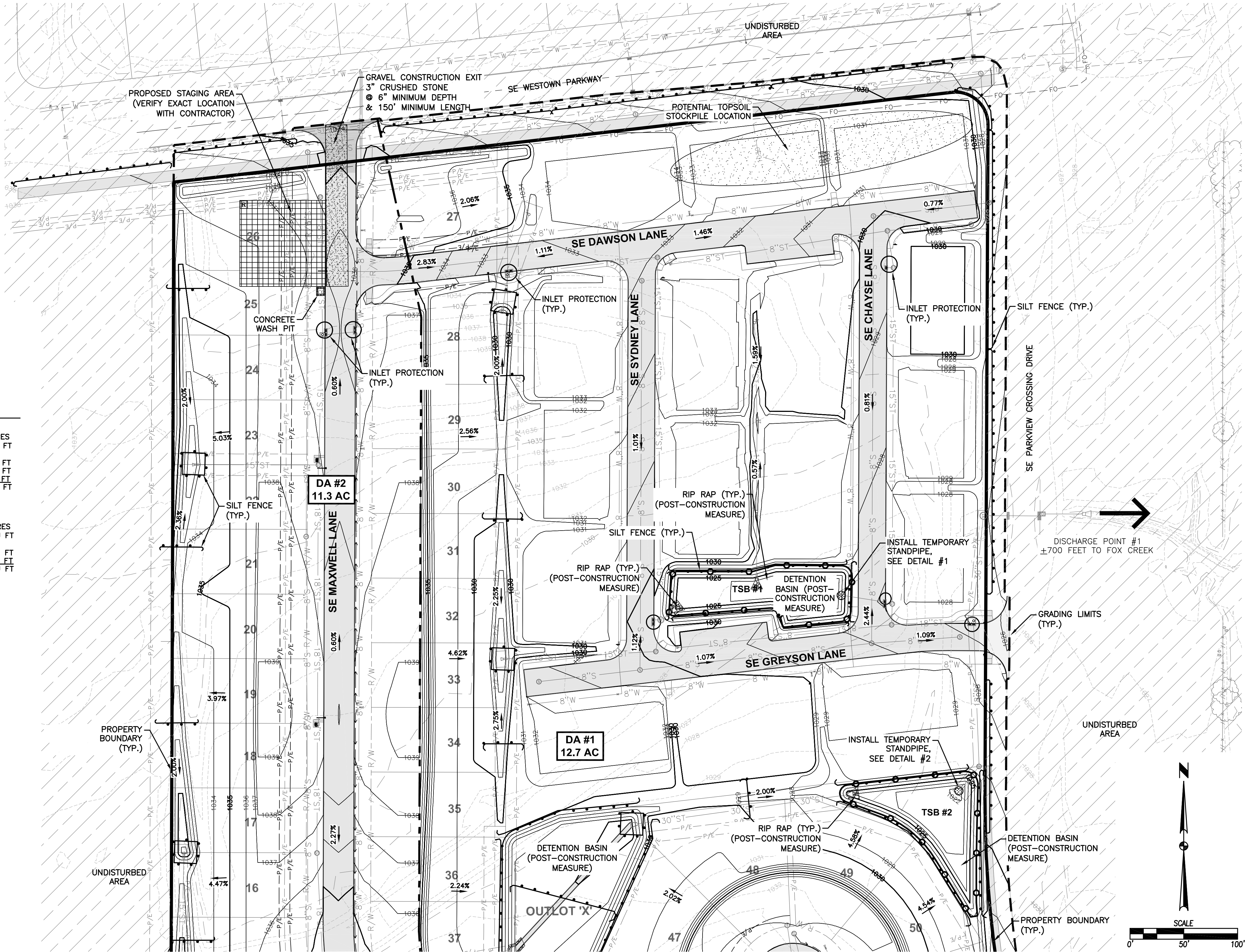
VOLUME PROVIDED IN SILT FENCE (2,988 LF @ 4.5 CU FT/LF OF FENCE) 13,446 CU FT
VOLUME PROVIDED IN TSB #1 19,004 CU FT
VOLUME PROVIDED IN TSB #2 18,128 CU FT
TOTAL VOLUME PROVIDED 50,578 CU FT

DISCHARGE POINT #2 TO FOX CREEK ±700 FT
TOTAL AREA DISTURBED TO DISCHARGE POINT 11.3 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT) 40,680 CU FT

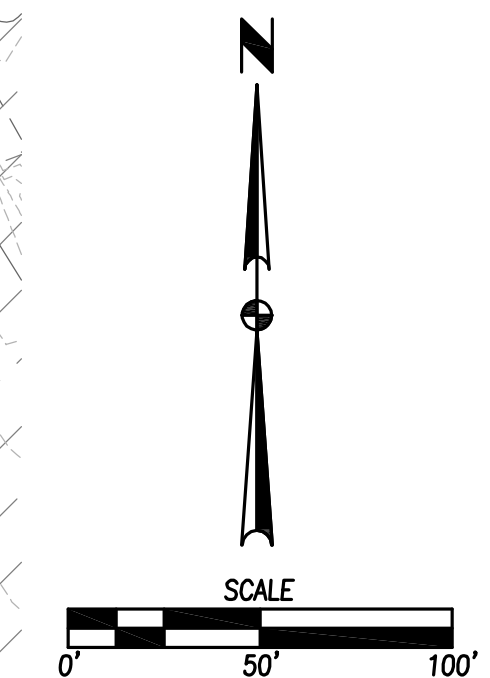
VOLUME PROVIDED IN SILT FENCE (1,912 LF @ 4.5 CU FT/LF OF FENCE) 8,604 CU FT
VOLUME PROVIDED IN TSB #3 41,004 CU FT
TOTAL VOLUME PROVIDED 49,608 CU FT

SWPPP LEGEND

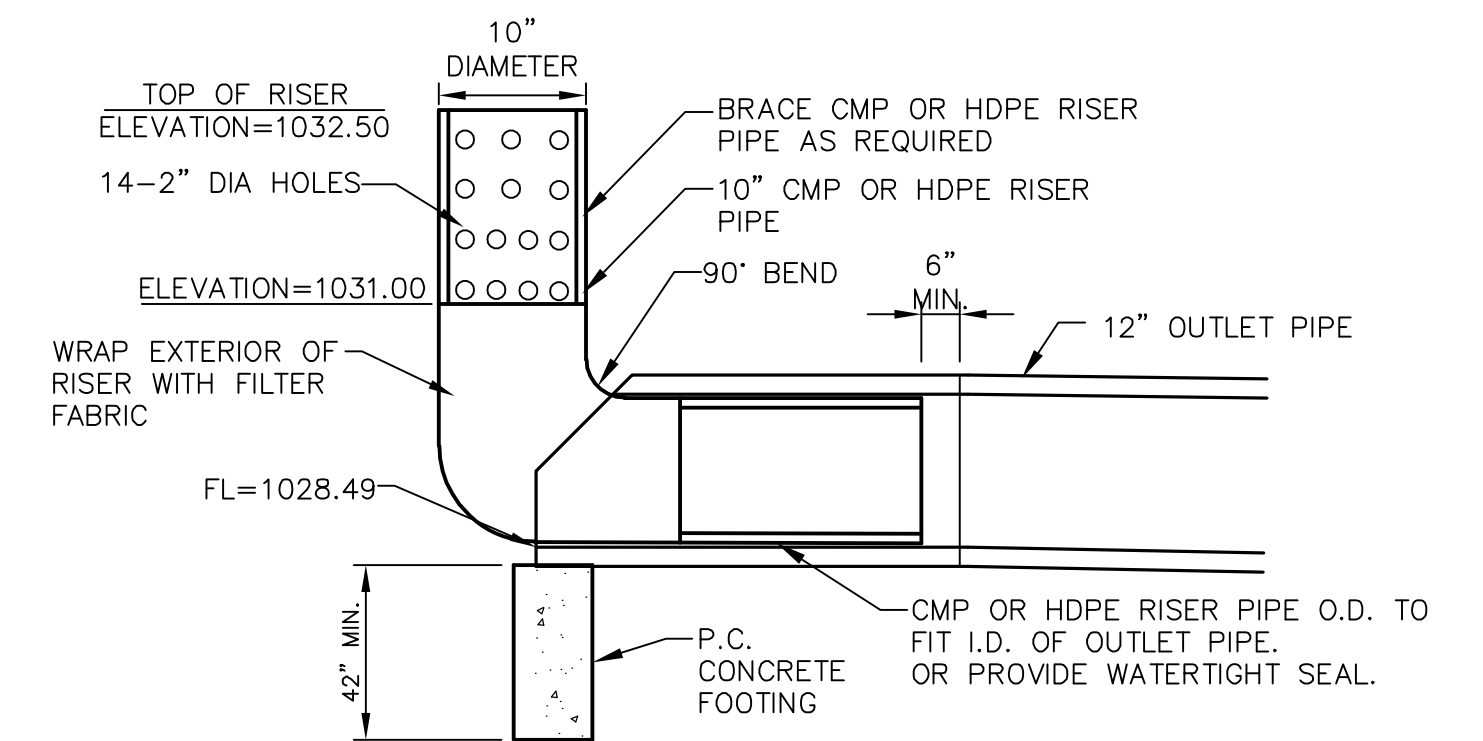
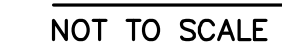
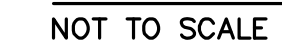
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GRADING LIMITS	---
FILTER SOCK	
SILT FENCE	---
DITCH CHECK	---
INLET PROTECTION	○
PORTABLE RESTROOM	R
CONCRETE WASHOUT PIT	□
TEMPORARY STANDPIPE	●
UNDISTURBED AREA	▨
RIPRAP	▨
GRAVEL ENTRANCE	▨
STAGING AREA	▨
TEMPORARY SEDIMENT BASIN	TSB #



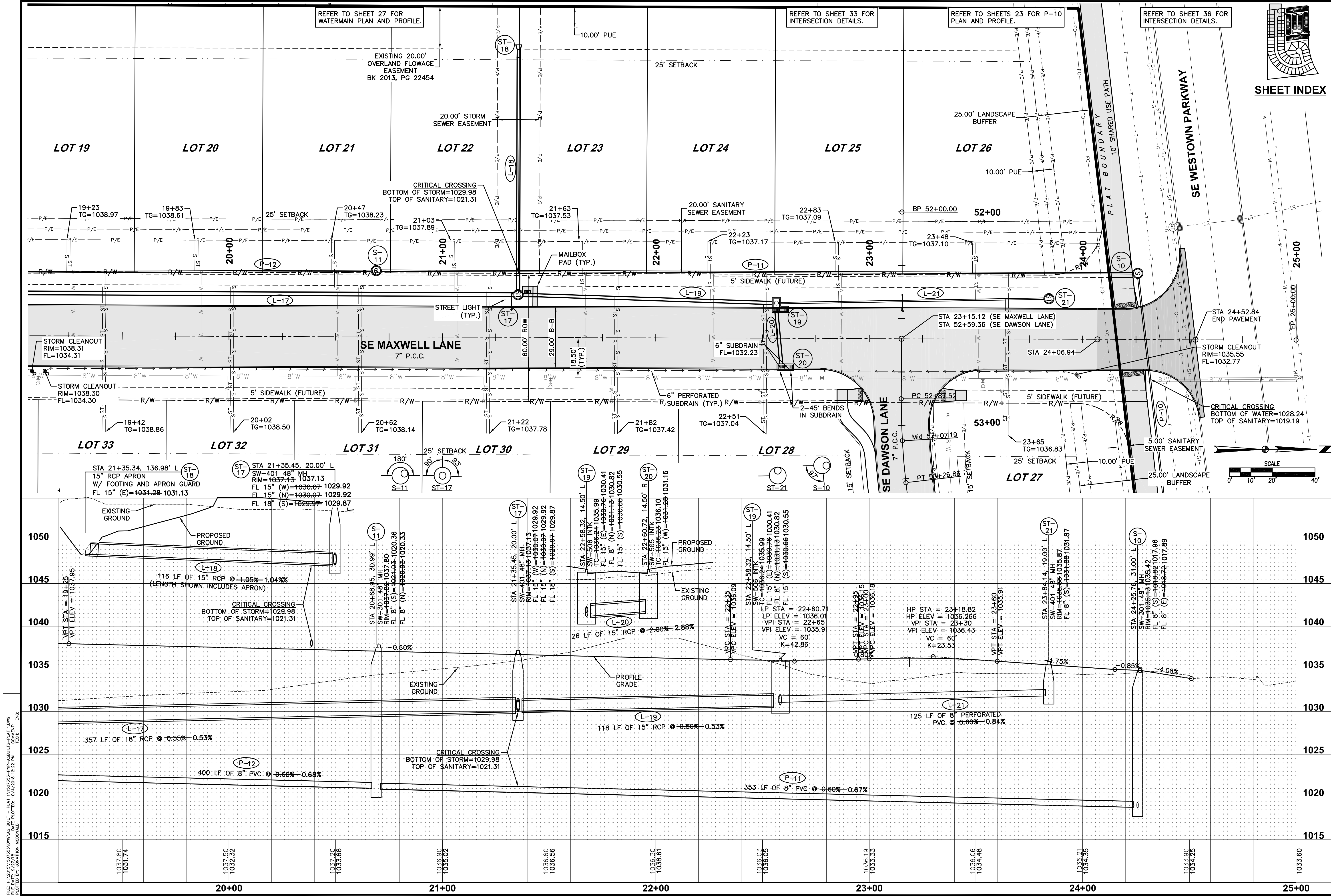
EROSION AND SEDIMENT CONTROL PLAN



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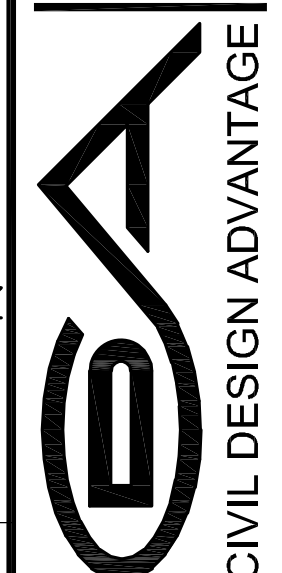


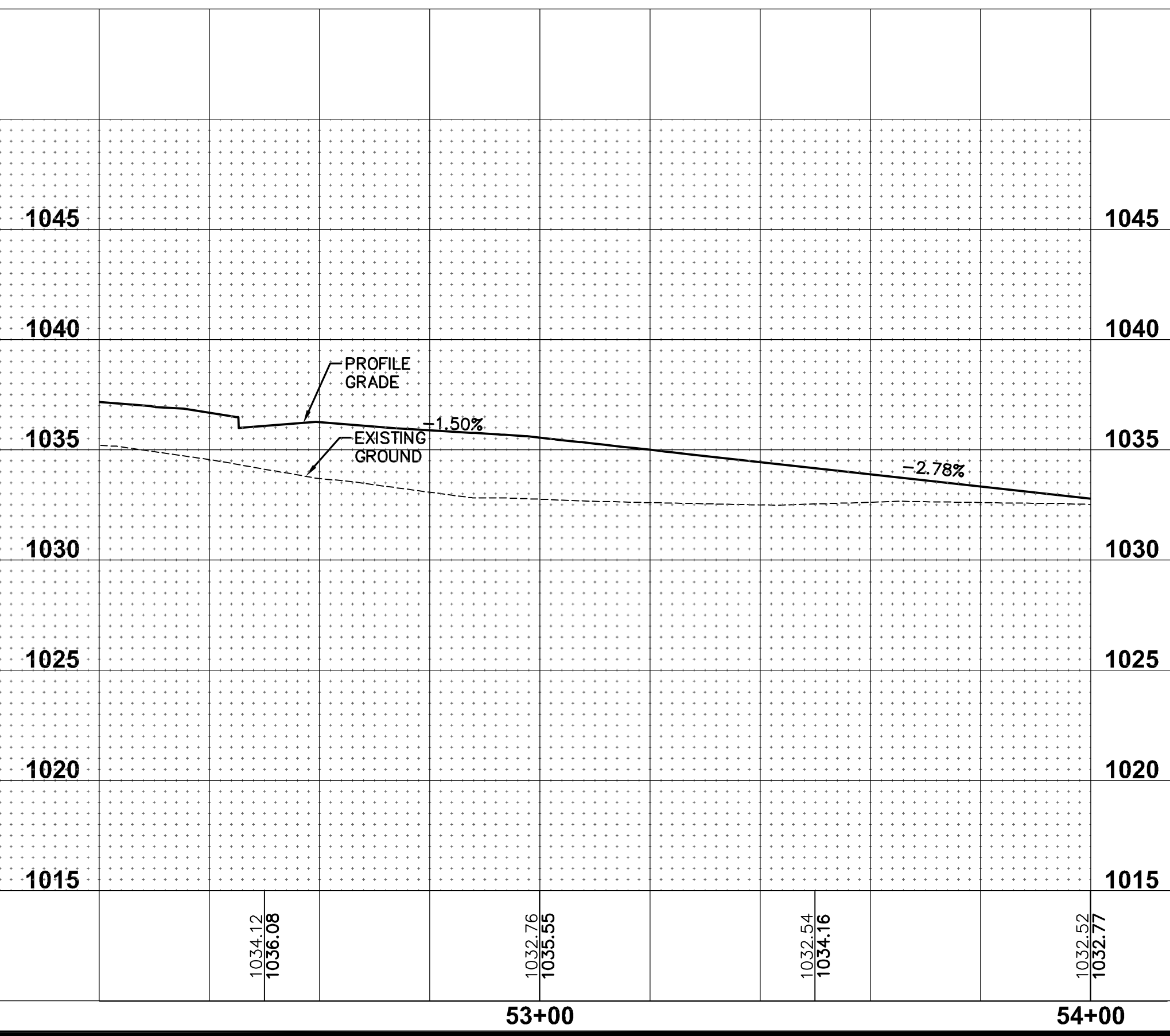
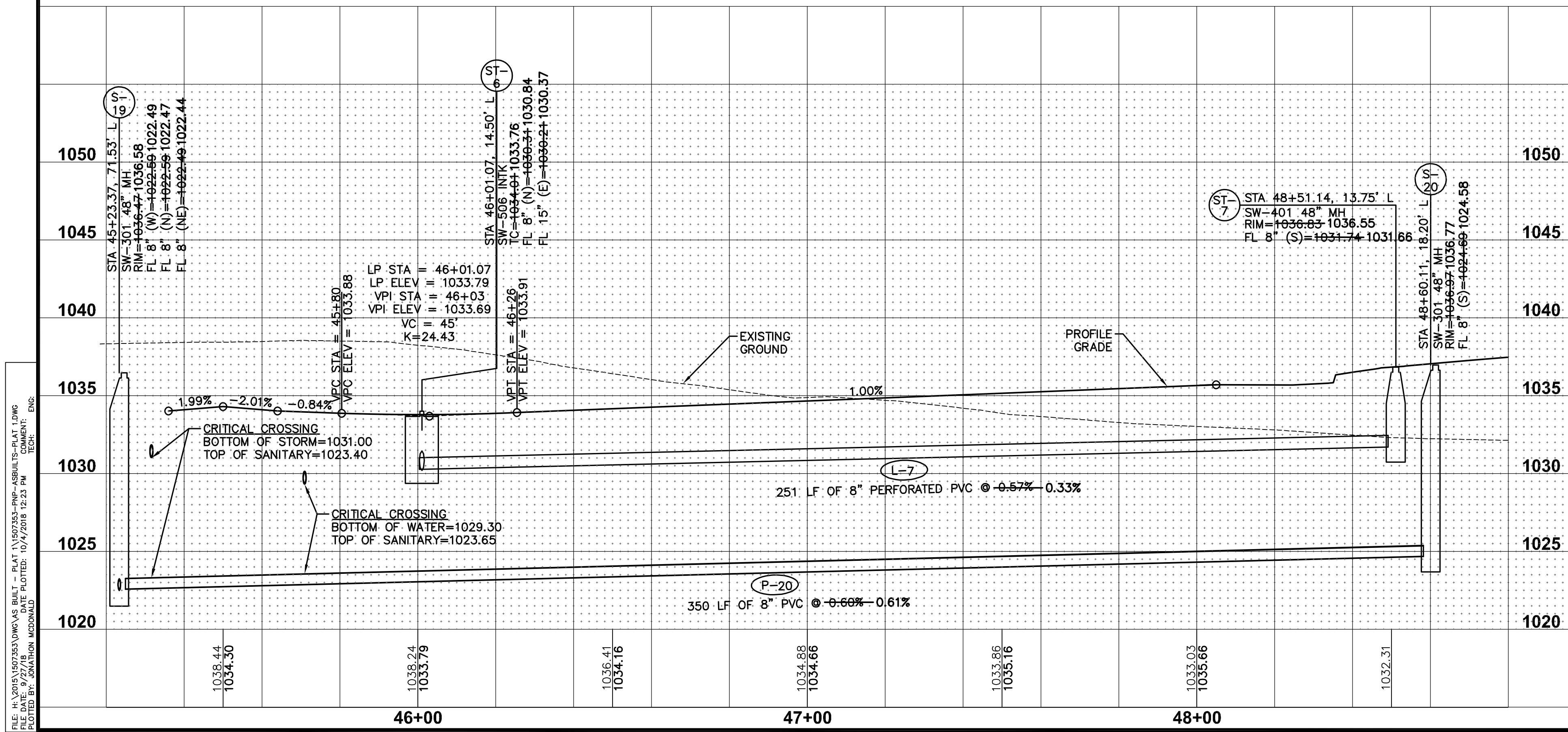
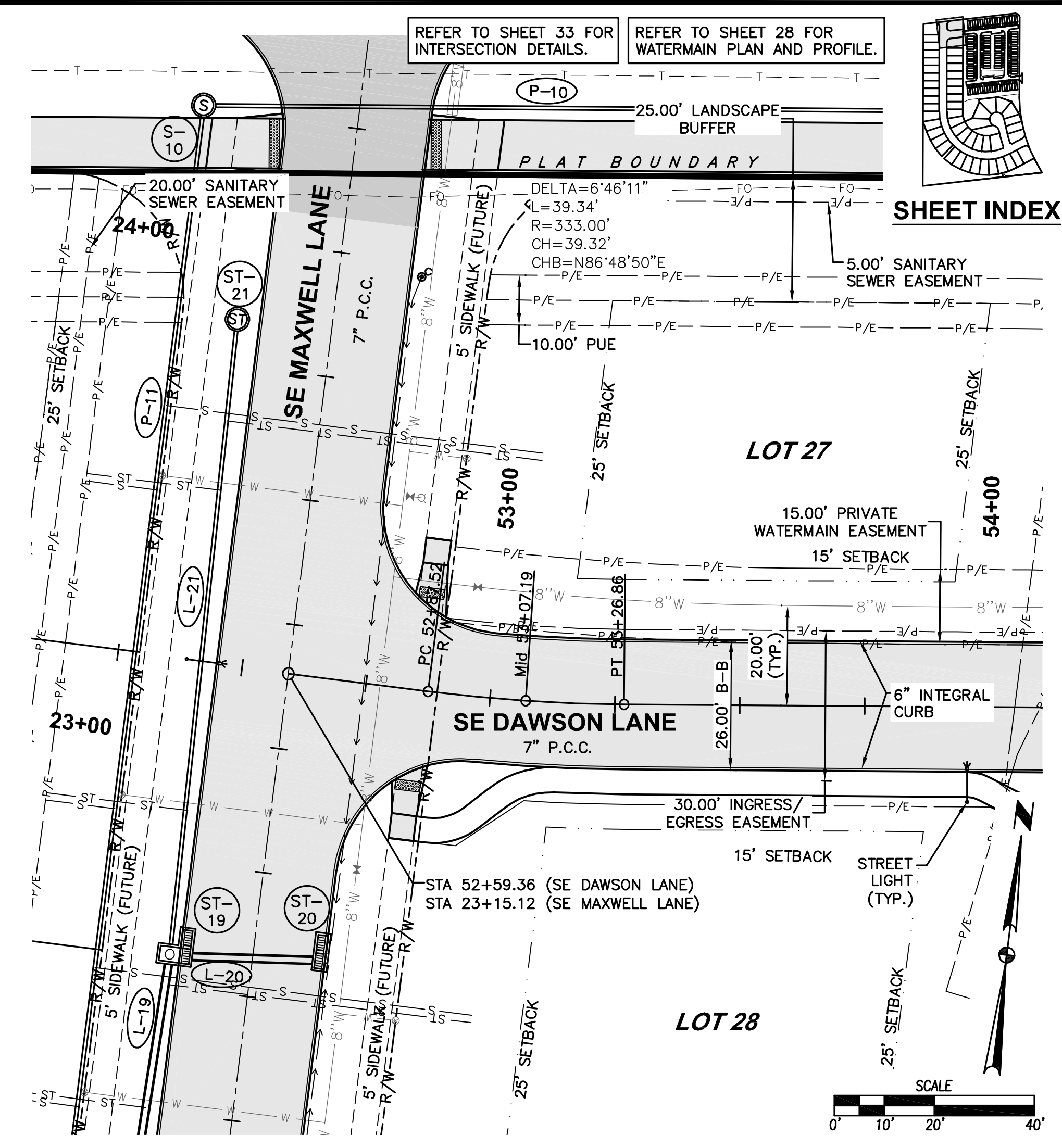
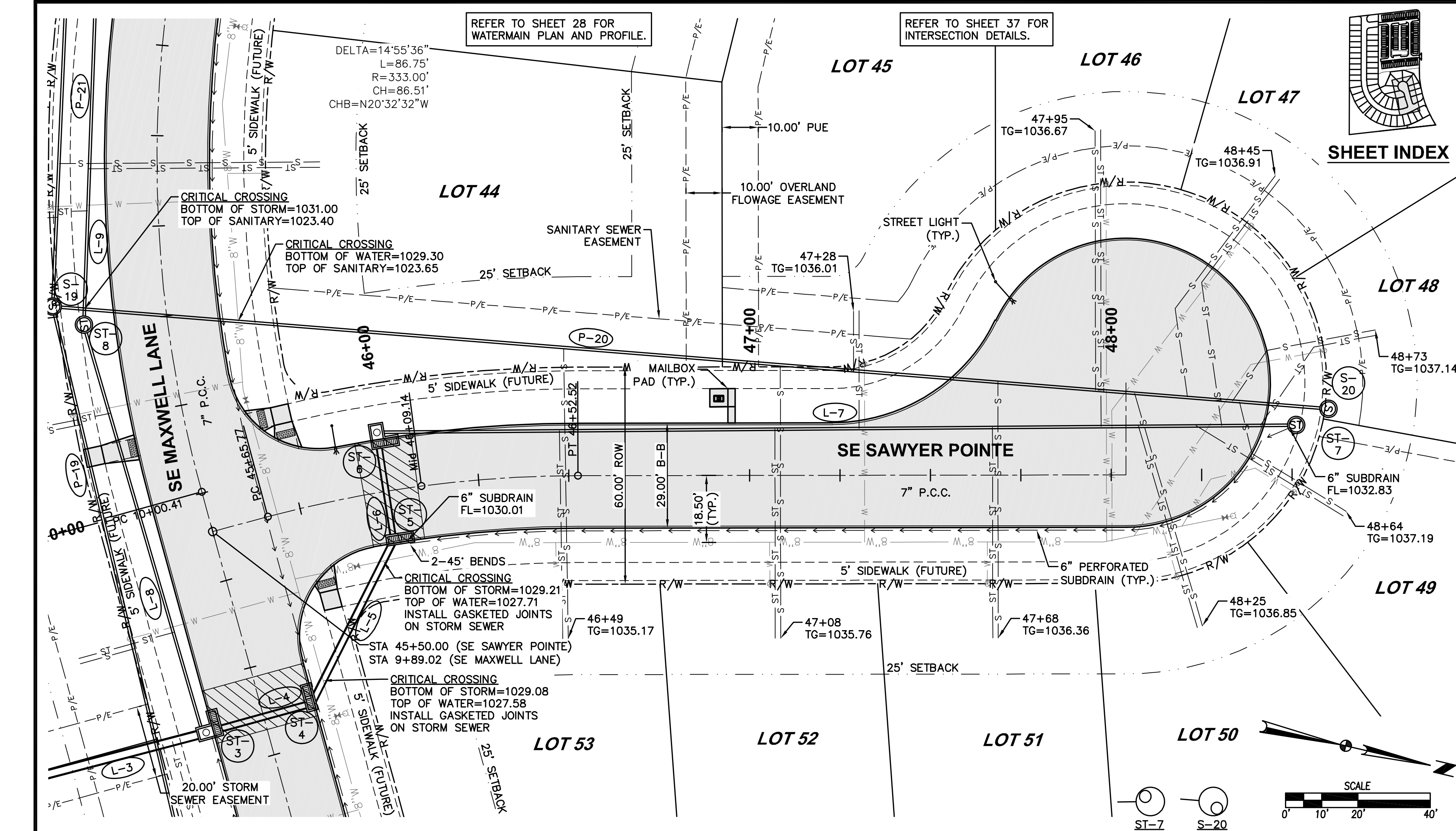
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09/19/18	AS-BUILTS
05/25/17	REVISED STORM SEWER
02/01/17	FINAL SUBMITTAL
11/30/16	FOURTH SUBMITTAL
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TECH: EKO
ENGINEER: EKO





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TECH: ENG

09/19/18
05/25/17
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10/13/16
09/16/16

AS-BUILTS
REVISED STORM SEWER
FINAL SUBMITTAL
FOURTH SUBMITTAL
THIRD SUBMITTAL
SECOND SUBMITTAL
FIRST SUBMITTAL

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TECH:
ENGINEER: EKO

KETTLESTONE HEIGHTS PLAT 1

SANITARY AND STORM PLAN AND PROFILE

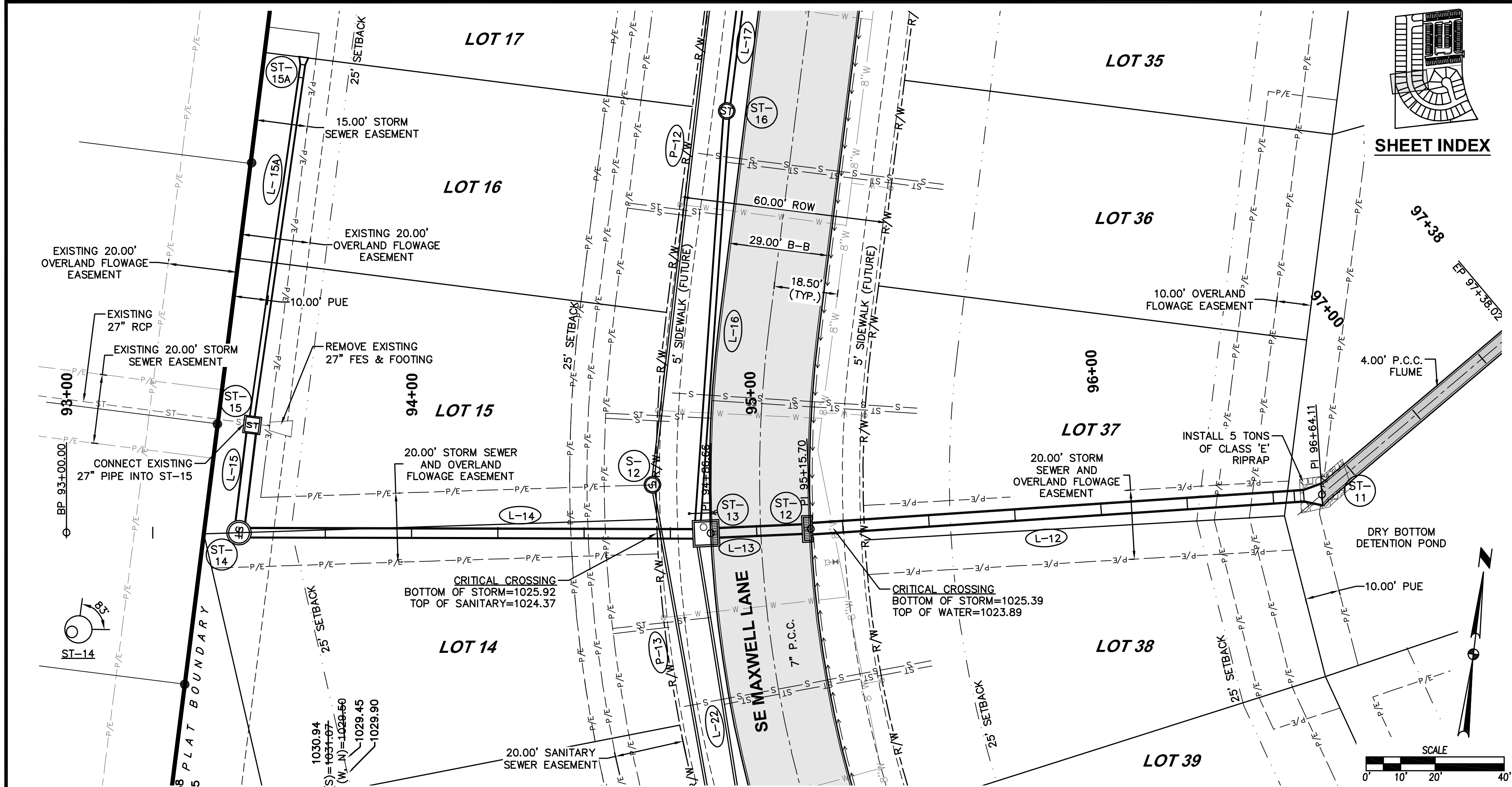
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CIVIL DESIGN ADVANTAGE

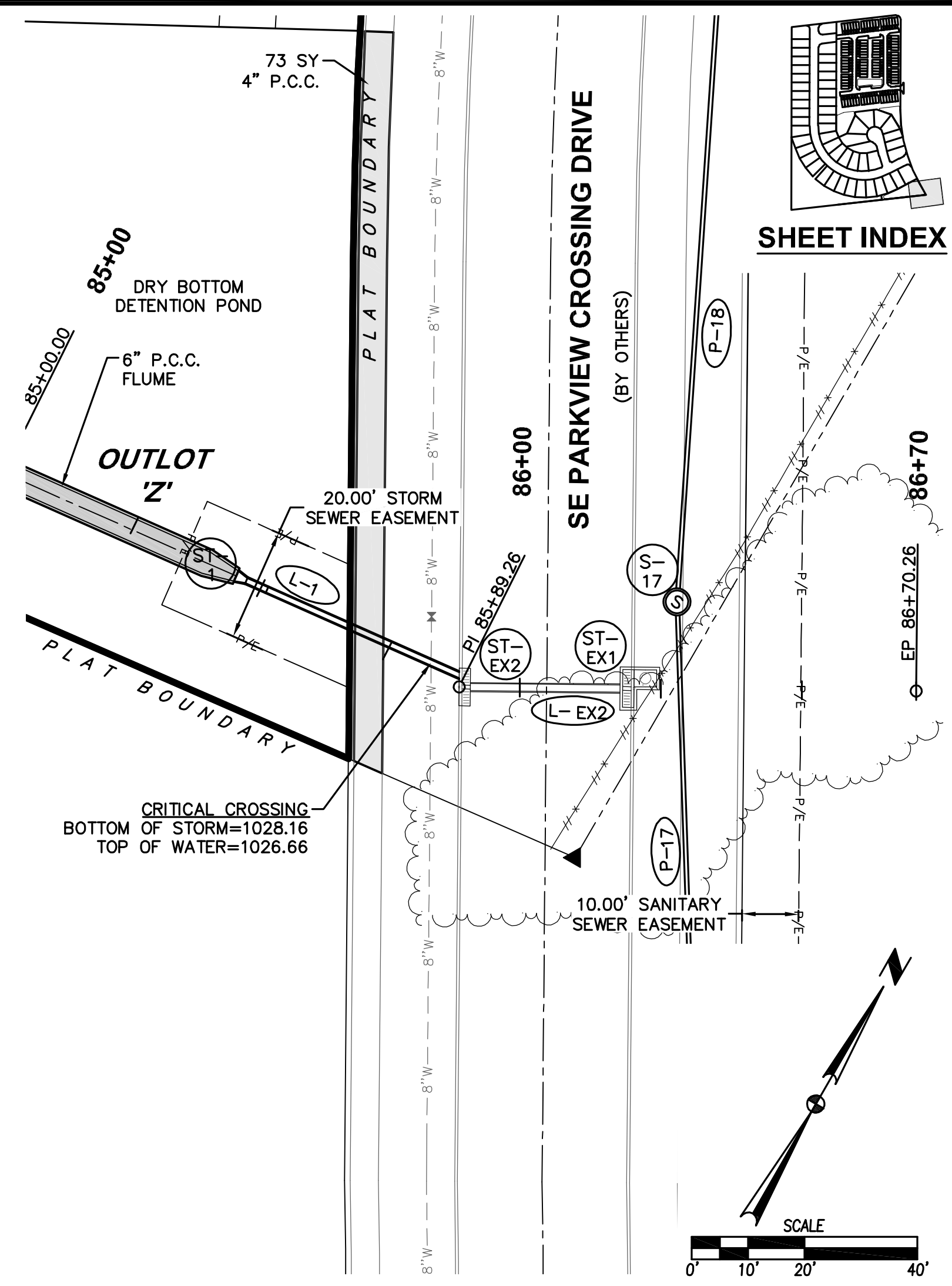
WAUKEE, IOWA

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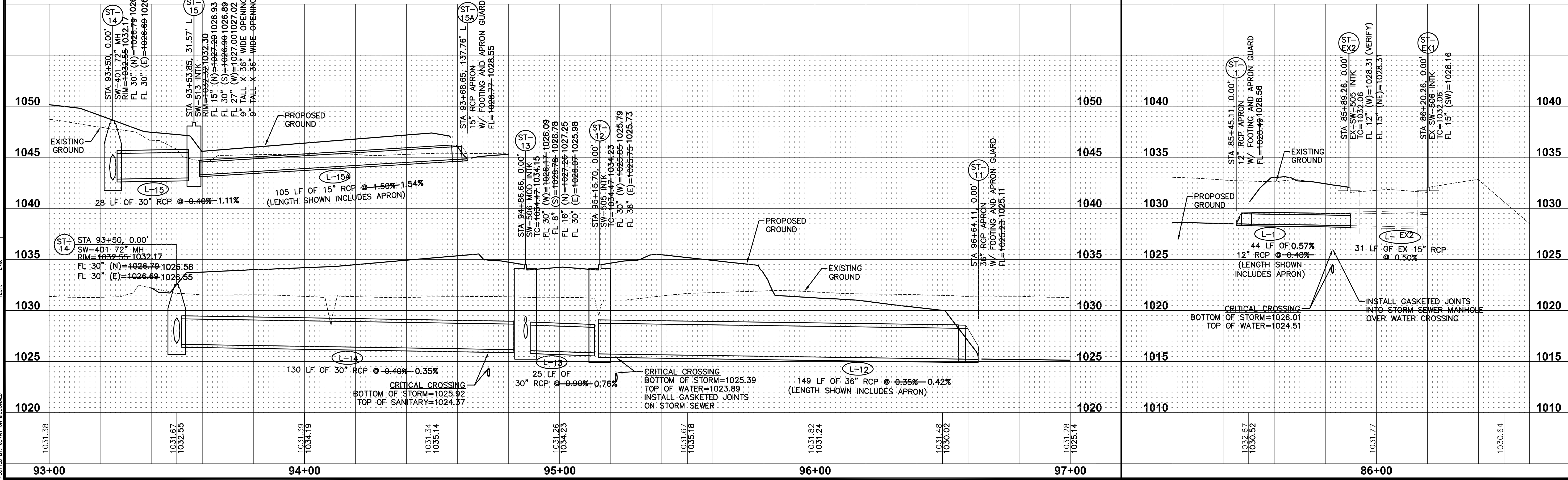
SHEET INDEX

SCALE
0' 10' 20' 40'



SHEET INDEX

SCALE
0' 10' 20' 40'



09/19/18

05/25/17

02/01/17

11/30/16

11/03/16

10/13/16

09/16/16

AS-BUILTS
REVISED STORM SEWER
FINAL SUBMITTAL
FOURTH SUBMITTAL
THIRD SUBMITTAL
SECOND SUBMITTAL
FIRST SUBMITTAL

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

TECH:
ENGINEER: EKO

KETTLESTONE HEIGHTS PLAT 1

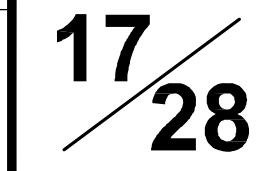
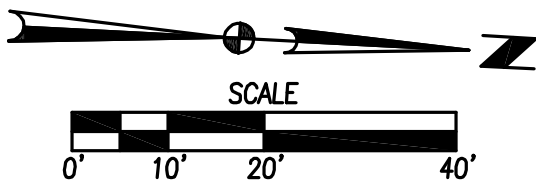
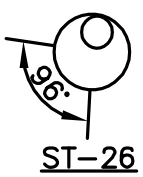
SANITARY AND STORM PLAN AND PROFILE

16/28

1507.353

CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA



KETTLESTONE HEIGHTS PLAT 1

SANITARY AND STORM PLAN AND PROFILE

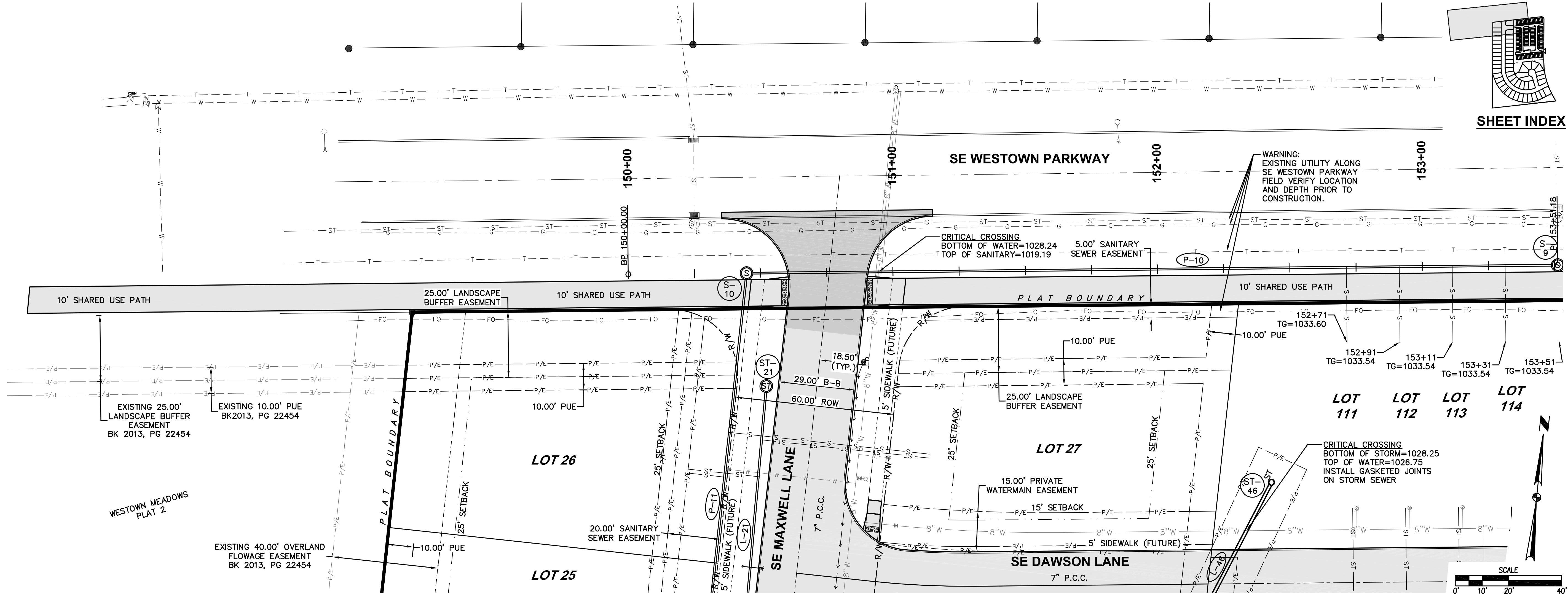
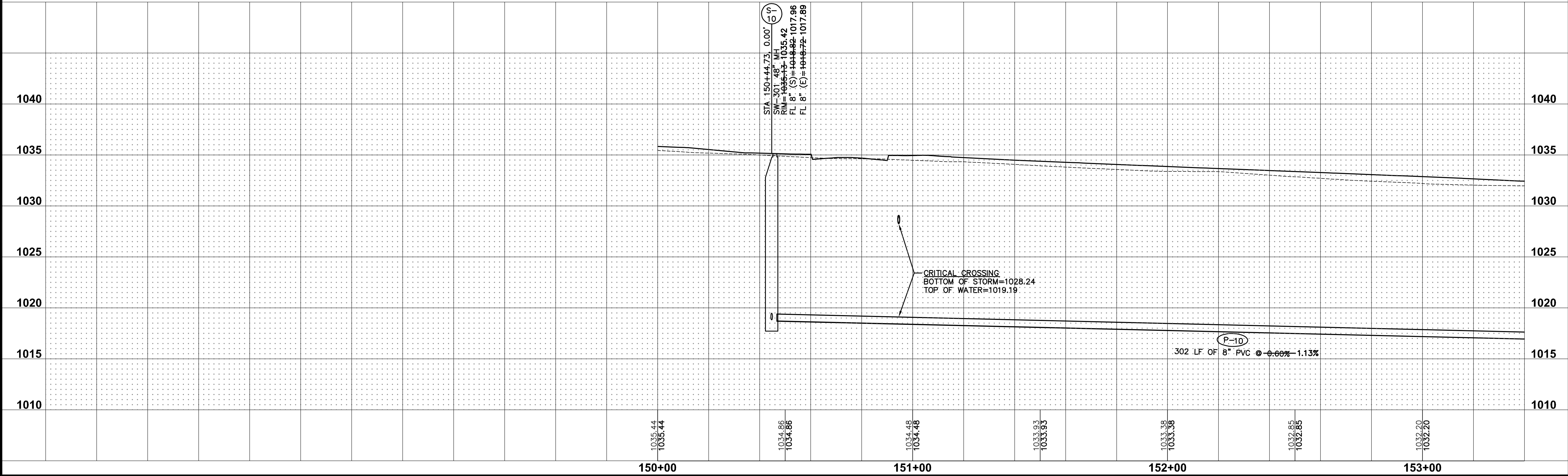


CSA
CIVIL DESIGN ADVANTAGE

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO TECH:

AS-BUILTS	09/19/18
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PLOT DATE: 10/17/2018 12:22 PM
PLOT BY: J. WATSON MODIFIED: 10/17/2018 12:22 PM
TECH: EKO



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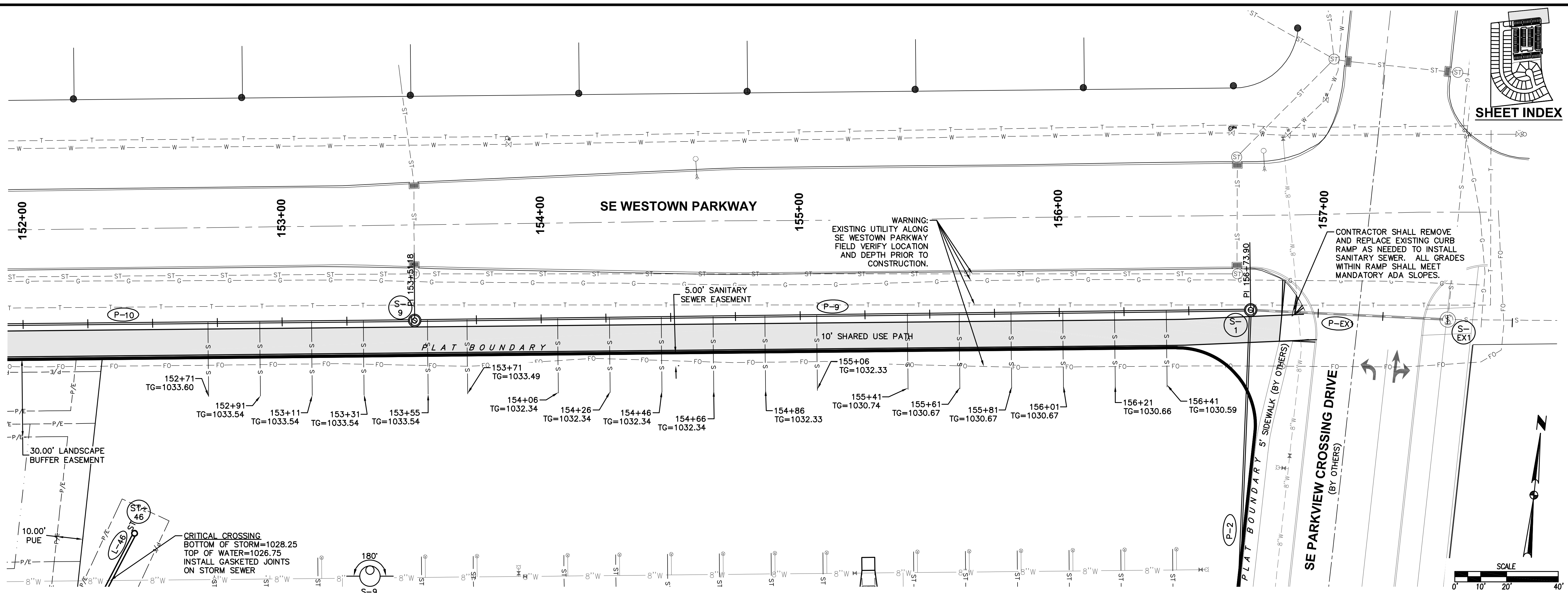
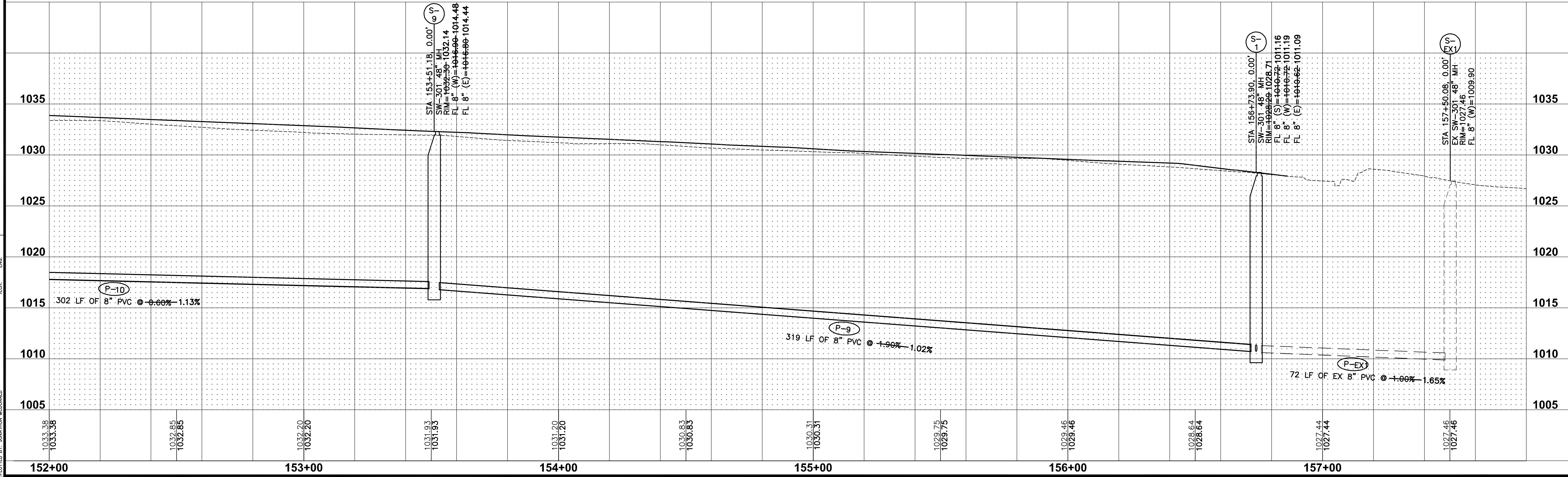
3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

TECH: EKO
ENGINEER: EKO

KETTLESTONE HEIGHTS PLAT 1
SANITARY AND STORM PLAN AND PROFILE
WAUKEE, IOWA

19
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1507.353

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PLOT BY: JAVIER MORALES



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TECH:
ENGINEER: EKO

20

28

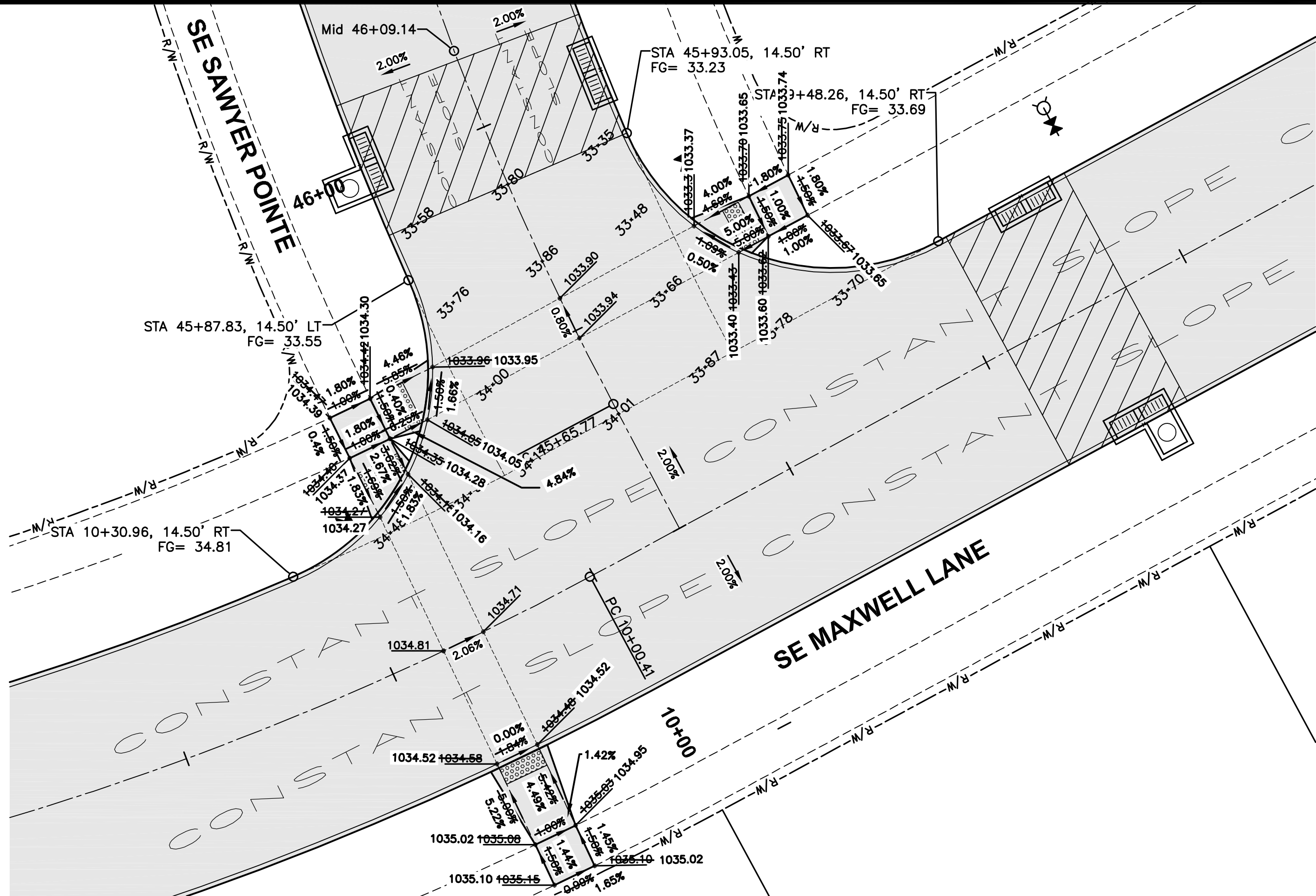
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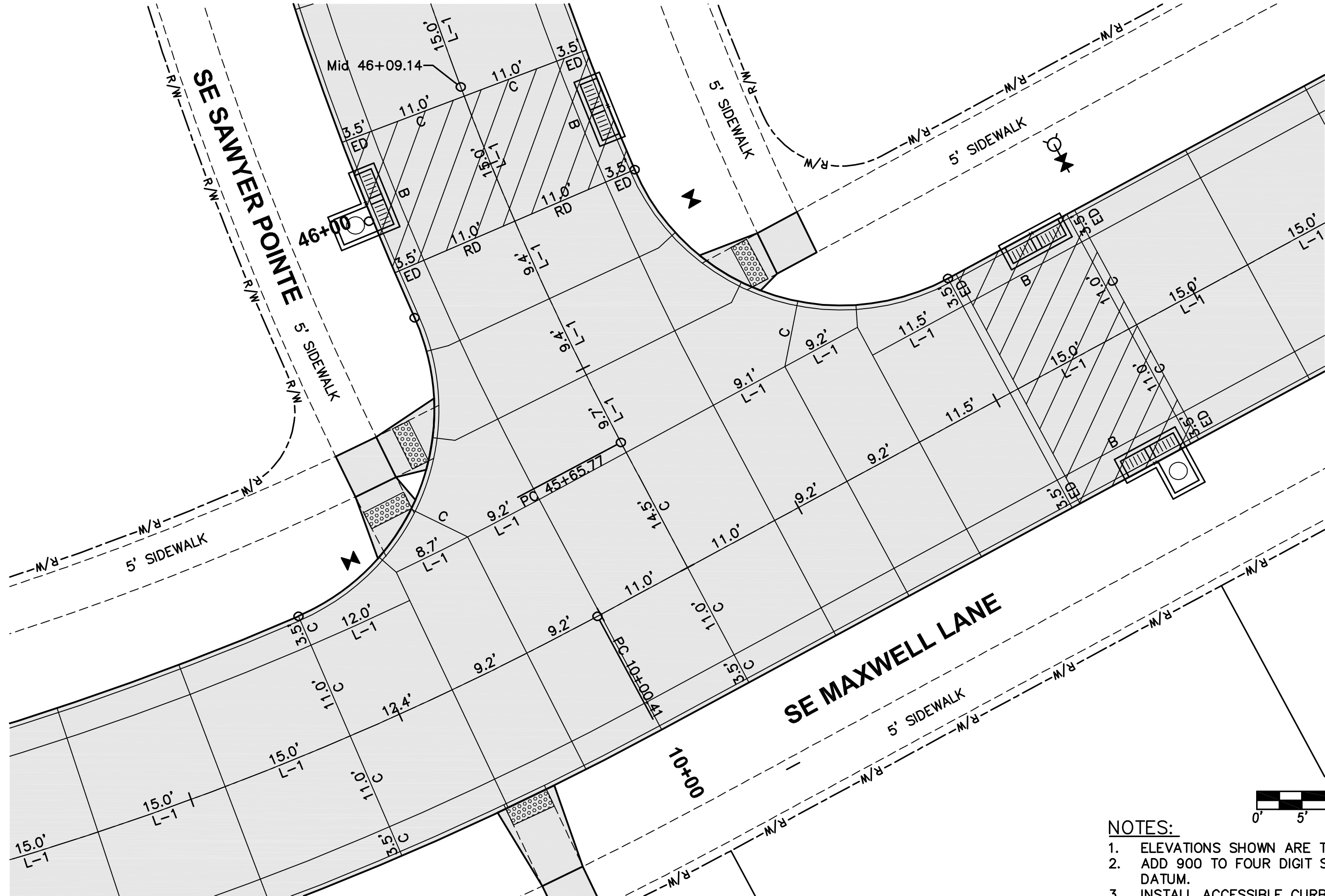
SANITARY AND STORM PLAN AND PROFILE

WAUKEE, IOWA

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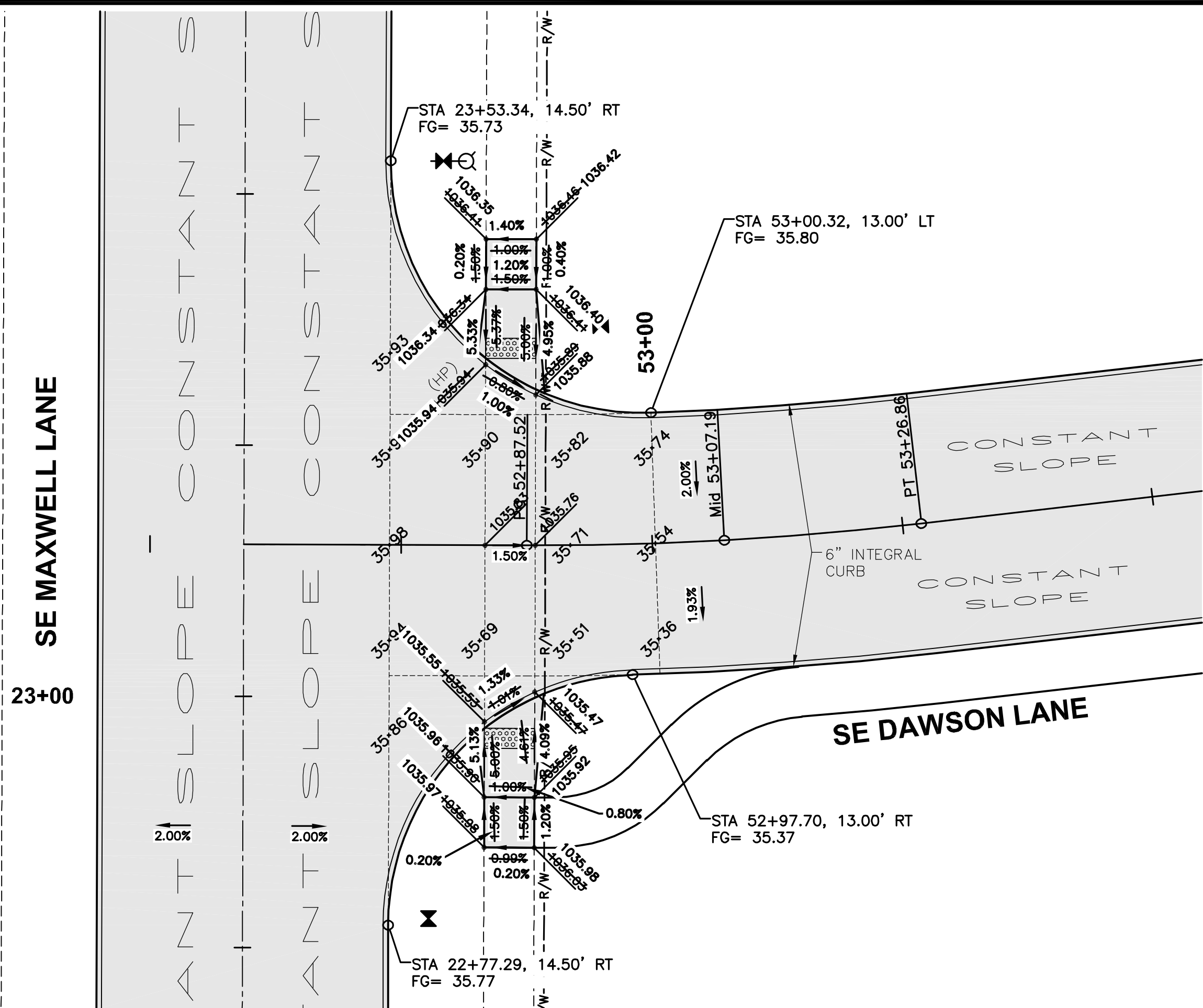
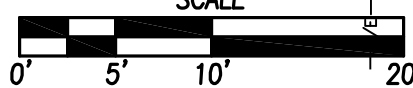
GEOMETRICS AND STAKING LAYOUT



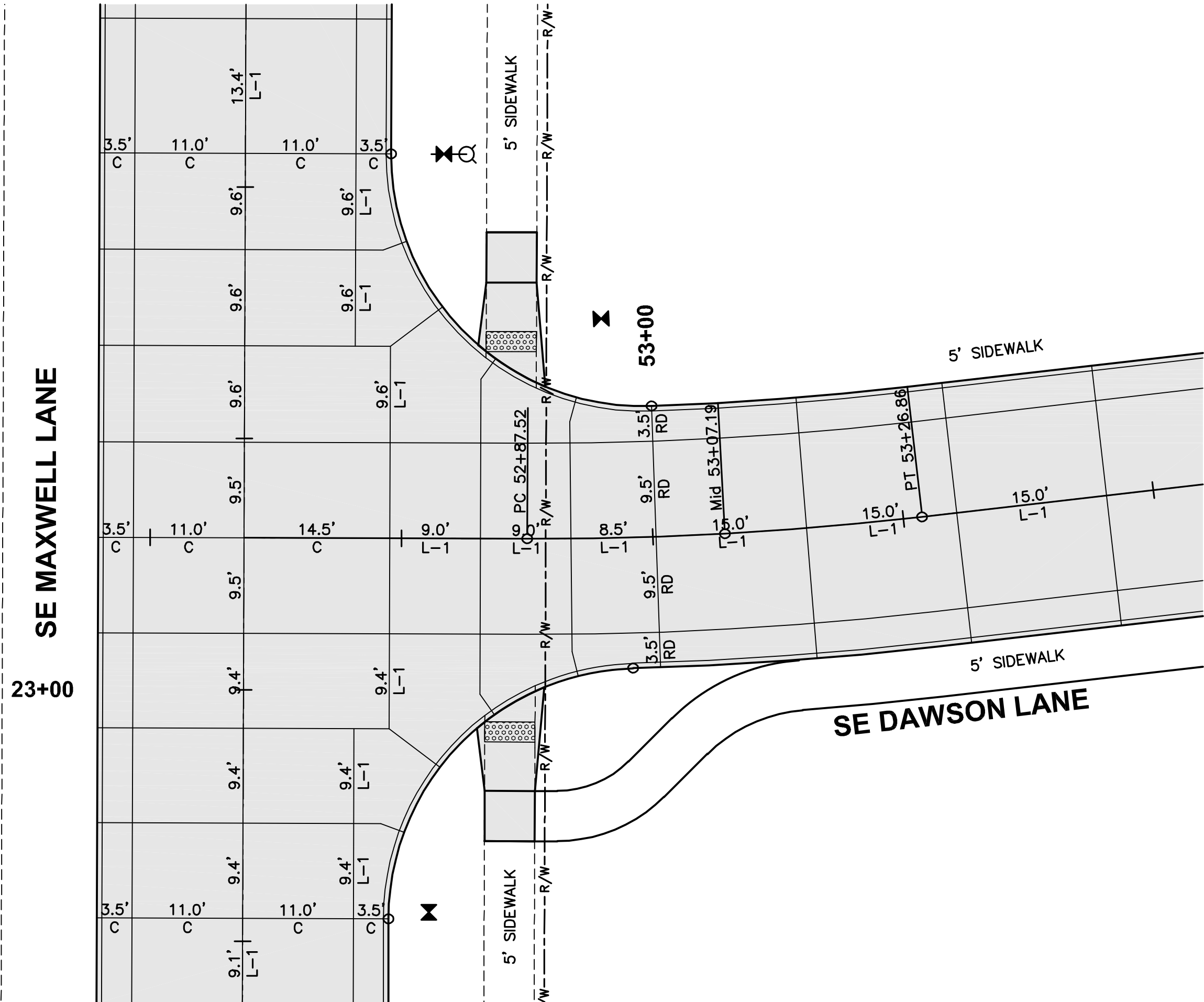
JOINTING LAYOUT

NOTES:

1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
2. ADD 900 TO FOUR DIGIT SPOT ELEVATIONS TO MATCH PROJECT DATUM.
3. INSTALL ACCESSIBLE CURB RAMP AT LOCATIONS SHOWN.
4. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.

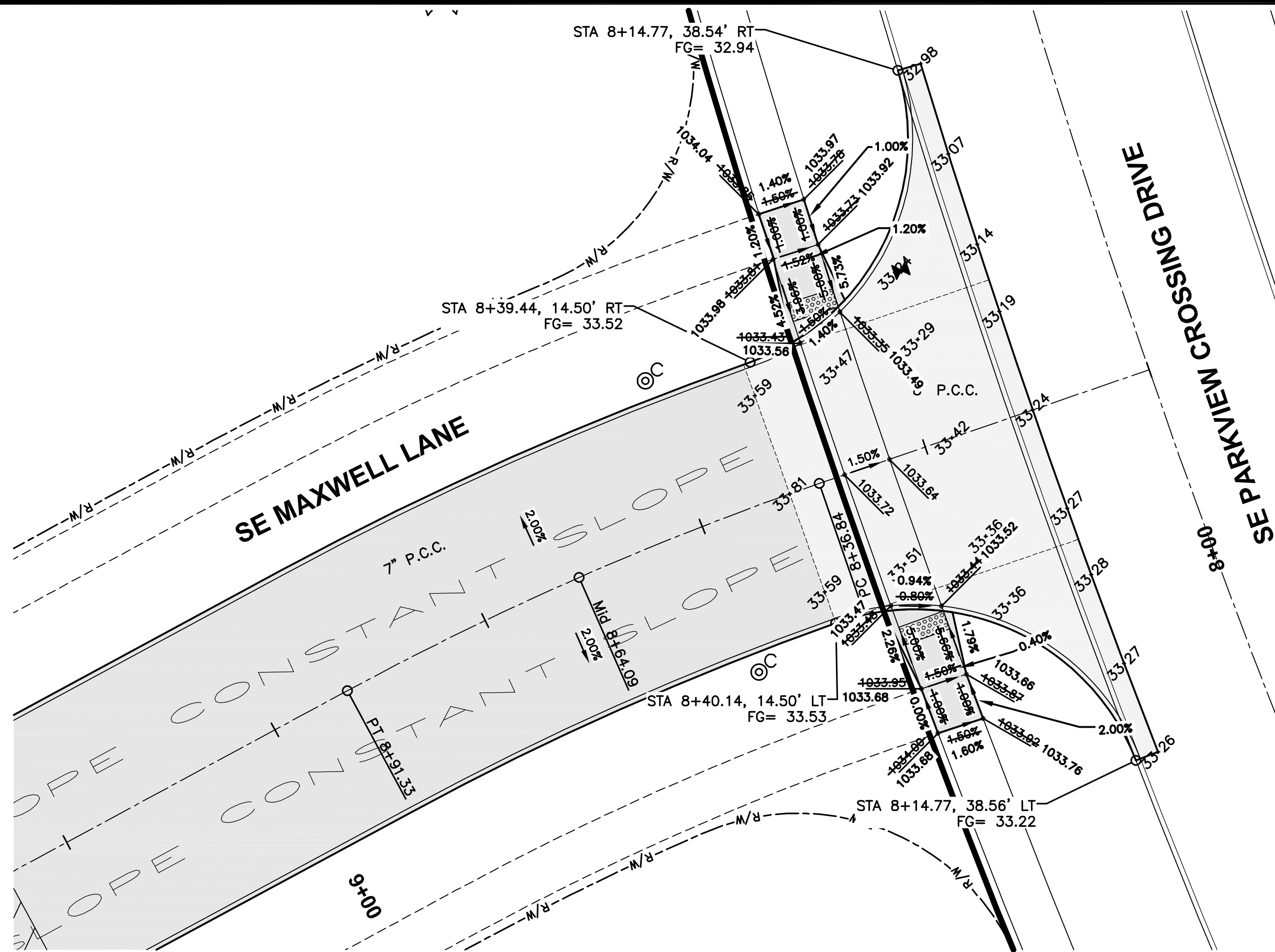


GEOMETRICS AND STAKING LAYOUT

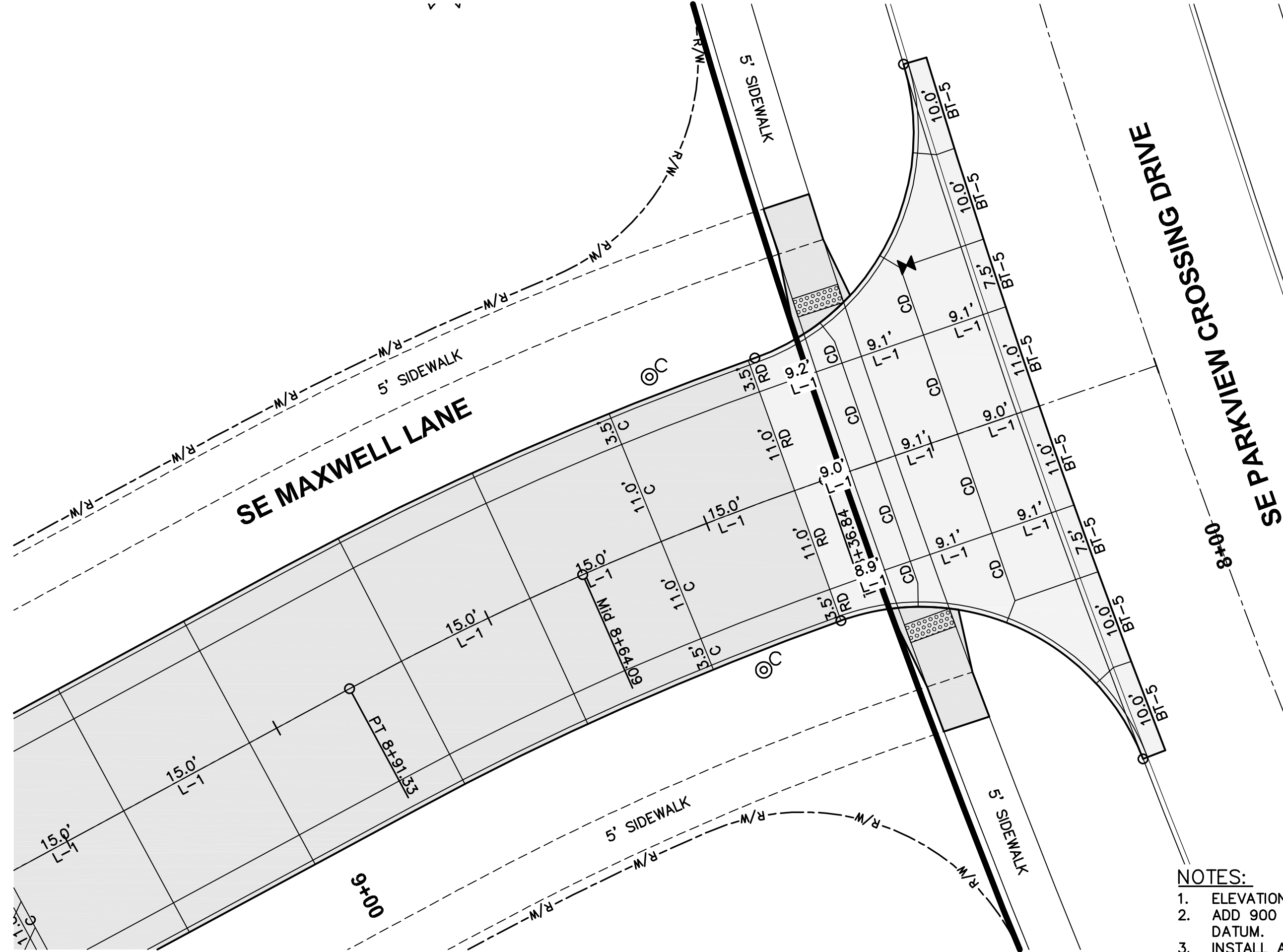


JOINTING LAYOUT

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PLOTTER: HP DesignJet 5000
PLOTTER: HP DesignJet 5000



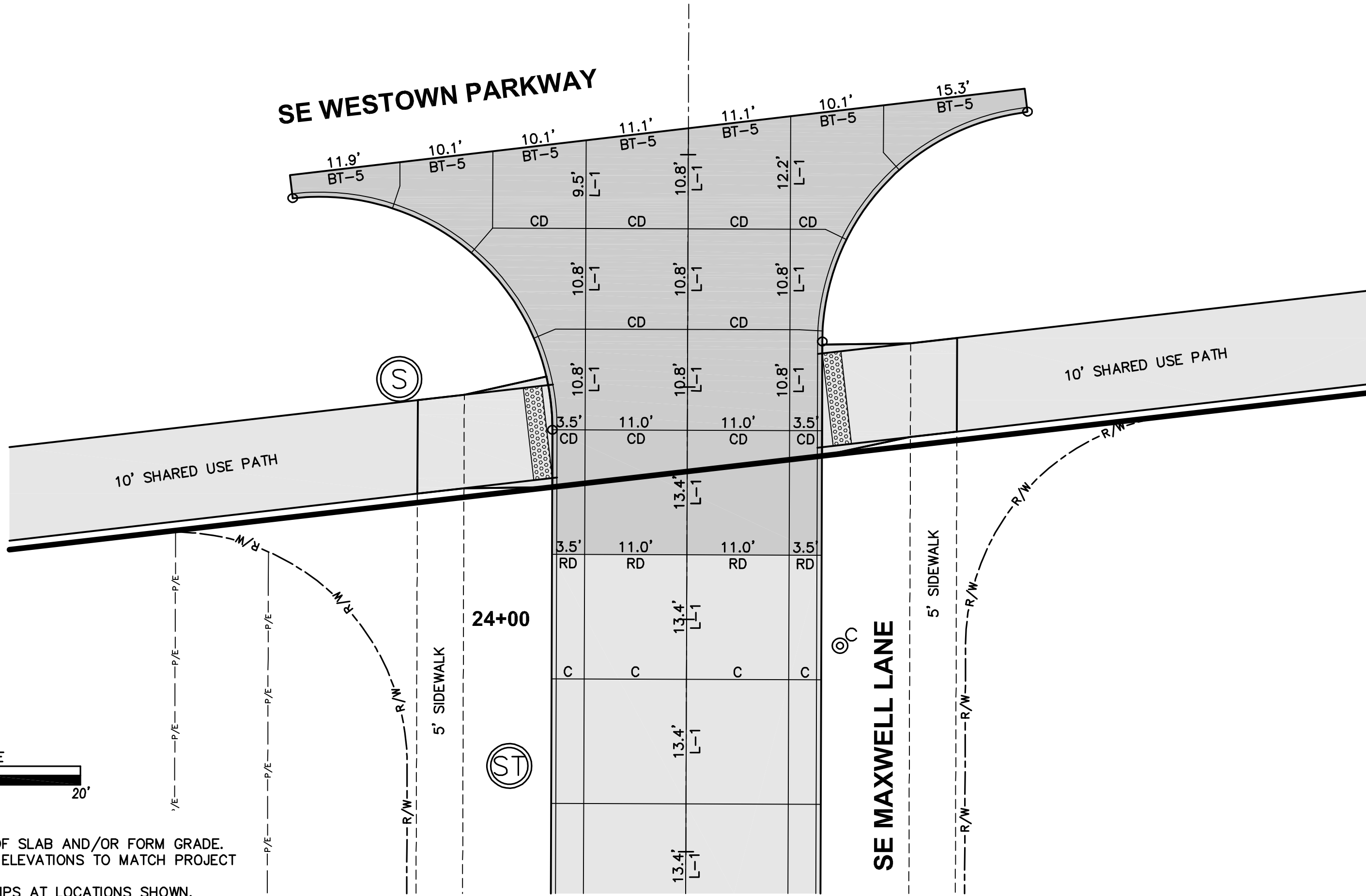
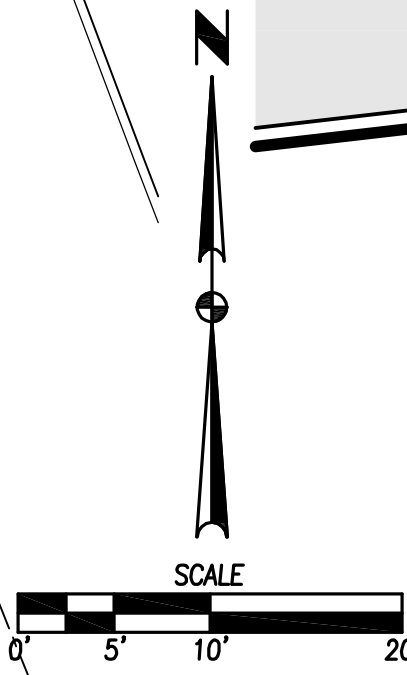
GEOMETRICS AND STAKING LAYOUT



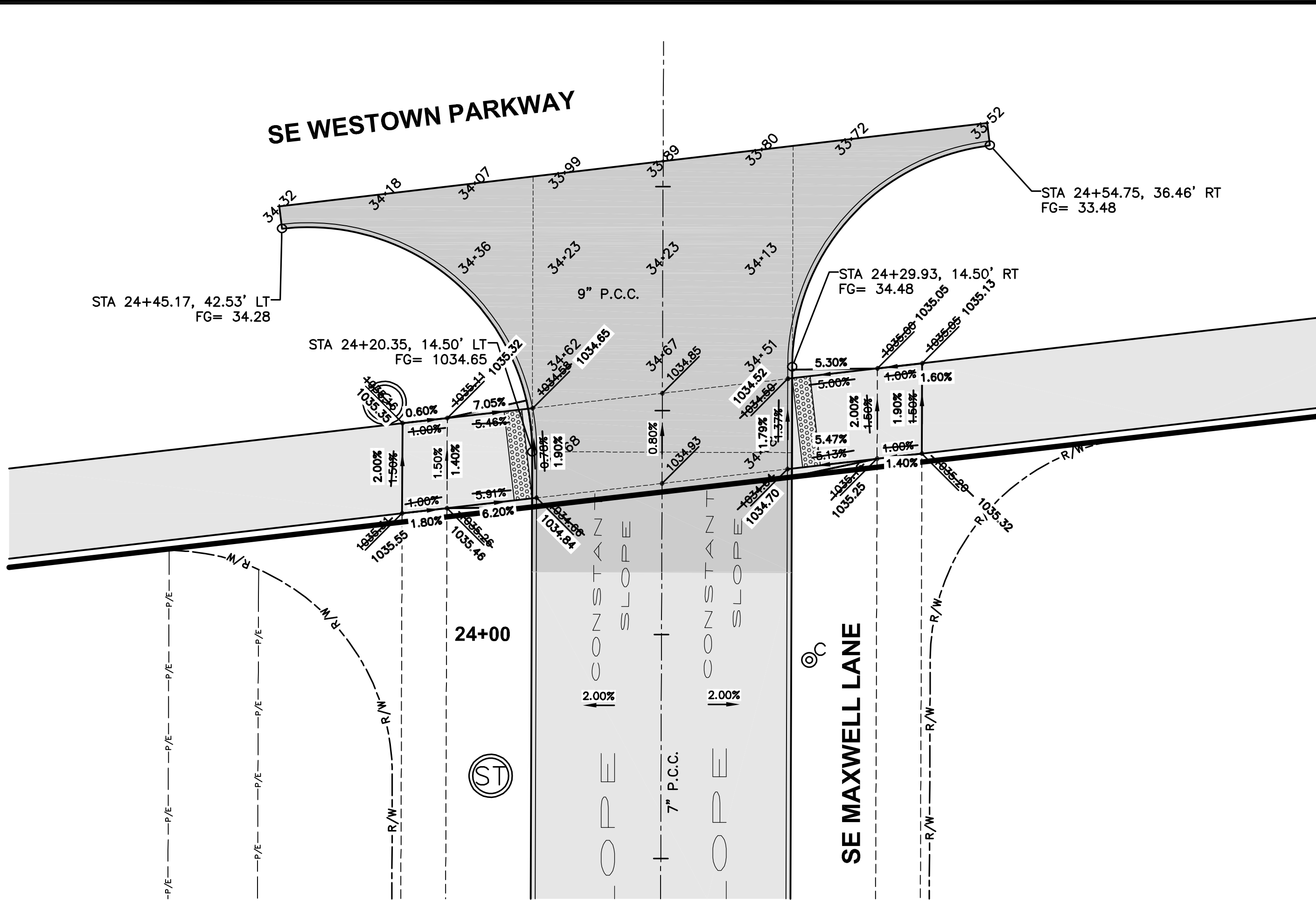
JOINTING LAYOUT

NOTES:

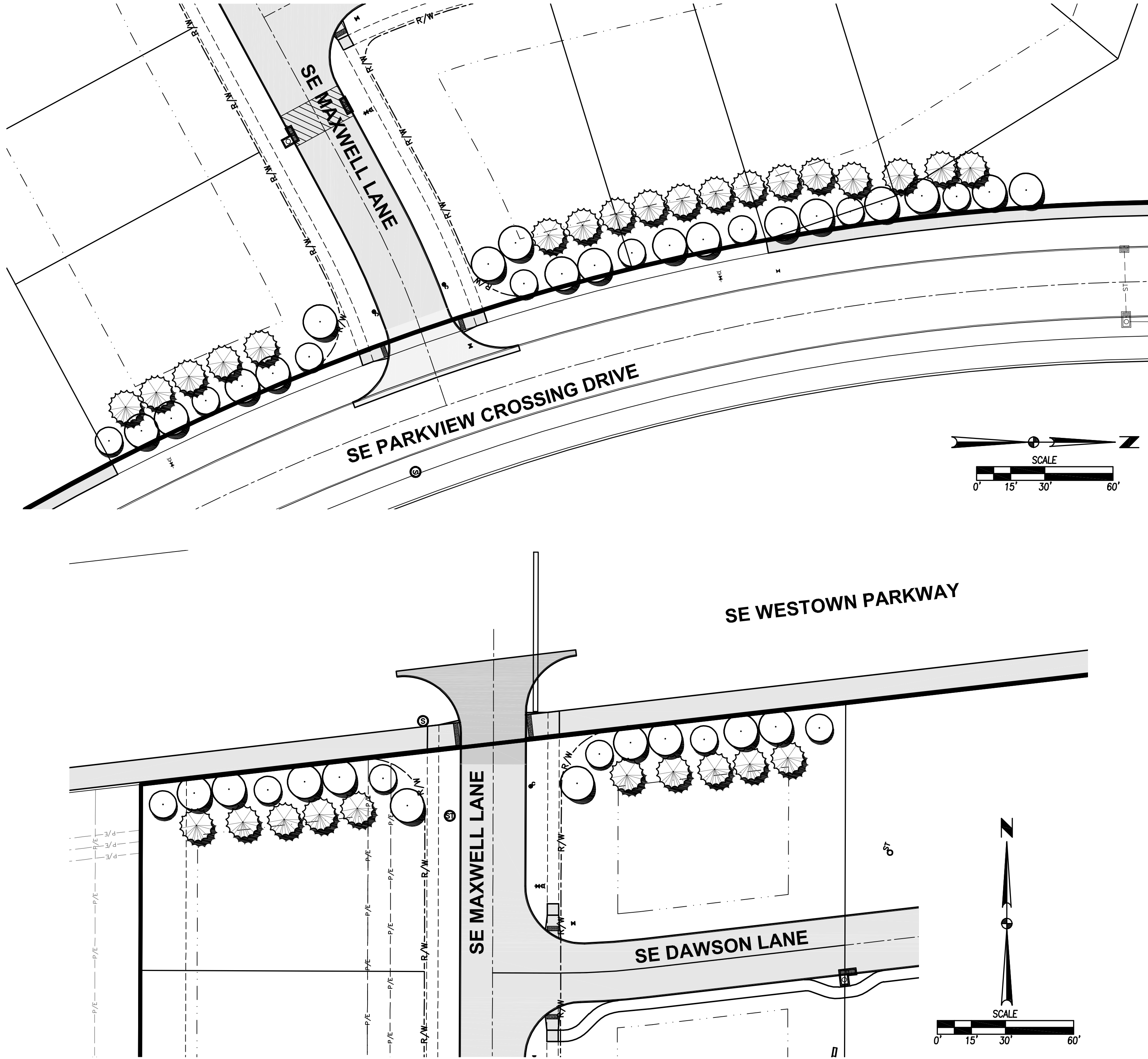
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JOINTING LAYOUT



GEOMETRICS AND STAKING LAYOUT



PLANT SCHEDULE

OVERSTORY TREES		SIZE	COND
AUTUMN BLAZE MAPLE	ACER RUBRUM 'AUTUMN BLAZE'	2" CAL	B&B
ORNAMENTAL TREES		SIZE	COND
SPRING SNOW CRAB	MALUS X 'SPRING SNOW'	1.5" CAL	B&B
EVERGREEN TREES		SIZE	COND
COLORADO BLUE SPRUCE	PICEA PUNGENS	6' HT.	B&B