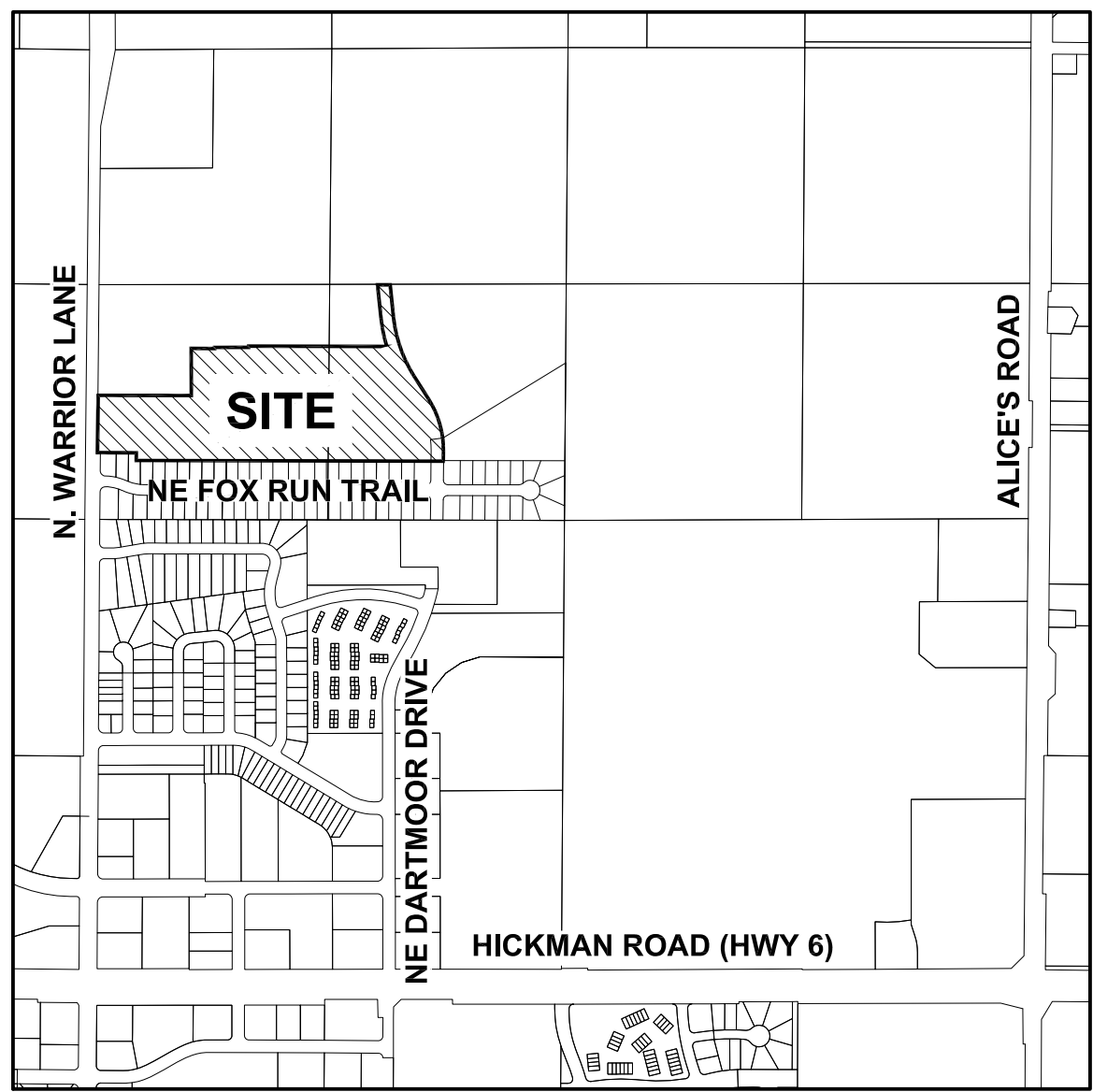


# CONSTRUCTION PLANS FOR: FOX CREEK ESTATES PLAT 5

WAUKEE, IOWA

## VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

## OWNER/DEVELOPER

PERFECT ACRES, L.C.  
804 SUNSET DRIVE  
INDIANOLA, IOWA 50215

## 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

## ZONING

R-2 ONE AND TWO FAMILY RESIDENTIAL DISTRICT

## BULK REGULATIONS

- MIN. LOT AREA = 8,000 SF (SINGLE-FAMILY)
- MIN. LOT AREA = 10,000 SF (TWO-FAMILY)
- 30' FRONT YARD SETBACK:
- 30' REAR SIDE YARD SETBACK:
- 15' SIDE YARD SETBACK  
(TOTAL=15', MIN. SIDE=7')

## SUBMITTAL DATES

FIRST SUBMITTAL: 06/11/2013  
SECOND SUBMITTAL: 07/17/2013  
THIRD SUBMITTAL: 07/31/2013  
FOURTH SUBMITTAL: 08/16/2013  
FINAL SUBMITTAL: 09/06/2013  
AS-BUILT SUBMITTAL: 10/09/2014  
AS-BUILT SUBMITTAL: 04/03/2015

## BENCHMARKS

1. STORM SEWER MANHOLE RIM LOCATED AT THE N.E. CORNER OF WARRIOR LANE AND FOX RUN TRAIL INTERSECTION. MANHOLE IS LOCATED 4' FROM THE EAST BACK OF CURB LINE OF WARRIOR LANE AND 46' NORTH OF FOX RUN TRAIL CENTERLINE. ELEVATION = 1014.23
2. SANITARY SEWER MANHOLE RIM LOCATED ON THE WEST SIDE OF NE DARTMOOR DRIVE, 121' +/- NORTH OF THE CENTERLINE OF NE BOWMAN DRIVE. MANHOLE IS LOCATED 9' FROM THE WEST BACK OF CURB LINE OF NE DARTMOOR DRIVE. ELEVATION = 1020.12

## 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.

## 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.

## INDEX OF SHEETS

| NO.   | DESCRIPTION                               |
|-------|-------------------------------------------|
| 1     | TITLE SHEET                               |
| 2-3   | TYPICAL SECTIONS AND DETAILS              |
| 4     | QUANTITIES AND REFERENCE NOTES            |
| 5     | HYDRANT COVERAGE PLAN                     |
| 6-8   | GRADING PLAN                              |
| 9-10  | EROSION & SEDIMENT CONTROL PLAN           |
| 11-28 | STORM AND SANITARY SEWER PLAN AND PROFILE |
| 29-39 | WATERMAIN PLAN AND PROFILE                |
| 40-43 | INTERSECTION DETAILS                      |
| 44    | 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.

## LEGAL DESCRIPTION

A PART OF THE SOUTH HALF OF SECTION 27, TOWNSHIP 79 NORTH, RANGE 26 WEST, OF THE FIFTH PRINCIPAL MERIDIAN AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF FOX CREEK ESTATES PLAT 2, AN OFFICIAL PLAT IN THE CITY OF WAUKEE; THENCE NORTH 0°00'55" EAST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 27, 320.01 FEET; THENCE NORTH 89°31'25" EAST, 553.17 FEET; THENCE NORTH 0°38'07" WEST, 263.24 FEET; THENCE NORTH 89°33'12" EAST, 130.49 FEET; THENCE NORTH 0°26'48" WEST, 6.56 FEET; THENCE NORTH 89°33'12" EAST, 189.47 FEET; THENCE NORTH 0°28'35" WEST, 7.16 FEET; THENCE NORTH 89°31'25" EAST, 771.13 FEET; THENCE NORTHERLY ALONG A CURVE CONCAVE EASTERLY WHOSE RADIUS IS 835.00 FEET, WHOSE ARC LENGTH IS 162.02 FEET AND WHOSE CHORD BEARS NORTH 12°04'49" WEST, 161.76 FEET; THENCE NORTH 89°31'18" WEST, 164.52 FEET; THENCE NORTH 83°28'42" EAST, 70.00 FEET; THENCE SOUTH 6°31'18" EAST, 164.52 FEET; THENCE SOUTHERLY ALONG A CURVE CONCAVE EASTERLY WHOSE RADIUS IS 765.00 FEET, WHOSE ARC LENGTH IS 352.90 FEET AND WHOSE CHORD BEARS S19°44'14" EAST, 349.78 FEET; THENCE SOUTH 32°57'09" EAST, 152.57 FEET; THENCE SOUTHERLY ALONG A CURVE CONCAVE WESTERLY WHOSE RADIUS IS 535.00 FEET, WHOSE ARC LENGTH IS 237.59 FEET AND WHOSE CHORD BEARS SOUTH 20°13'49" EAST, 235.64 FEET TO THE NORTHERLY LINE OF FOX CREEK ESTATES PLAT 4, AN OFFICIAL PLAT IN THE CITY OF WAUKEE; THENCE SOUTH 82°29'31" WEST ALONG SAID NORTHERLY LINE, 70.00 FEET; THENCE CONTINUING SOUTH 0°00'00" EAST ALONG SAID NORTHERLY LINE, 55.79 FEET TO THE NORTHEAST CORNER OF LOT 8, FOX CREEK ESTATES PLAT 4; THENCE SOUTH 89°31'25" WEST ALONG SAID NORTHERLY LINE, 1644.17 FEET; THENCE NORTH 0°28'35" WEST ALONG THE NORTHERLY LINE OF SAID FOX CREEK ESTATES PLAT 2, 43.20 FEET; THENCE SOUTH 89°31'25" WEST ALONG SAID NORTHERLY LINE, 249.68 FEET TO THE POINT OF BEGINNING AND CONTAINING 24.00 ACRES (1,045,562 SQUARE FEET).

PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.



3405 SE CROSSROADS DR. SUITE G GRIMES, IOWA 50111

PH: (515) 369-4400 Fax: (515) 369-4410

PROJECT NO. 1305.214

## GENERAL LEGEND

| PROPOSED                     | EXISTING                  |
|------------------------------|---------------------------|
| SECTION LINE                 | SANITARY MANHOLE          |
| CENTER LINE                  | WATER VALVE BOX           |
| RIGHT OF WAY                 | FIRE HYDRANT              |
| PERMANENT EASEMENT           | WATER CURB STOP           |
| TEMPORARY EASEMENT           | WELL                      |
| TYPE SW-501 STORM INTAKE     | STORM SEWER MANHOLE       |
| TYPE SW-503 STORM INTAKE     | STORM SEWER SINGLE INTAKE |
| TYPE SW-505 STORM INTAKE     | STORM SEWER DOUBLE INTAKE |
| TYPE SW-506 STORM INTAKE     | FLARED END SECTION        |
| TYPE SW-513 STORM INTAKE     | DECIDUOUS TREE            |
| TYPE SW-401 STORM MANHOLE    | CONIFEROUS TREE           |
| TYPE SW-402 STORM MANHOLE    | DECIDUOUS SHRUB           |
| TYPE SW-301 SANITARY MANHOLE | CONIFEROUS SHRUB          |
| STORM/SANITARY CLEANOUT      | ELECTRIC POWER POLE       |
| WATER VALVE                  | GUY ANCHOR                |
| FIRE HYDRANT ASSEMBLY        | STREET LIGHT              |
| SIGN                         | POWER POLE W/ TRANSFORMER |
| DETECTABLE WARNING PANEL     | UTILITY POLE W/ LIGHT     |
| STORM SEWER STRUCTURE NO.    | ELECTRIC BOX              |
| STORM SEWER PIPE NO.         | ELECTRIC TRANSFORMER      |
| SANITARY SEWER STRUCTURE NO. | ELECTRIC MANHOLE OR VAULT |
| SANITARY SEWER PIPE NO.      | TRAFFIC SIGN              |
| SANITARY SEWER WITH SIZE     | TELEPHONE JUNCTION BOX    |
| SANITARY SERVICE             | TELEPHONE MANHOLE/VAULT   |
| STORM SEWER                  | TELEPHONE POLE            |
| STORM SERVICE                | GAS VALVE BOX             |
| WATERMAIN WITH SIZE          | CABLE TV JUNCTION BOX     |
| WATER SERVICE                | CABLE TV MANHOLE/VAULT    |
| SAWCUT (FULL DEPTH)          | MAIL BOX                  |
| SILT FENCE                   | BENCHMARK                 |
| USE AS CONSTRUCTED           | SOIL BORING               |
| MINIMUM OPENING ELEVATION    | UNDERGROUND TV CABLE      |
| MINIMUM GRADE AT STRUCTURE   | 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 SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.



1-800-292-8989

www.iowaonecall.com



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.

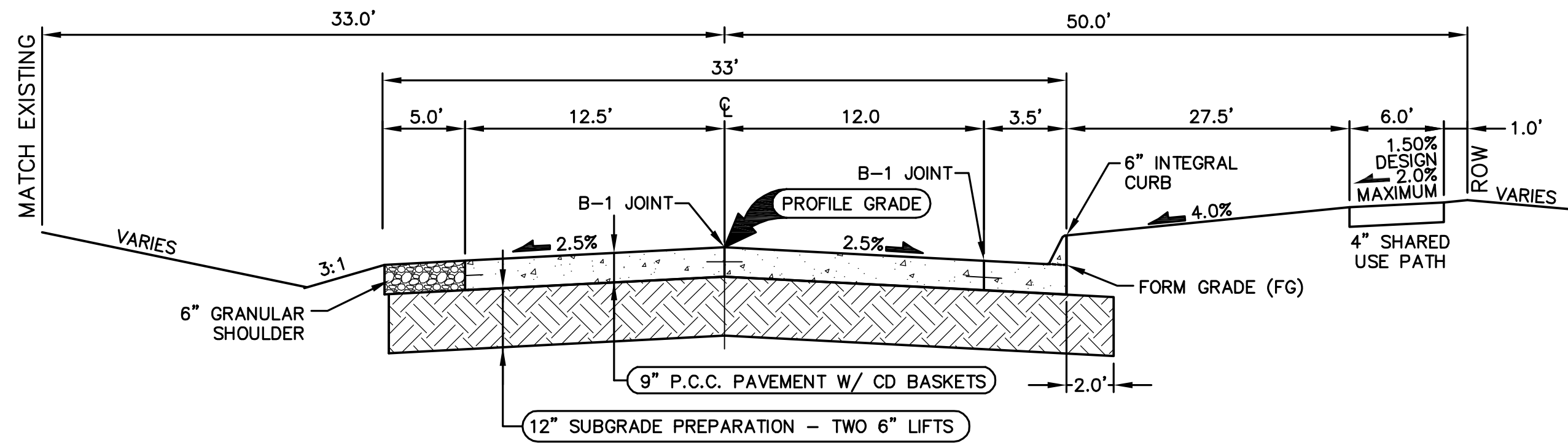
ERIN K. OLLENDIKE, P.E.

DATE

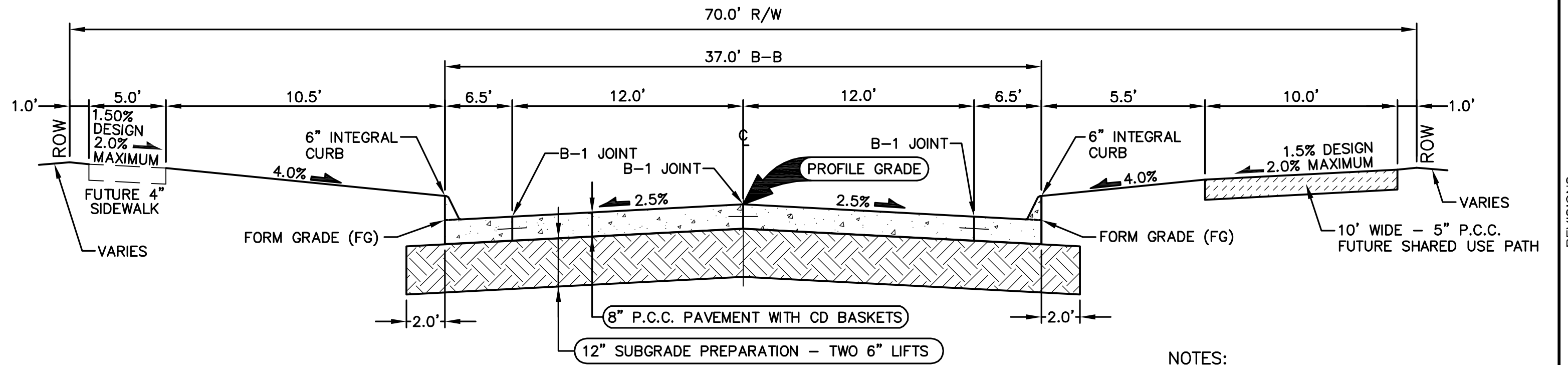
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PAGES OR SHEETS COVERED BY THIS SEAL:

SHEETS 1-44

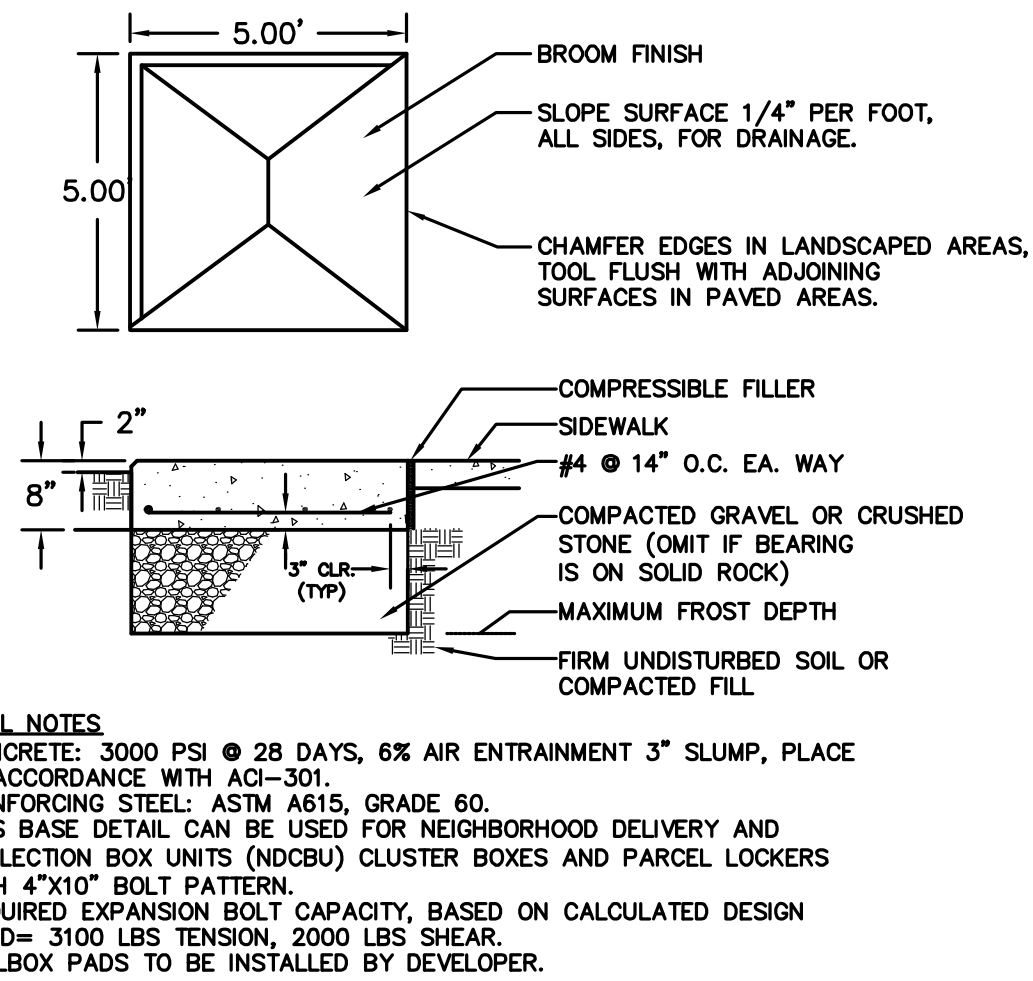
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COMMENTS: DESIGNED BY: GAZE



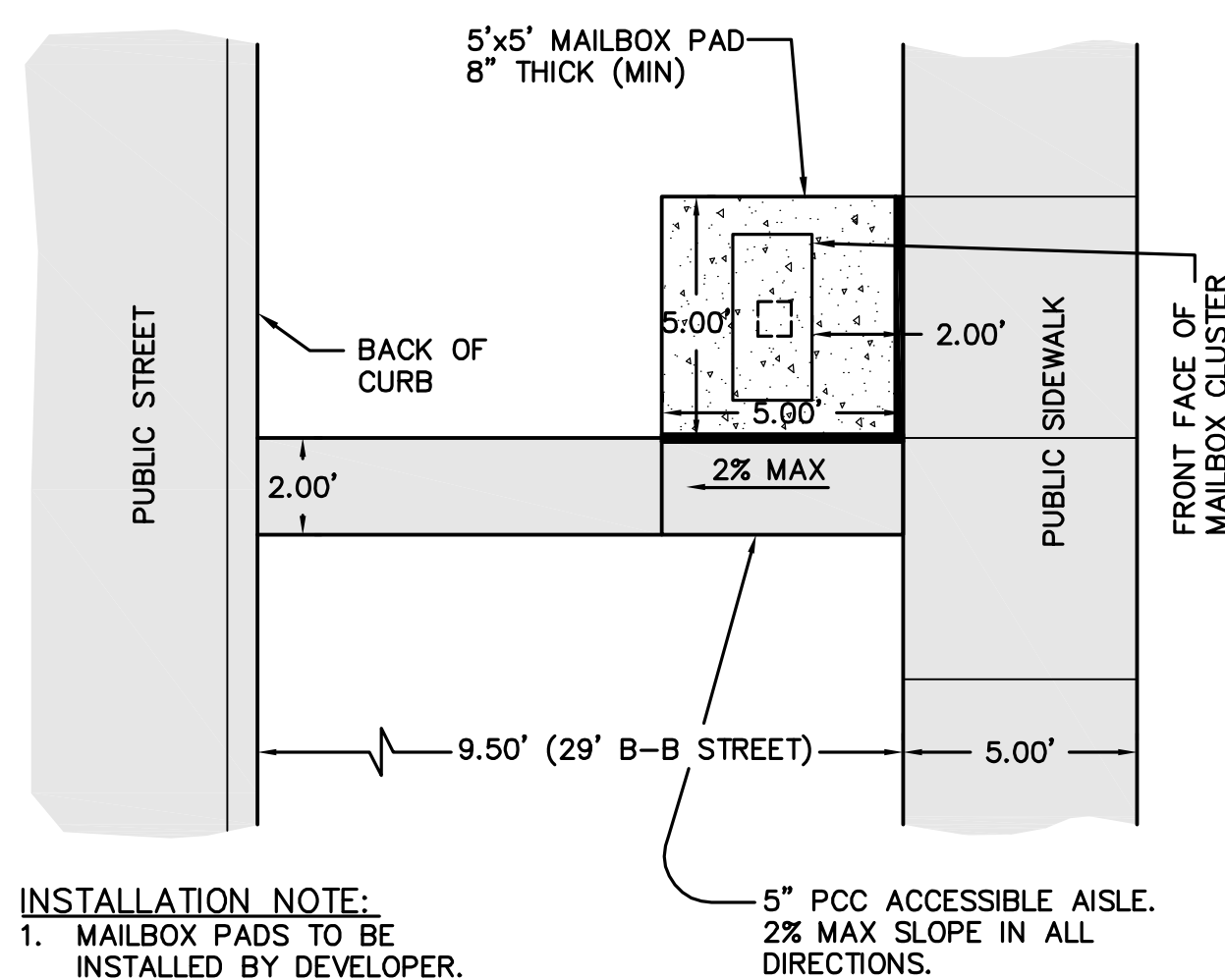
**TYPICAL SECTION - N. WARRIOR LANE**  
NOT TO SCALE



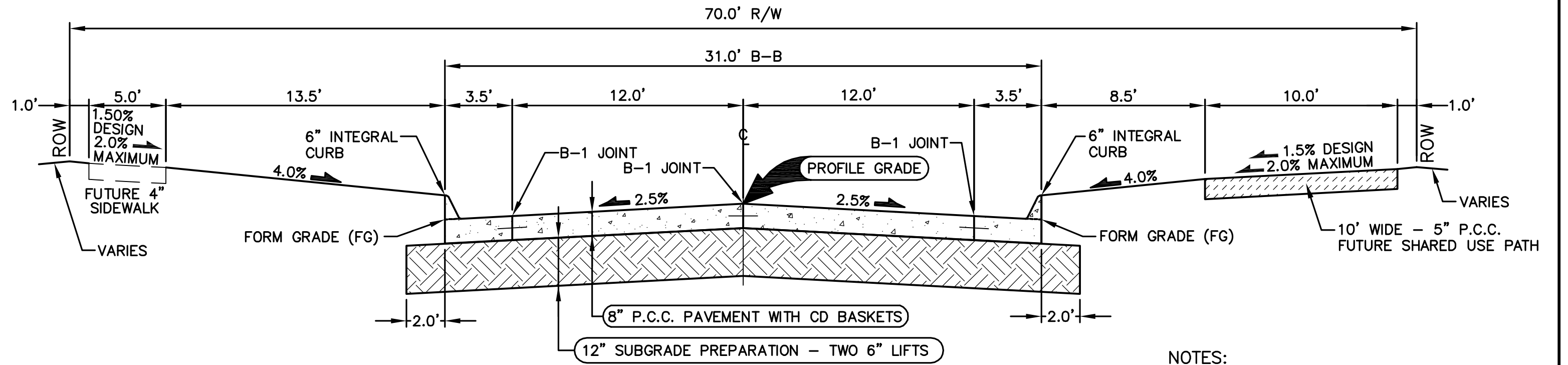
**TYPICAL SECTION - N.E. DARTMOOR DRIVE - 37' B/B P.C.C. ROADWAY WITH 70' R.O.W.**  
NOT TO SCALE



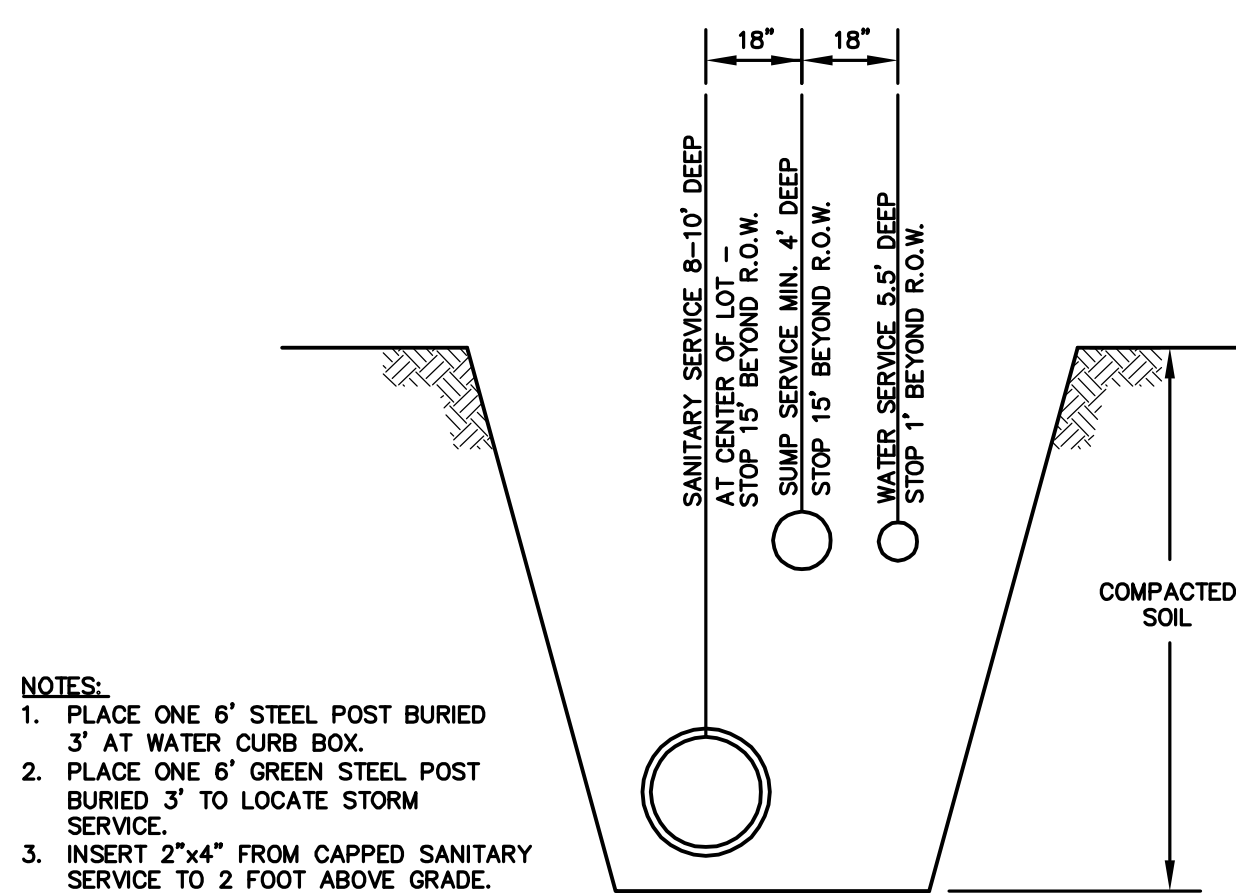
**MAILBOX PAD DETAIL**  
NOT TO SCALE



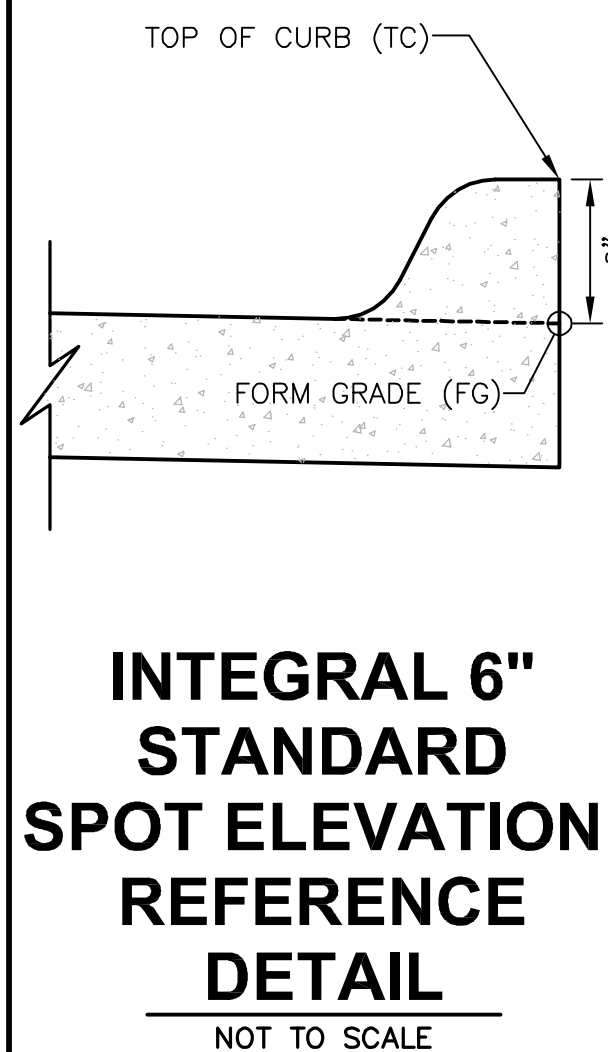
**MAILBOX PAD DETAIL**  
NOT TO SCALE



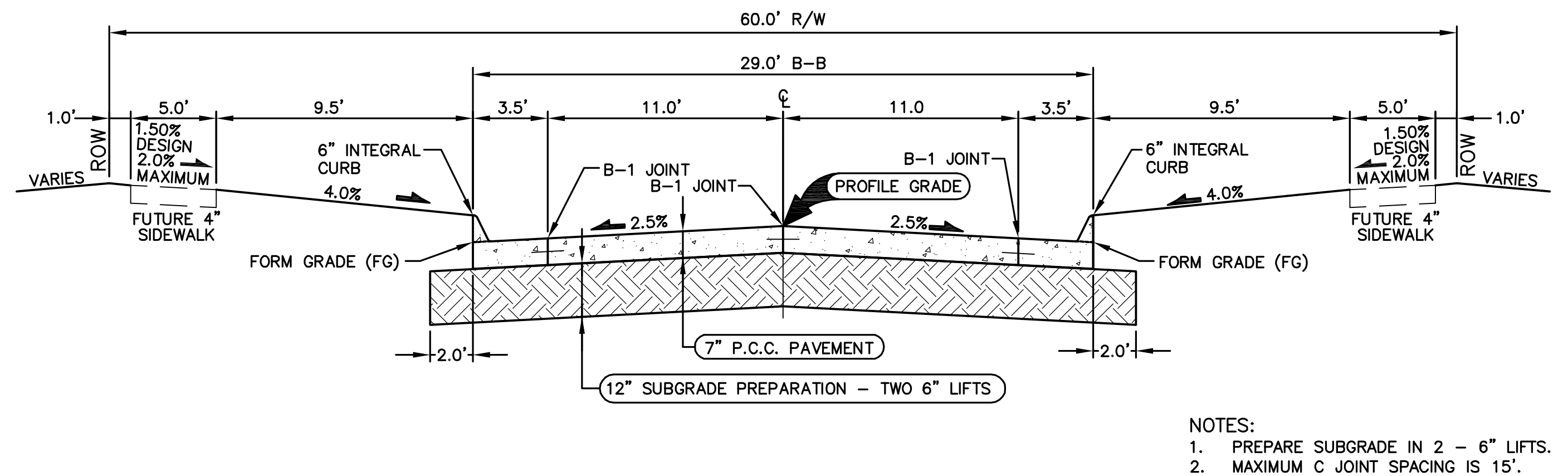
**TYPICAL SECTION - N.E. DARTMOOR DRIVE - 31' B/B P.C.C. ROADWAY WITH 70' R.O.W.**  
NOT TO SCALE



**SERVICE LOCATION DETAIL**  
NOT TO SCALE



**INTEGRAL 6" STANDARD SPOT ELEVATION REFERENCE DETAIL**  
NOT TO SCALE



**29' B/B P.C.C. ROADWAY WITH 60' R.O.W.**  
NOT TO SCALE

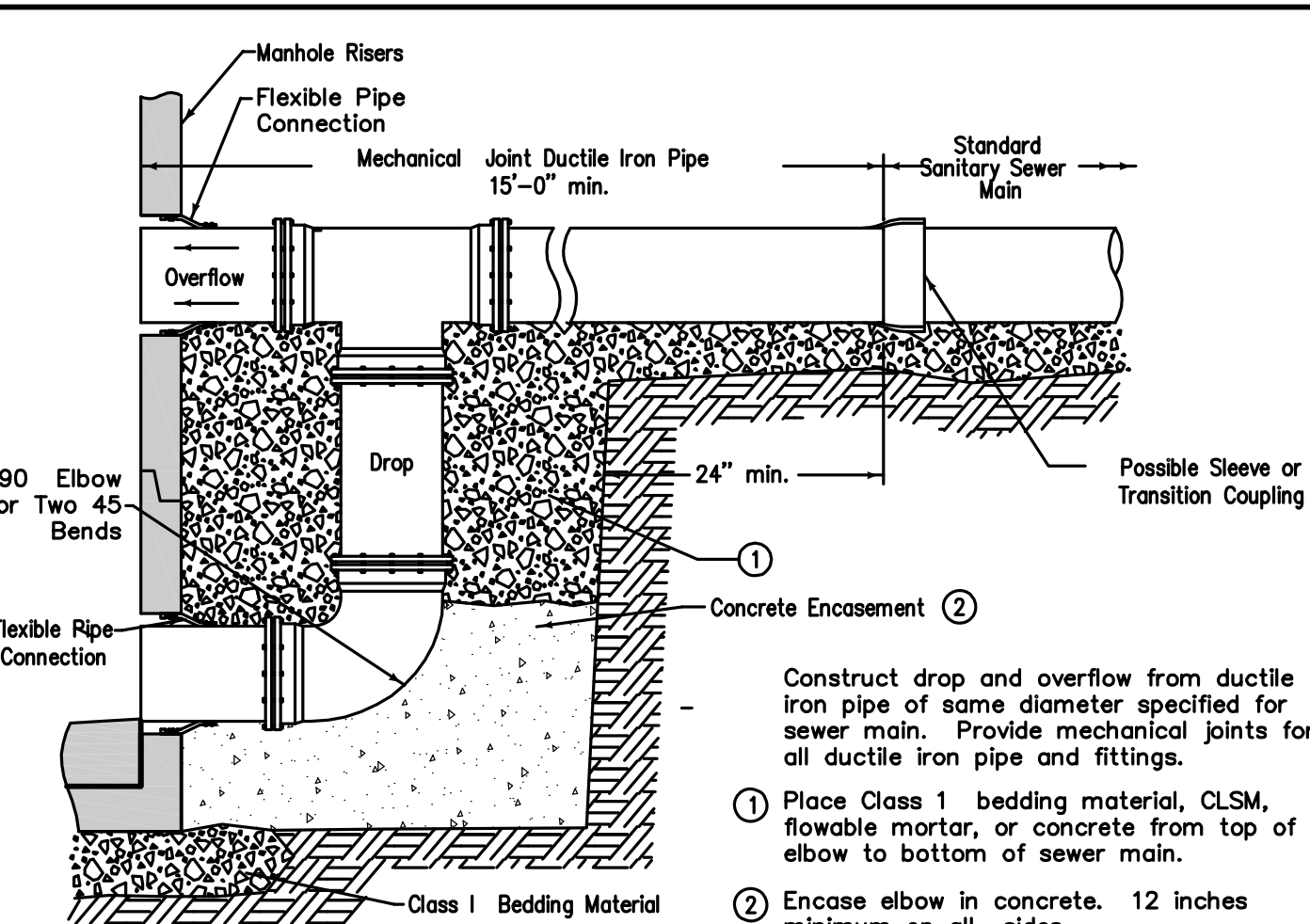
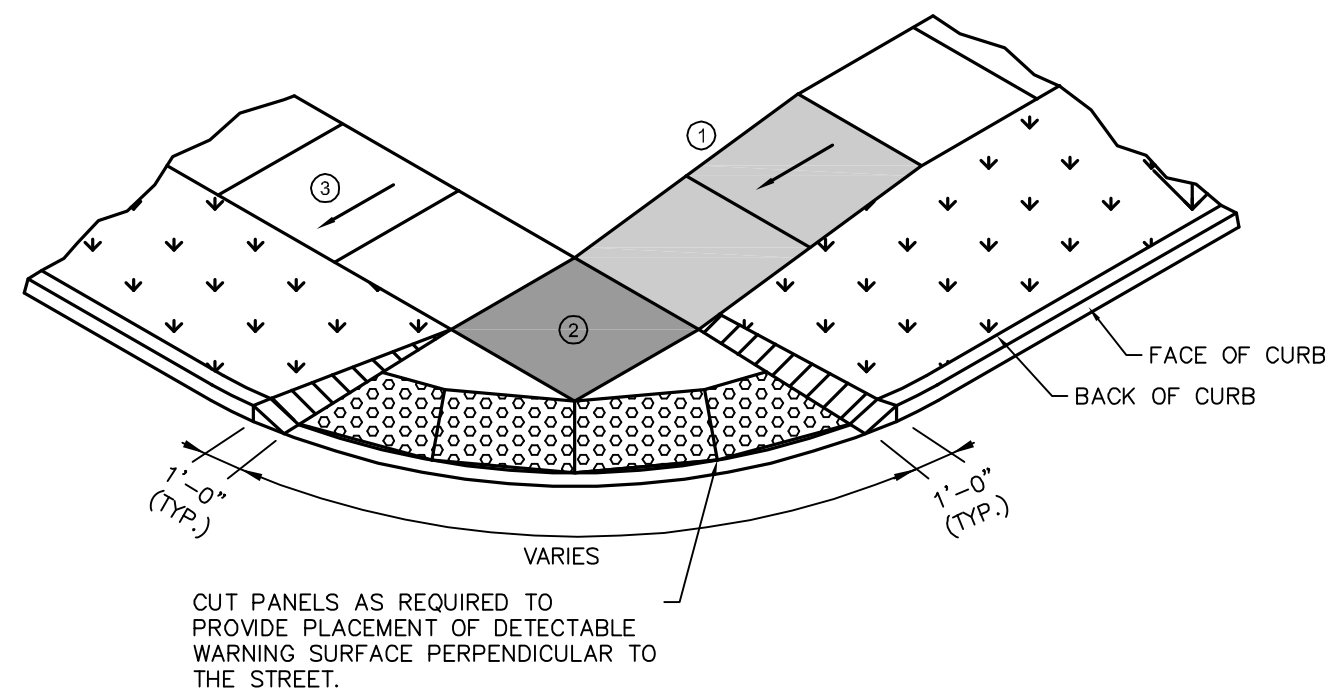
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PLOT BY: GALE HEROLD

- KEY:
- CURB RAMP
  - TURNING SPACE
  - DETECTABLE WARNING
  - GRASS

- PARALLEL CURB RAMP: IF NORMAL SIDEWALK ELEVATION CANNOT BE ACHIEVED WITH THE PERPENDICULAR RAMP BETWEEN THE STREET AND LANDING DUE TO LIMITED RAMP LENGTH, PROVIDE A PARALLEL RAMP TO MAKE UP THE ELEVATION DIFFERENCE BETWEEN THE TURNING SPACE AND THE STANDARD SIDEWALK.
- THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMP SHORTER THAN 15 FEET.
  - TURNING SPACE: TARGET SLOPE OF 1.5% WITH A MAXIMUM SLOPE PERPENDICULAR TO THE DIRECTION OF TRAVEL OF 2.0%. MINIMUM 4 FT BY 4 FT.
  - TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%.

### CURB RAMP DETAIL

NOT TO SCALE

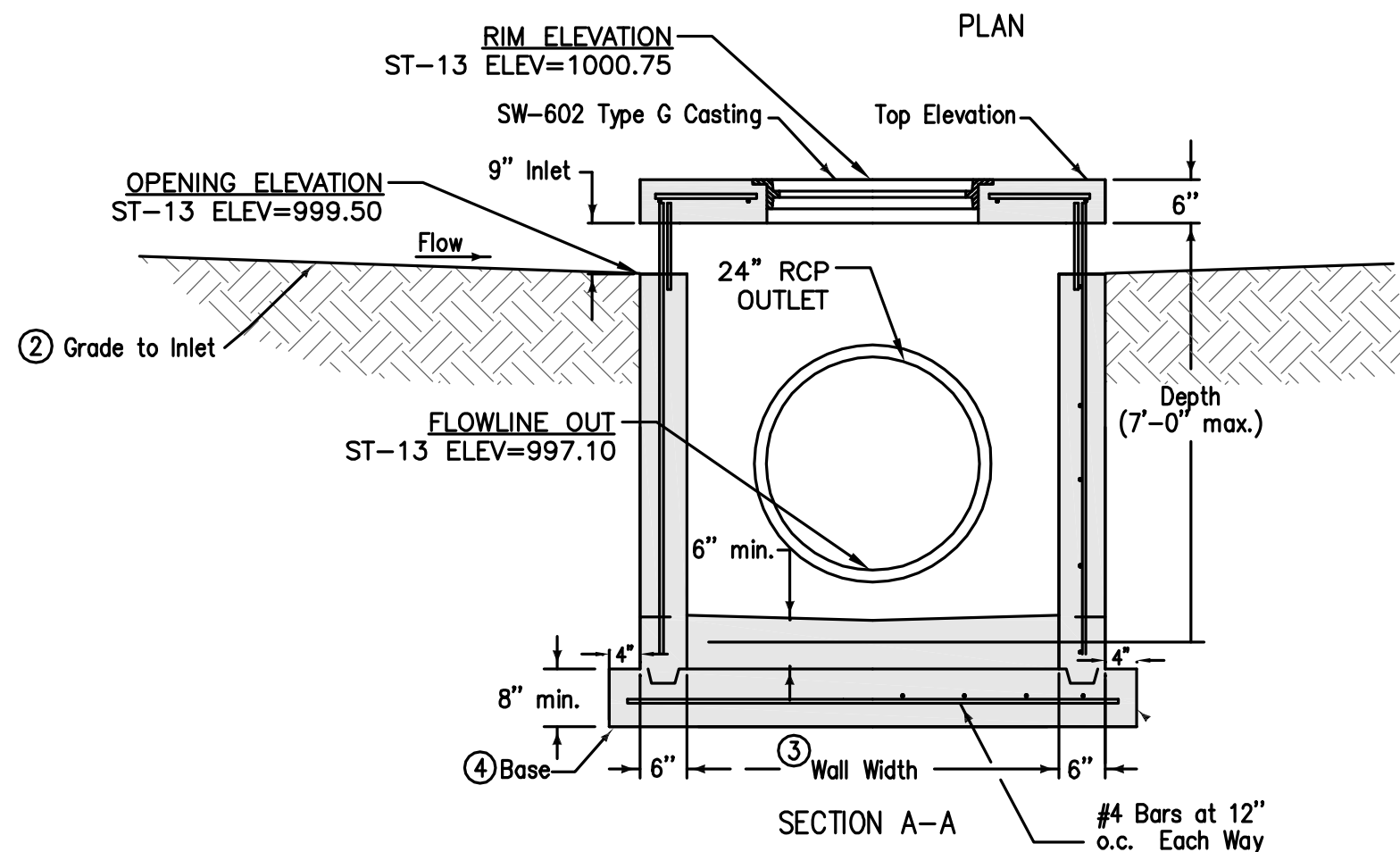
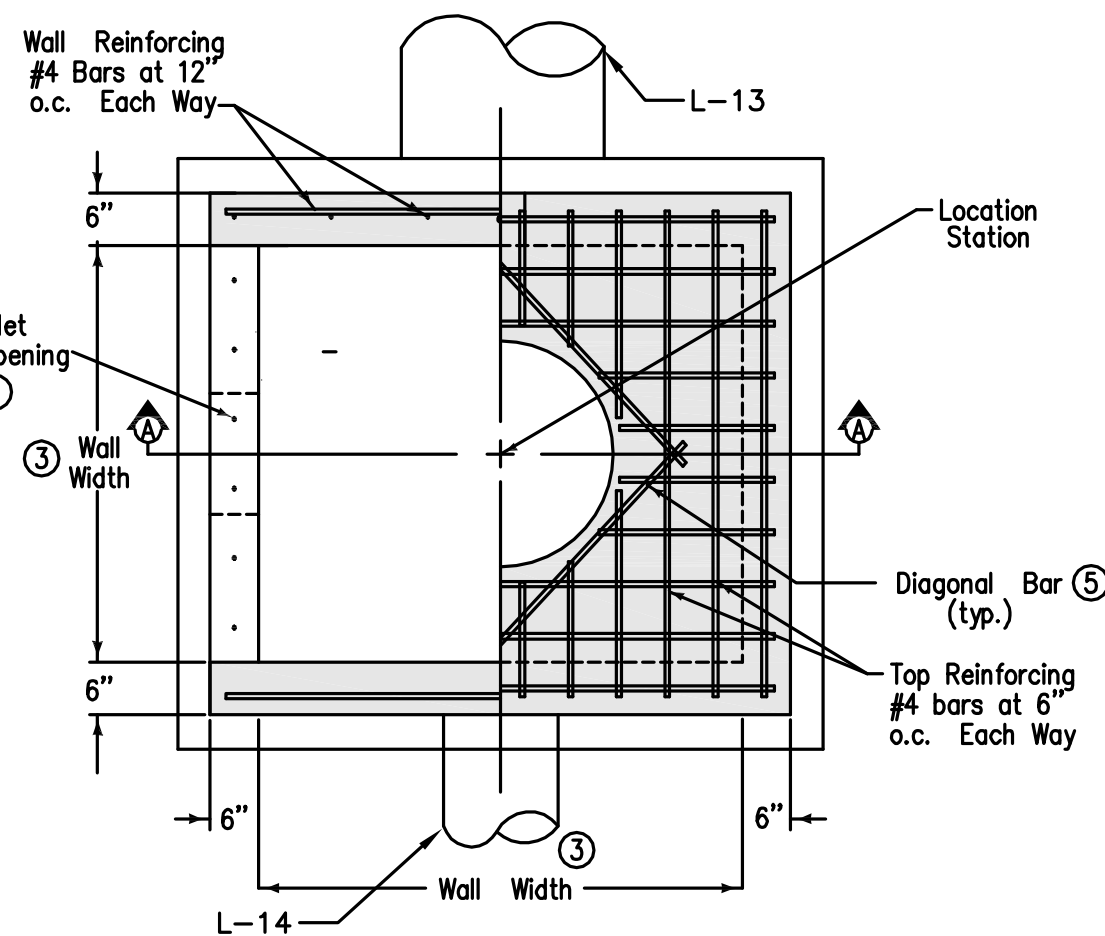


### SANITARY SEWER DROP CONNECTION

NOT TO SCALE

- Construct inlet openings with 15-inch #4 epoxy-coated bars at 8 inches on center. Embed bars a minimum of 3 inches into walls and top at all openings.
- Grade to inlet elevation on open sides. Grade to top elevation on closed sides.
- Wall widths vary with pipe diameter. Provide 6 inches of wall width (minimum) each side of pipe opening. Minimum wall width is 36 inches. Maximum wall width is 72 inches.
- 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.
- Install four #4 diagonal bars at all pipe openings.

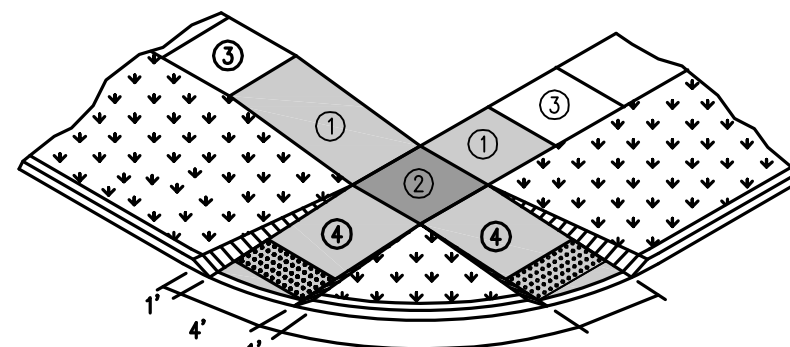
① ST-13 9" TALL X 36" WIDE OPENING (E&W)



### ST-13 SW-513 (MODIFIED) OPEN-SIDED AREA INTAKE

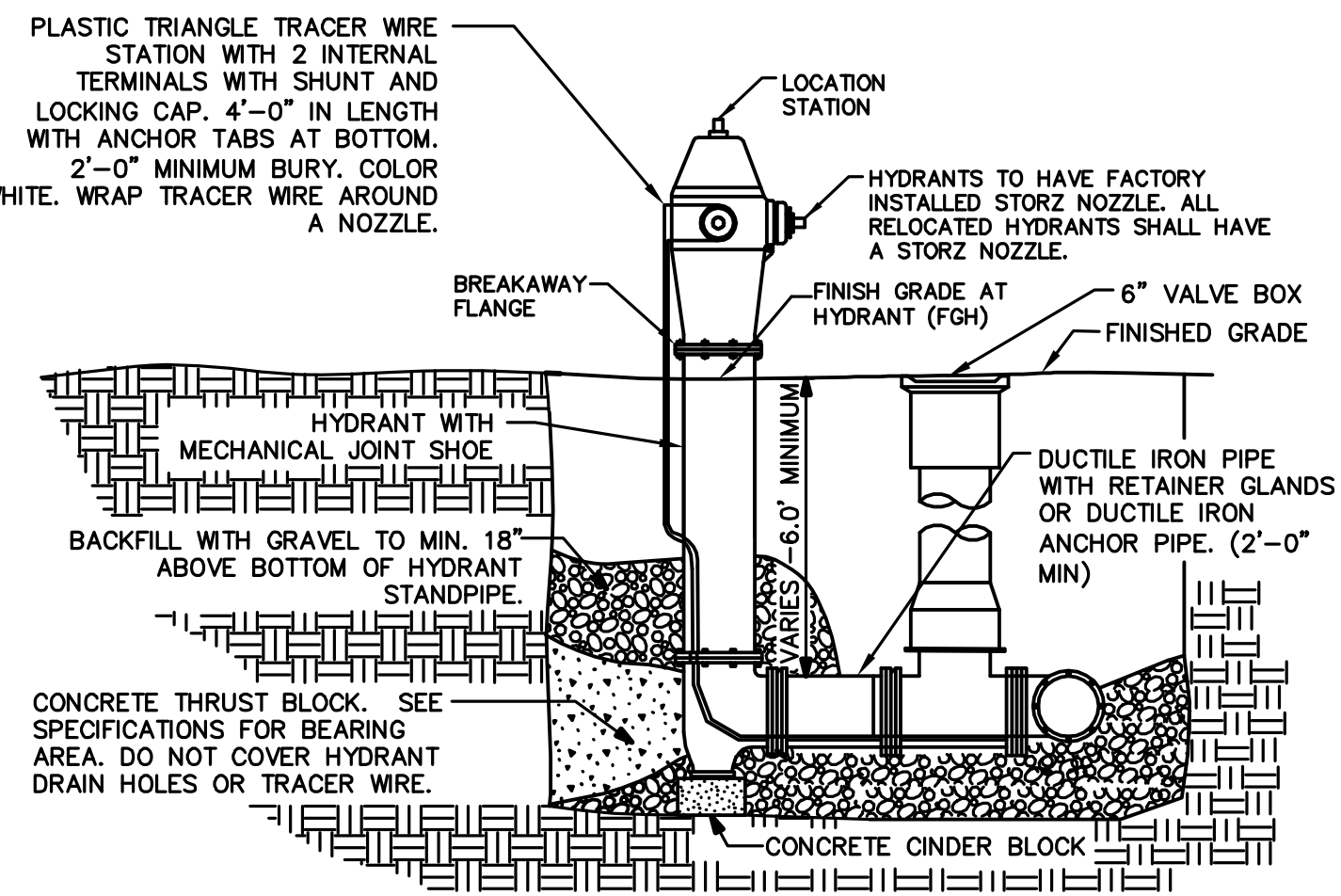
NOT TO SCALE

- 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.
- 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 4 feet by 4 feet.
- Target cross-slope of 1.5% with a maximum cross-slope of 2.0%.
- Perpendicular curb ramp: Target running slope of 6.25% with maximum running slope of 8.3%.



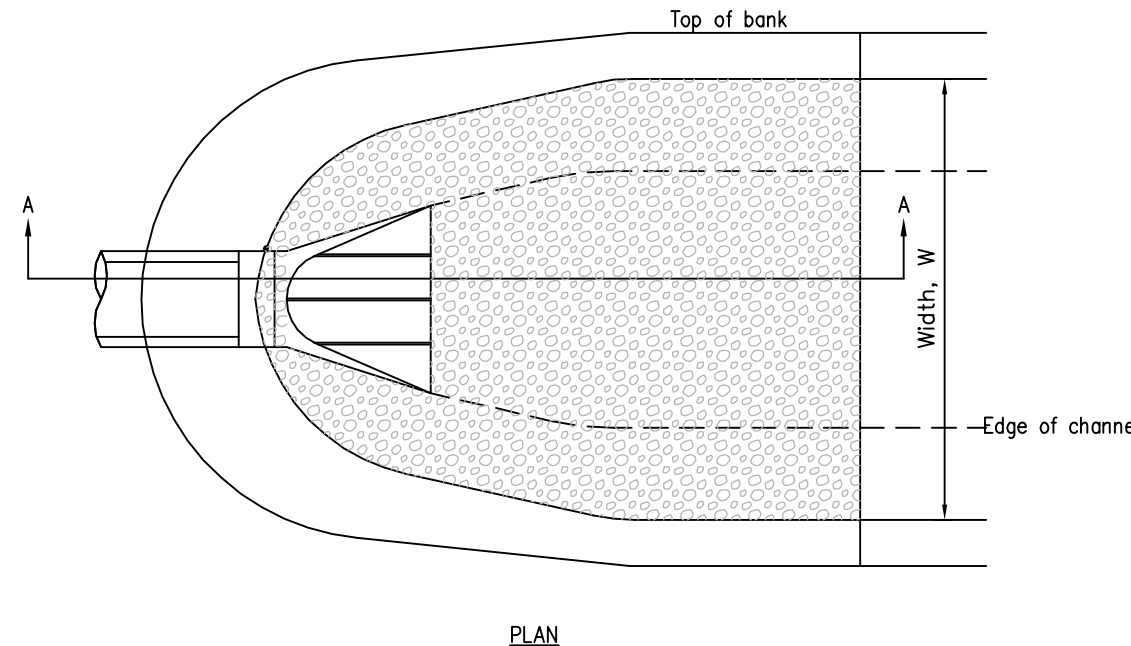
NOTE  
THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION WITH THE BUILDING DIVISION AT (515) 978-9533, PRIOR TO PLACEMENT OF ANY CONCRETE RAMPS.

### CURB RAMPS OUTSIDE OF INTERSECTION RADIUS



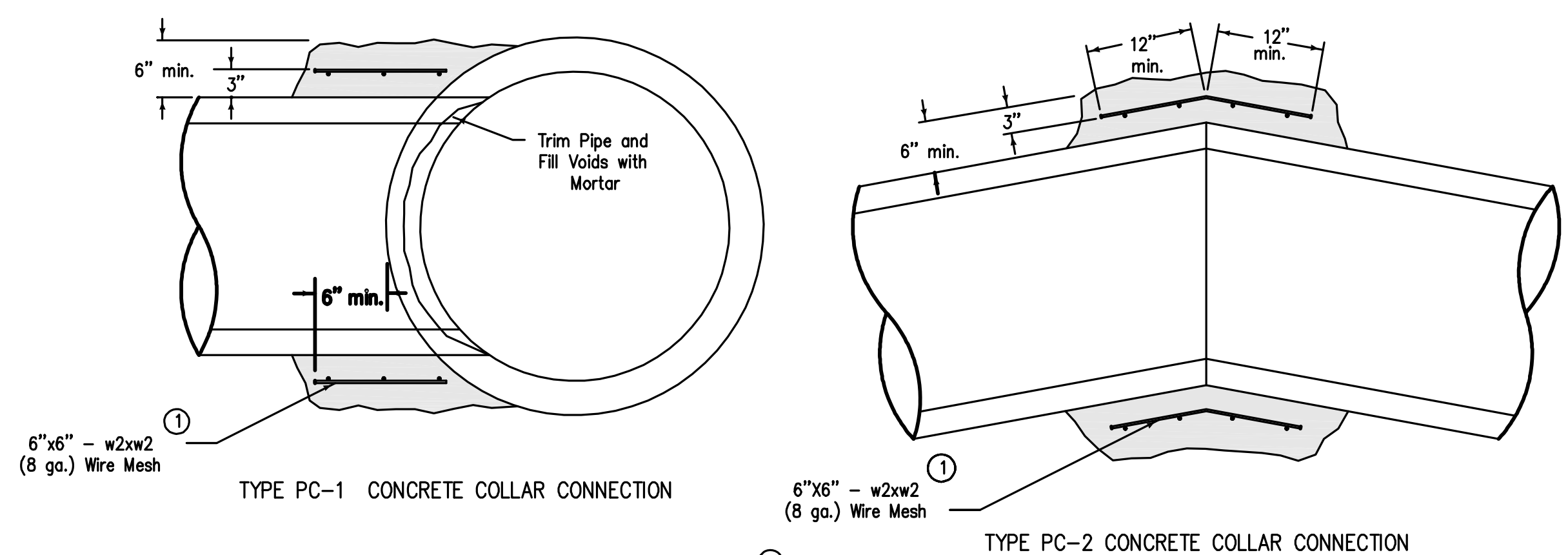
### HYDRANT ASSEMBLY DETAIL

NOT TO SCALE



### ROCK APRON FOR PIPE OUTLET

NOTE:  
THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTIONS PER SECTION 4030.302C OF SUDAS.

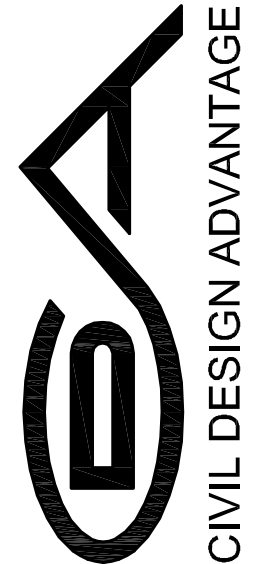


### CONCRETE COLLAR

NOT TO SCALE

| DATE     | REVISIONS          |
|----------|--------------------|
| 04/03/15 | AS-BUILT SUBMITTAL |
| 10/09/14 | AS-BUILT SUBMITTAL |
| 09/06/13 | FINAL SUBMITTAL    |
| 08/16/13 | FOURTH SUBMITTAL   |
| 07/31/13 | THIRD SUBMITTAL    |
| 07/17/13 | SECOND SUBMITTAL   |
| 06/11/13 | FIRST SUBMITTAL    |

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



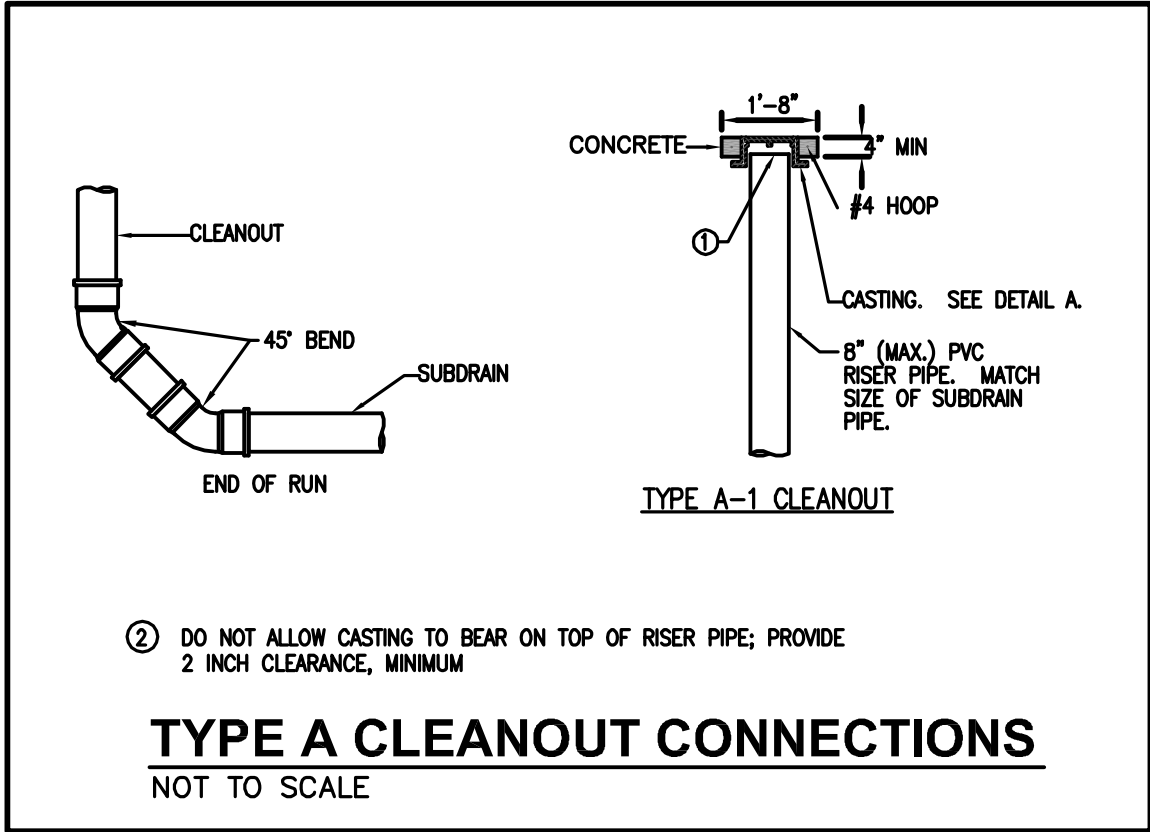
CIVIL DESIGN ADVANTAGE  
WAUKEE, IOWA

## FOX CREEK ESTATES PLAT 5

### TYPICAL SECTIONS AND DETAILS

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PLOT BY: GAZE HEROLD  
COMMENT: ENG.

| ESTIMATED PROJECT QUANTITIES |                                                    |      |          |
|------------------------------|----------------------------------------------------|------|----------|
| ITEM NO.                     | ITEM DESCRIPTION                                   | UNIT | QUANTITY |
| 1                            | COMBINED CLEARING AND GRUBBING                     | AC   | 26.91    |
| 2                            | STRIPPING, SALVAGING AND SPREAD TOPSOIL            | LS   | 1        |
| 3                            | CLASS 10 EXCAVATION                                | LS   | 1        |
| 4                            | SUBGRADE PREPARATION                               | SY   | 17822    |
| 5                            | SANITARY SEWER DROP CONNECTION                     | EA   | 3        |
| 6                            | SANITARY SEWER GRAVITY MAIN, 8" DIA                | LF   | 3884     |
| 7                            | SANITARY SEWER GRAVITY MAIN, 15" DIA               | LF   | 10       |
| 8                            | SANITARY SEWER GRAVITY MAIN, 18" DIA               | LF   | 718      |
| 9                            | SANITARY SEWER SERVICE STUB, 4" DIA                | EA   | 74       |
| 10                           | STORM SEWER, 15" RCP                               | LF   | 1387     |
| 11                           | STORM SEWER, 18" RCP                               | LF   | 305      |
| 12                           | STORM SEWER, 24" RCP                               | LF   | 1253     |
| 13                           | STORM SEWER, 30" RCP                               | LF   | 774      |
| 14                           | STORM SEWER, 36" RCP                               | LF   | 360      |
| 15                           | FOOTING DRAIN SEWER COLLECTOR, 8" DIA, PERFORATED  | LF   | 1806     |
| 16                           | STORM SEWER SERVICE STUB, 4" DIA                   | EA   | 74       |
| 17                           | STORM SEWER, 15" RCP APRON W/FOOTING & APRON GUARD | EA   | 3        |
| 18                           | STORM SEWER, 24" RCP APRON W/FOOTING & APRON GUARD | EA   | 3        |
| 19                           | STORM SEWER, 30" RCP APRON W/FOOTING & APRON GUARD | EA   | 1        |
| 20                           | STORM SEWER, 36" RCP APRON W/FOOTING & APRON GUARD | EA   | 1        |
| 21                           | CONCRETE COLLAR                                    | EA   | 1        |
| 22                           | WATER MAIN, 8" DIA                                 | LF   | 4412     |
| 23                           | WATER MAIN, 12" DIA                                | LF   | 336      |
| 24                           | WATER SERVICE STUB, 1" DIA                         | EA   | 74       |
| 25                           | VALVE, 8" DIA                                      | EA   | 15       |
| 26                           | VALVE, 12" DIA                                     | EA   | 3        |
| 27                           | FIRE HYDRANT ASSEMBLY                              | EA   | 19       |
| 28                           | RELOCATED BLOWOFF HYDRANT                          | EA   | 3        |
| 29                           | MANHOLE, SW-301, 48" (SANITARY SEWER)              | EA   | 18       |
| 30                           | MANHOLE, SW-401, 48" (STORM SEWER)                 | EA   | 9        |
| 31                           | MANHOLE, SW-401, 60" (STORM SEWER)                 | EA   | 3        |
| 32                           | MANHOLE, SW-401, 72" (STORM SEWER)                 | EA   | 1        |
| 33                           | INTAKE, SW-501                                     | EA   | 6        |
| 34                           | INTAKE, SW-503                                     | EA   | 3        |
| 35                           | INTAKE, SW-503 (MODIFIED)                          | EA   | 2        |
| 36                           | INTAKE, SW-505                                     | EA   | 6        |
| 37                           | INTAKE, SW-506                                     | EA   | 2        |
| 38                           | INTAKE, SW-512, 24" DIA.                           | EA   | 2        |
| 39                           | INTAKE, SW-512, 30" DIA.                           | EA   | 1        |
| 40                           | INTAKE, SW-513                                     | EA   | 1        |
| 41                           | STORM SEWER CLEAN OUT                              | EA   | 1        |
| 42                           | PAVEMENT, 6" P.C.C. FLUME                          | SY   | 18       |
| 43                           | PAVEMENT, 7" P.C.C.                                | SY   | 11326    |
| 44                           | PAVEMENT, 8" P.C.C. W/ CD BASKETS                  | SY   | 3220     |
| 45                           | PAVEMENT, 9" P.C.C. W/ CD BASKETS                  | SY   | 1227     |
| 46                           | PAVEMENT, 5" P.C.C. SHARED USE PATH                | SY   | 228      |
| 47                           | PAVEMENT, 4" P.C.C. SIDEWALK                       | SY   | 234      |
| 48                           | DETECTABLE WARNING PANELS                          | SY   | 31       |
| 49                           | SEEDING, FERTILIZING, AND MULCHING                 | AC   | 23.65    |
| 50                           | ROCK OUTLET PROTECTION, CLASS E RIP RAP            | TON  | 125      |
| 51                           | MAILBOX CLUSTER                                    | EA   | 6        |
| 52                           | RELOCATED PERMANENT ROAD CLOSURE, URBAN, SI-182    | EA   | 10       |
| 53                           | TRAFFIC CONTROL                                    | LS   | 1        |
| 54                           | REMOVE EXISTING TEMPORARY TURNAROUND               | EA   | 1        |
| 55                           | EROSION CONTROL                                    | LS   | 1        |
| 56                           | 6" TEMPORARY GRANULAR ROAD                         | SY   | 686      |
| 57                           | TEMPORARY TURNAROUND                               | SF   | 5301     |



**TYPE A CLEANOUT CONNECTIONS**  
NOT TO SCALE

### 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 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 THE TOP 6 INCHES OF TOPSOIL. RESPREAD TOPSOIL WITHIN THE RIGHT OF WAY, ON BACKSLOPES AND IN DEVELOPED AREAS A MINIMUM OF 6 INCHES THICK. RESPREAD TOPSOIL IN AREAS THAT ARE FARMED A MINIMUM OF 12 INCHES THICK. 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 2 FOR TYPICAL LOCATIONS AND THICKNESS.                                                                                                                                                                                                                                                                                                                                                                                       |
| 5         | REFER TO 6010.307 - DROP CONNECTION FOR SANITARY SEWER MANHOLE FOR CONSTRUCTION DETAILS.                                                                                                                                                                                                                                                                                                                                                    |
| 6-8       | SANITARY SEWER FOR 8" AND 15" SHALL BE PVC TRUSS PIPE. SANITARY SEWER FOR 18" PIPE SHALL BE A-2000 PVC 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.                                                                                                                               |
| 10-14     | 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 SANITARY AND STORM SEWER PRIOR TO PAVING AND PROVIDE TELEVISING REPORT TO CITY IN HARD COPY AND DISC FORMAT. TELEVISING SHALL BE CONSIDERED INCIDENTAL. |
| 15-16     | REFER TO FIGURE 3010.101 AND 3010.103 FOR PIPE EMBEDMENT DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL.                                                                                                                                                                                                                                                                                                                     |
| 9, 16, 24 | REFER TO SHEET 2 FOR SERVICE LOCATION DETAIL.                                                                                                                                                                                                                                                                                                                                                                                               |
| 17-20     | 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.                                                                                           |
| 21        | REFER TO SHEET 3 FOR DETAIL. REFER TO SHEET 11 FOR LOCATION.                                                                                                                                                                                                                                                                                                                                                                                |
| 22-23     | 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.                                                                                      |
| 27        | 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 CONNECTOR, POLYETHYLENE WRAP, THRUST BLOCK AND TRACER WIRE SYSTEM AND FIRE HYDRANT.                                                                                                                                                 |
| 28        | REFER TO SHEET 29, 35 AND 38 FOR LOCATIONS OF EXISTING FIRE HYDRANTS.                                                                                                                                                                                                                                                                                                                                                                       |
| 29        | 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).                                             |
| 30-32     | REFER TO FIG. 6010.401 - CIRCULAR STORM SEWER MANHOLE (SW-401) FOR CONSTRUCTION DETAILS. MANHOLE INSIDE DIAMETERS GREATER THAN 48" SHALL BE CONSIDERED INCIDENTAL.                                                                                                                                                                                                                                                                          |

### GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
- 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 GENERAL CONTRACTOR 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.
- 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.
- REMOVE DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
- 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.
- THE CONTRACTOR SHALL SUBMIT WRITTEN VERIFICATION THAT A MINIMUM TOPSOIL DEPTH OF 6" WAS SPREAD ACROSS ALL LOTS AND RIGHT-OF-WAYS WITHIN THE PLAT.

### 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 33-40    | 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".                                                                                                                                                                                                    |
| 33       | REFER TO FIG 6010.501 - SINGLE GRATE INTAKE (SW-501) FOR CONSTRUCTION DETAILS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 34-35    | REFER TO FIG 6010.503 - SINGLE GRATE INTAKE WITH MANHOLE (SW-503) FOR CONSTRUCTION DETAILS. INCLUDES MODIFICATIONS TO ST-31 AND ST-43. REFER TO DETAIL ON SHEET 8 FOR ST-43. ST-31 IS TO BE CONSTRUCTED WITH 8" WALLS DUE TO DEPTH OF STORM SEWER. ADDITIONAL COST TO CONSTRUCT MODIFIED SW-503 IS TO BE CONSIDERED INCIDENTAL.                                                                                                                                                                                                                                           |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 38-39    | REFER TO FIG 6010.512 - CIRCULAR AREA INTAKE (SW-512) FOR CONSTRUCTION DETAILS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 40       | REFER TO FIG 6010.513 - OPEN-SIDED AREA INTAKE (SW-513) AND DETAIL ON SHEET 3 FOR CONSTRUCTION DETAILS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 41       | REFER TO FIG 4040.232 - SUBDRAIN CLEANOUTS FOR CONSTRUCTION DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 42       | REFER TO SHEET 5 FOR DETAILS. REFER TO SHEET 11 FOR LOCATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 43-45    | REFER TO FIG. 7010.101 - JOINTS (PV-101) FOR JOINT DETAILS. MAXIMUM CD AND C JOINT SPACING IS 15 FEET.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 46-48    | REFER TO PLAN AND PROFILE SHEETS 11 THROUGH 25 FOR PROPOSED SHARED USE PATHS AND SIDEWALK LOCATIONS. REFER TO FIG. 7030.204 - GENERAL SIDEWALK AND CURB 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, RED IN COLOR. ACCESSIBLE CURB RAMPS INCLUDING TURNING SPACES SHALL BE 6" THICK P.C.C.                                                                                                                     |
| 49       | SUDAS TYPE 1 PERMANENT LAWN MIXTURE SEED SHALL BE USED WITHIN THE PROPOSED RIGHT-OF-WAY ON N.E. DARTMOOR DRIVE AND N. WARRIOR LANE IN ADDITION TO THE PROPOSED LANDSCAPE BUFFERS. THE REMAINDER OF SITE SHALL CONFORM TO THE SPECIFICATION FOR TYPE (2) EROSION CONTROL SEED MIXTURE.<br><br><u>SEEDING QUANTITIES</u><br>-TYPE 1 PERMANENT LAWN MIXTURE = 2.22 AC      -TYPE 2 EROSION CONTROL MIXTURE = 21.08 AC                                                                                                                                                        |
| 50       | INSTALL ENGINEERING FABRIC UNDER ALL RIP-RAP. ENGINEERING FABRIC SHALL BE CONSIDERED INCIDENTAL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 51       | REFER TO SHEET 2 FOR CONSTRUCTION DETAILS. REFER TO SHEET 5 FOR PROPOSED LOCATIONS. <ul style="list-style-type: none"><li>- 4-12 UNIT BOXES *BETWEEN LOTS 45/46, 51/52, 59/60, 60/61</li><li>- 2-13 UNIT BOXES *BETWEEN LOTS 28/29, 68/69</li></ul>                                                                                                                                                                                                                                                                                                                       |
| 52       | REFER TO PLAN AND PROFILE SHEETS FOR LOCATIONS. REFER TO IDOT STANDARD ROAD PLAN SI-182 FOR CONSTRUCTION DETAILS.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 53       | 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.                                                                                                                                                                                                                                                                                                                                        |
| 54       | REFER TO SHEET 24 FOR LOCATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 55       | REFER TO SHEETS 9 & 10 OF THE CONSTRUCTION DRAWINGS FOR EROSION AND SEDIMENT CONTROLS. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR SPECIFIC DETAILS.<br><br><u>EROSION CONTROL QUANTITIES</u> <ul style="list-style-type: none"><li>- 1 CONCRETE WASH PIT      - 19 INLET PROTECTION DEVICES</li><li>- 3,694 LF OF SILT FENCE      - 1,025 LF OF DITCH CHECK</li><li>- 23.20 ACRES OF SEEDING, FERTILIZING AND MULCHING.</li><li>- 312 SF OF LANDLOK 450 TURF REINFORCEMENT MAT. INSTALLATION TO BE COMPLETED BY A CERTIFIED INSTALLER.</li></ul> |
| 56       | TWO-WAY TRAFFIC TO BE MAINTAINED DURING THE GRADING AND CONSTRUCTION OF N. WARRIOR LANE. INSTALL A 12' FOOT WIDE TEMPORARY GRANULAR LANE.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 57       | REFER TO DETAIL ON SHEET 3 FOR TYPICAL CROSS-SECTION. REFER TO SHEET 25 FOR LOCATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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

ENGINEER: EKO

EI: JMM

FOX CREEK ESTATES PLAT 5

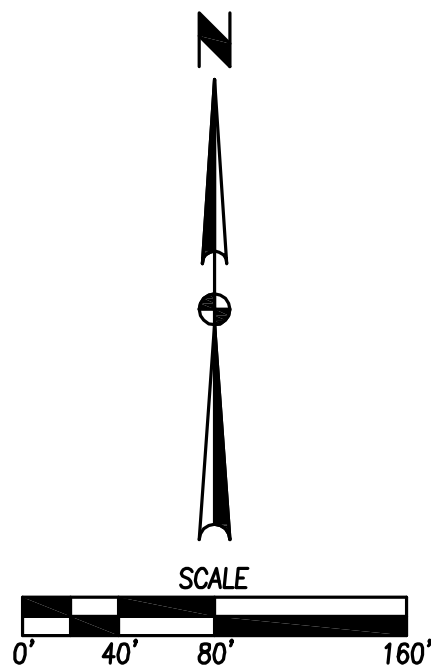
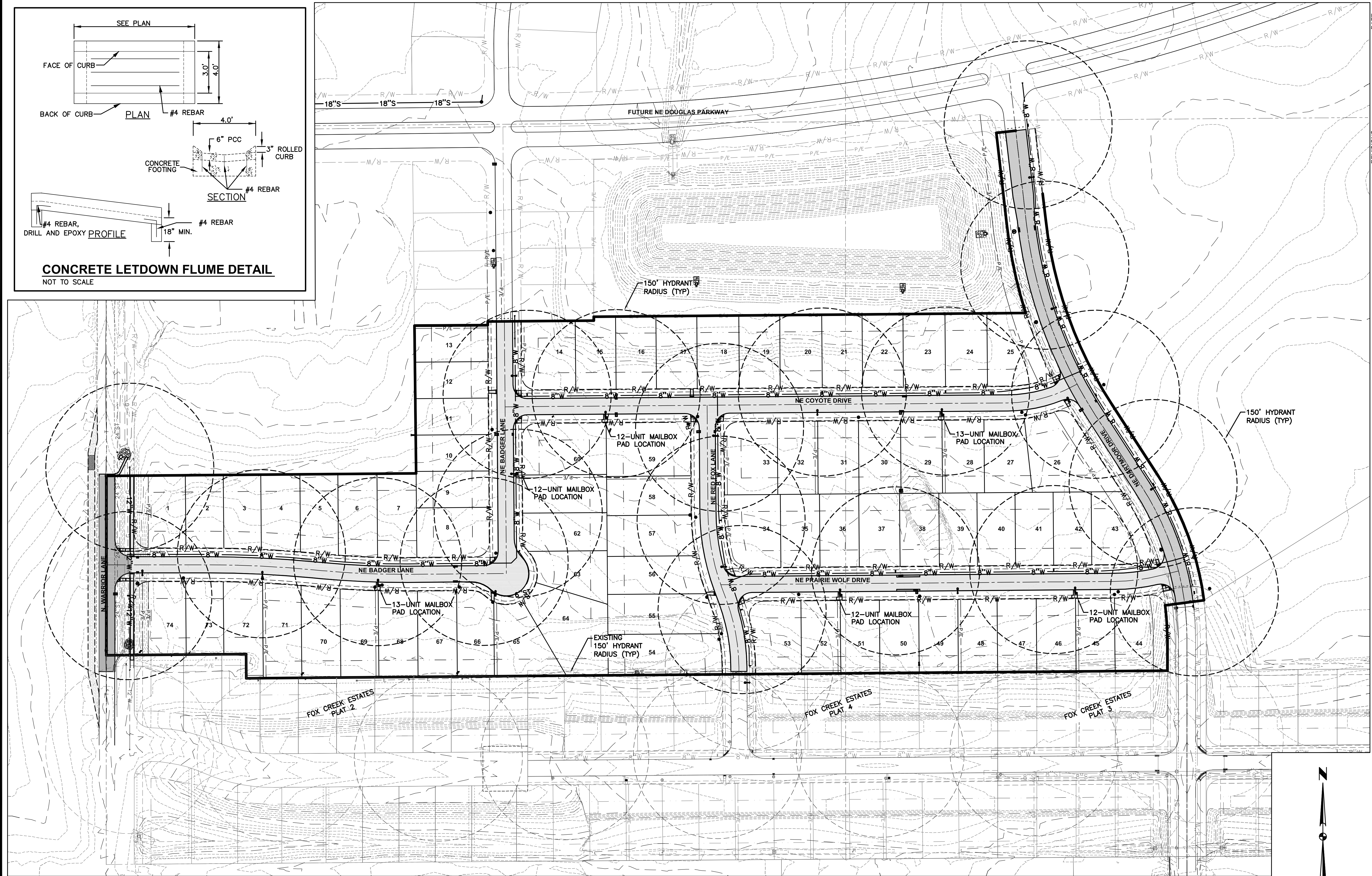
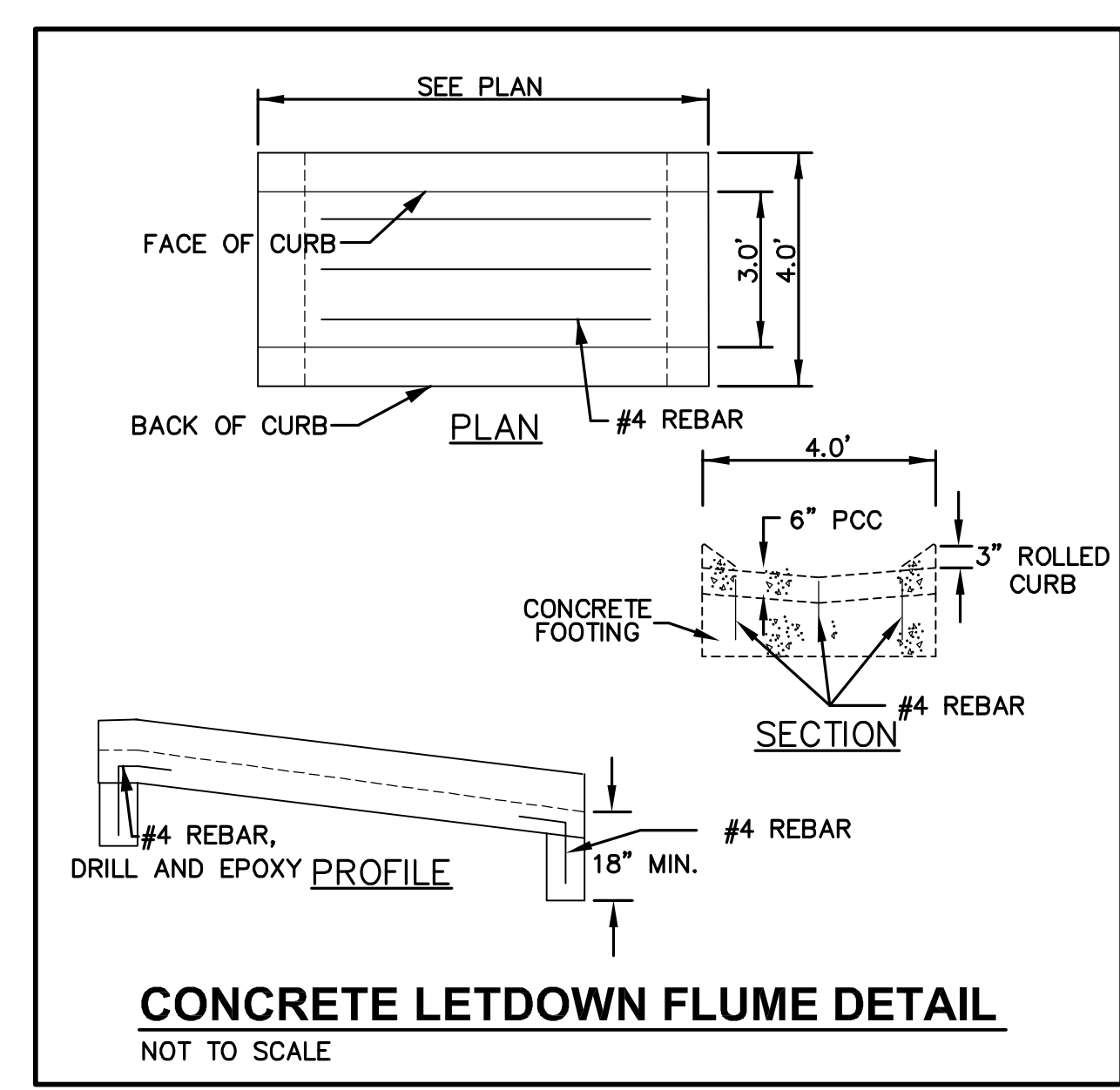
QUANTITIES AND REFERENCE NOTES

WAUKEE, IOWA

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| AS-BUILT SUBMITTAL | 09/06/13 | 10/09/14 |
| FINAL SUBMITTAL    | 08/16/13 | 09/06/13 |
| FOURTH SUBMITTAL   | 07/31/13 | 08/16/13 |
| THIRD SUBMITTAL    | 07/17/13 | 07/31/13 |
| SECOND SUBMITTAL   | 07/17/13 | 07/17/13 |
| FIRST SUBMITTAL    | 06/11/13 | 07/17/13 |

**5**  
**44**

**FOX CREEK ESTATES PLAT 5**  
**HYDRANT COVERAGE PLAN**

CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

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

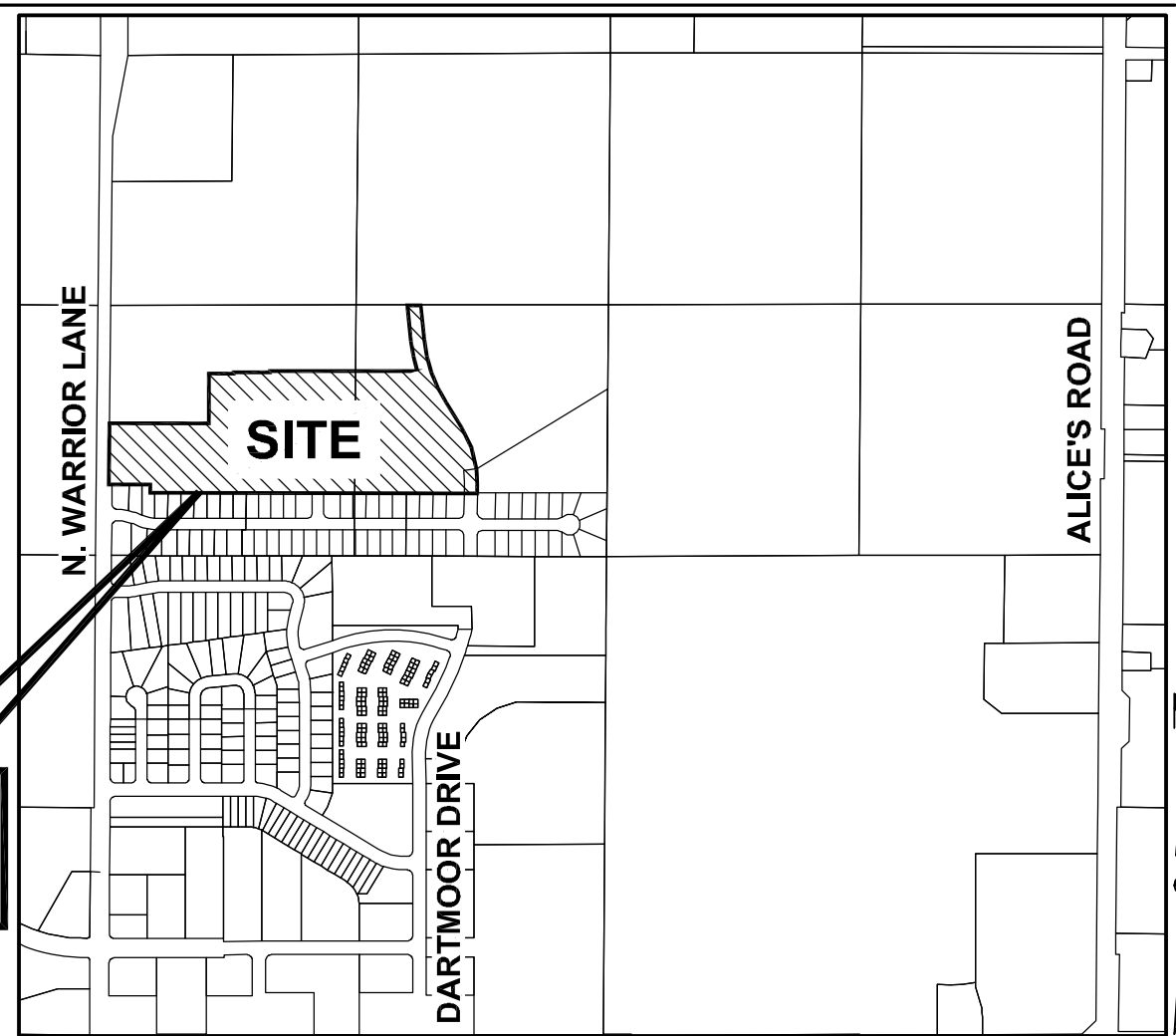






# FOX CREEK ESTATES PLAT 5

VICINITY MAP  
NOT TO SCALE



## EROSION AND SEDIMENT CONTROL PLAN

### DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO AN UNNAMED TRIBUTARY OF LITTLE WALNUT CREEK ±2500 FT

|                                                                 |               |
|-----------------------------------------------------------------|---------------|
| TOTAL AREA DISTURBED TO DISCHARGE POINT                         | 24.86 ACRES   |
| STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)                 | 89,496 CU FT  |
| VOLUME PROVIDED IN FILTER SOCK (100 LF @ 2.0 CU FT/LF OF SOCK)  | 200 CU FT     |
| VOLUME PROVIDED IN SILT FENCE (3625 LF @ 4.5 CU FT/LF OF FENCE) | 16,313 CU FT  |
| VOLUME PROVIDED IN MISCELLANEOUS FENCE (58331 - CALCULATED)     | 29,166 CU FT  |
| VOLUME PROVIDED IN DITCH CHECK (625 LF @ 4.5 CU FT/LF)          | 2,813 CU FT   |
| VOLUME PROVIDED IN TSB                                          | 187,358 CU FT |
| TOTAL VOLUME PROVIDED                                           | 235,850 CU FT |

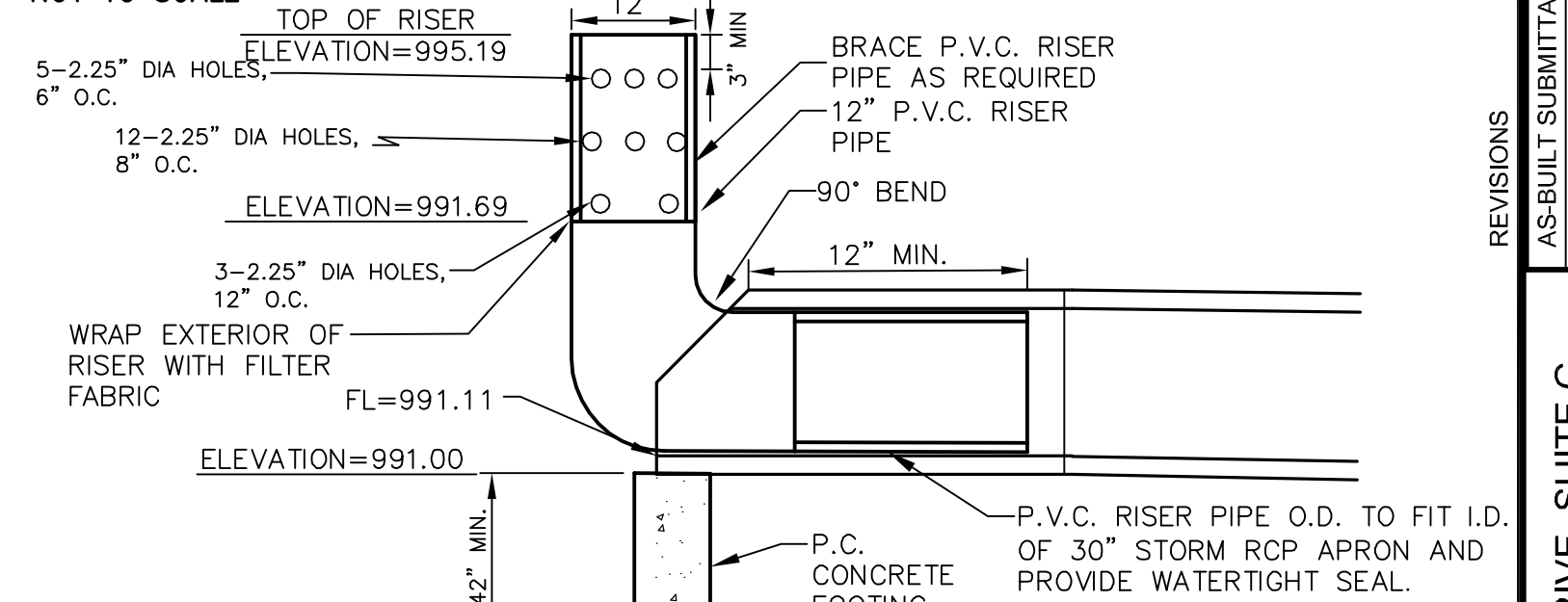
### DISCHARGE POINT SUMMARY

DISCHARGE POINT #2 TO AN UNNAMED TRIBUTARY OF LITTLE WALNUT CREEK ±2500 FT

|                                                                |             |
|----------------------------------------------------------------|-------------|
| TOTAL AREA DISTURBED TO DISCHARGE POINT                        | 1.67 ACRES  |
| STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)                | 6,023 CU FT |
| VOLUME PROVIDED IN SILT FENCE (340 LF @ 4.5 CU FT/LF OF FENCE) | 1,530 CU FT |
| VOLUME PROVIDED IN MISCELLANEOUS FENCE (8,438 - CALCULATED)    | 4,219 CU FT |
| VOLUME PROVIDED IN DITCH CHECK (400 LF @ 4.5 CU FT/LF)         | 1,800 CU FT |
| TOTAL VOLUME PROVIDED                                          | 7,549 CU FT |

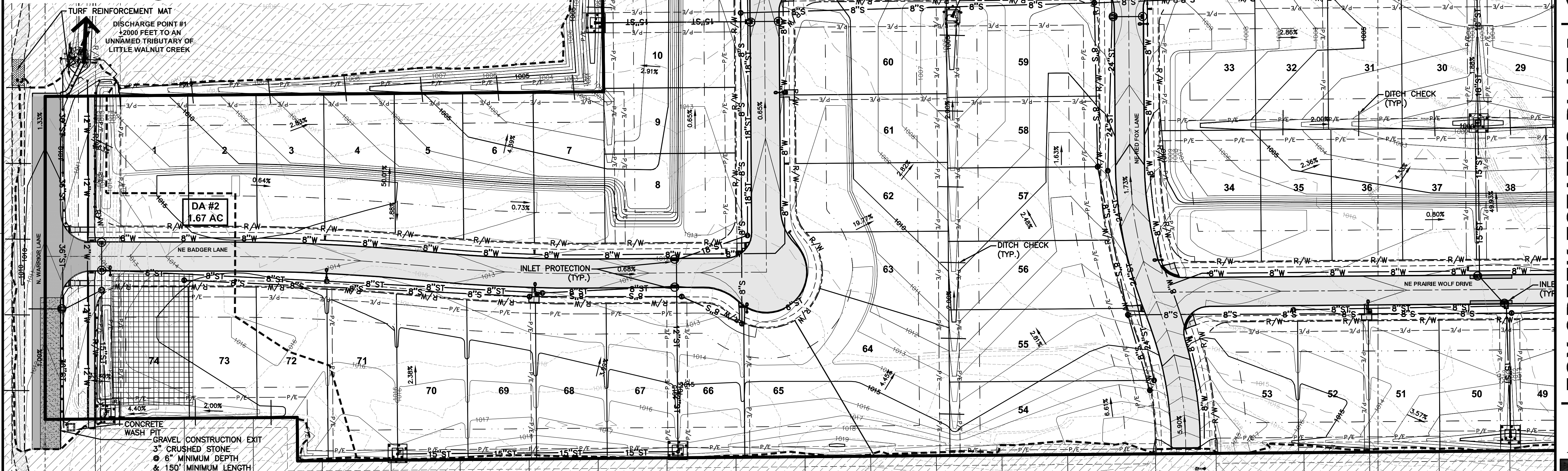
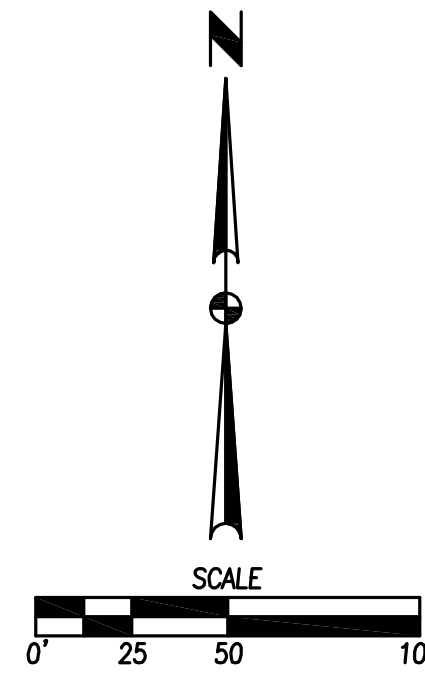
### EXISTING SEDIMENT BASIN OUTLET STRUCTURE DETAIL

NOT TO SCALE



### SWPPP LEGEND

|                      |           |                          |           |
|----------------------|-----------|--------------------------|-----------|
| DRAINAGE ARROW       | X.XX %    | AREA TO BE SEED          | [Pattern] |
| GRADING LIMITS       | [Pattern] | STRAW MAT                | [Pattern] |
| FILTER SOCK          | [Pattern] | UNDISTURBED AREA         | [Pattern] |
| SILT FENCE           | [Pattern] | RIPRAP                   | [Pattern] |
| DITCH CHECK          | [Pattern] | GRAVEL ENTRANCE          | [Pattern] |
| INLET PROTECTION     | [Symbol]  | STAGING AREA             | [Pattern] |
| PORTABLE RESTROOM    | R         | TEMPORARY SEDIMENT BASIN | TSB #     |
| CONCRETE WASHOUT PIT | [Symbol]  |                          |           |
| TEMPORARY STANDPIPE  | [Symbol]  |                          |           |



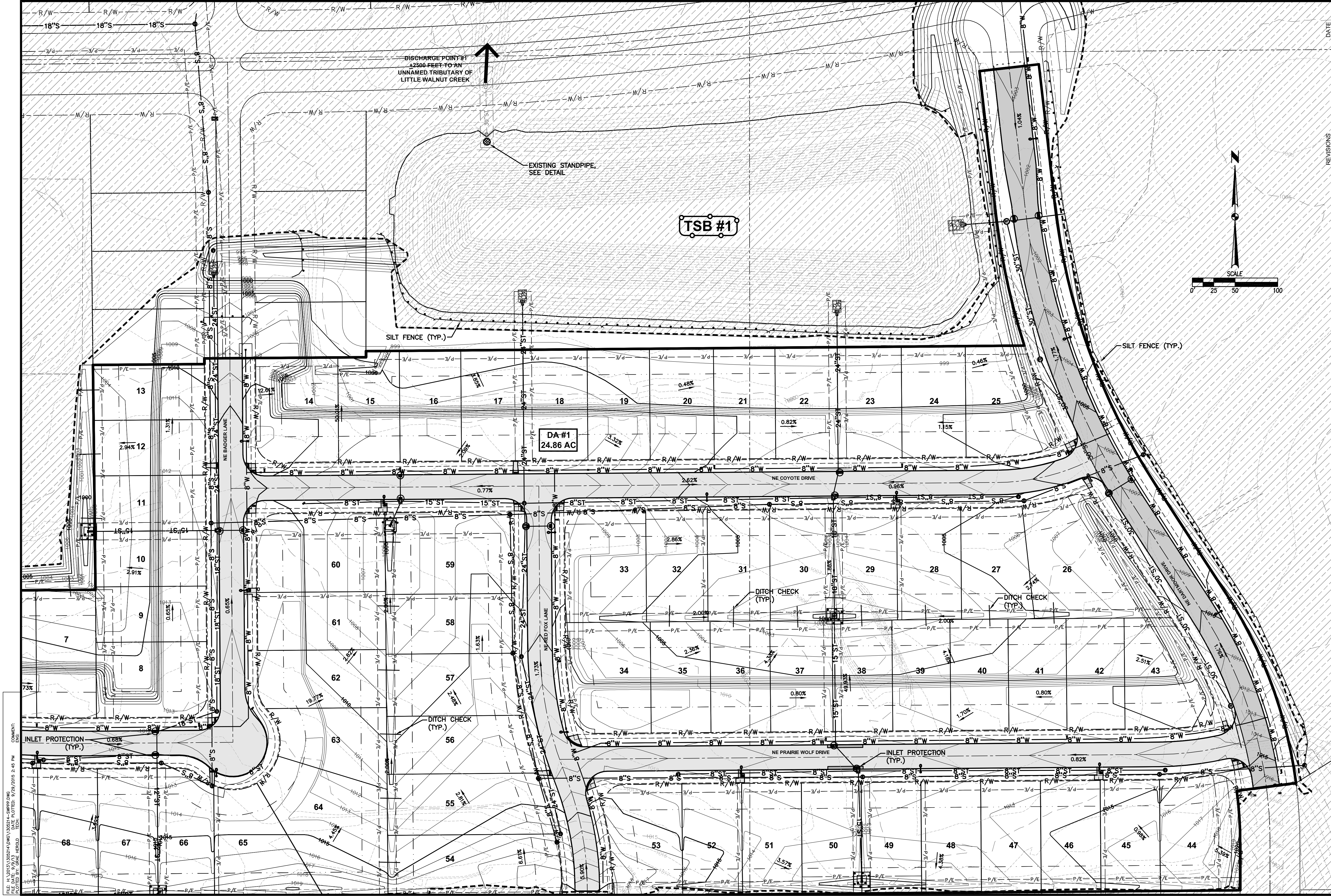
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PLOT BY: GRAE HEROLD

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08/16/13  
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06/11/13

REVISIONS  
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THIRD SUBMITTAL  
SECOND SUBMITTAL  
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3405 S.E. CROSSROADS DRIVE, SUITE G  
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PHONE: (515) 369-4400 FAX: (515) 369-4410  
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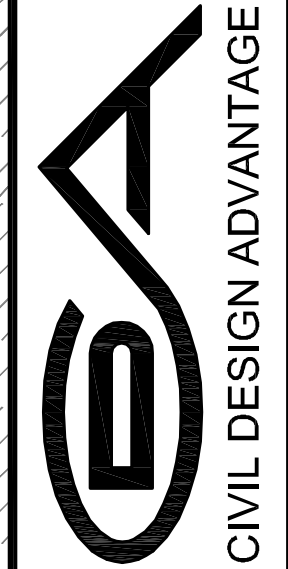
FOX CREEK ESTATES PLAT 5  
EROSION AND SEDIMENT CONTROL PLAN  
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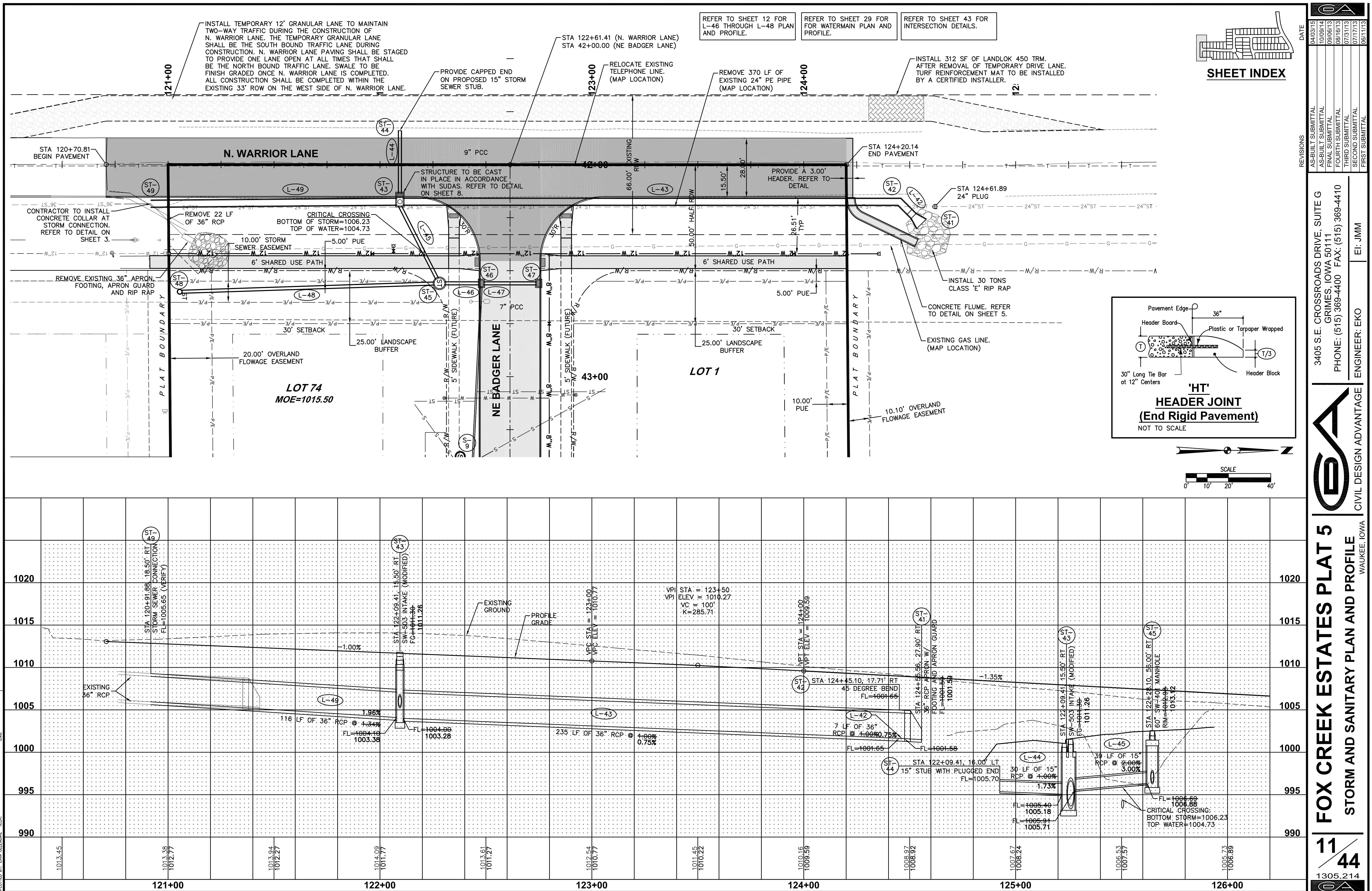
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| 10/09/14 | AS-BUILT SUBMITTAL |
| 09/06/13 | FINAL SUBMITTAL    |
| 08/16/13 | FOURTH SUBMITTAL   |
| 07/31/13 | THIRD SUBMITTAL    |
| 07/17/13 | SECOND SUBMITTAL   |
| 06/11/13 | FIRST SUBMITTAL    |

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GRIMES, IOWA 50111  
PHONE: (515) 369-4400 FAX: (515) 369-4410  
ENGINEER: EKO  
Ei: JMM



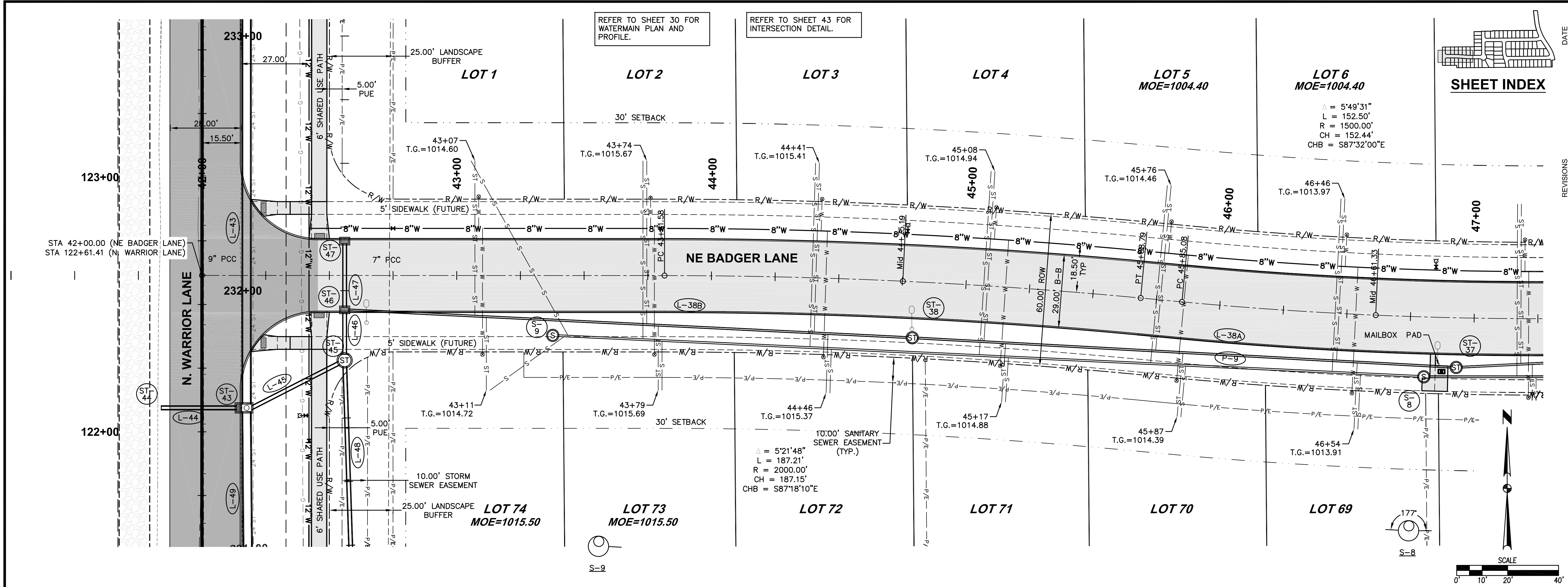
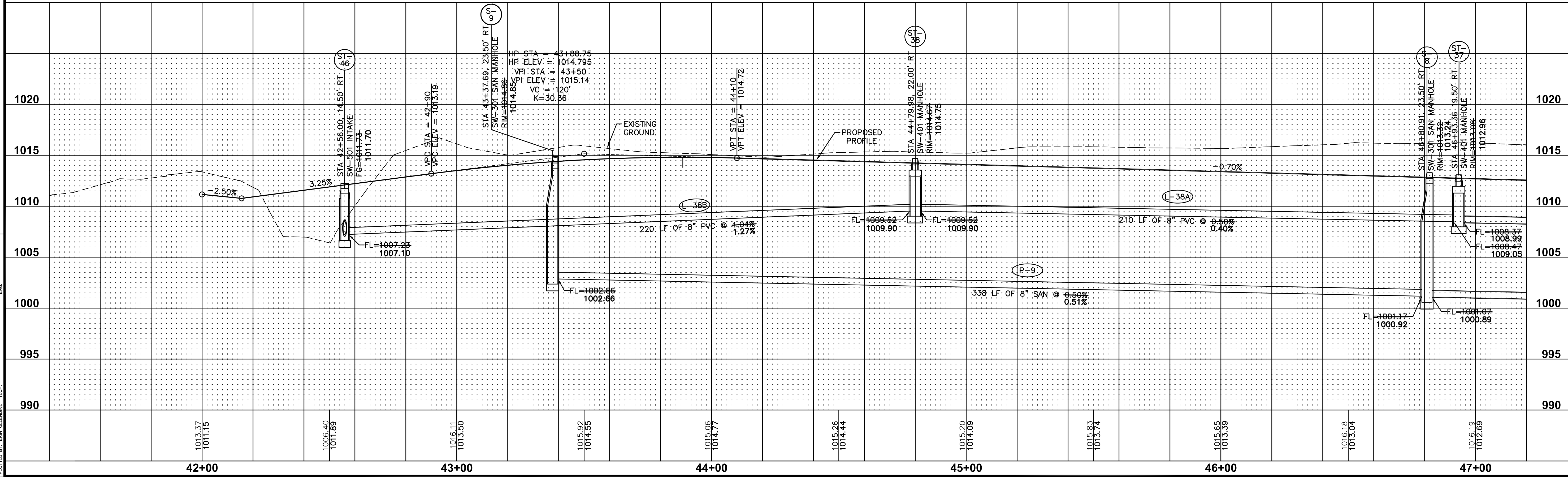
**FOX CREEK ESTATES PLAT 5**  
**EROSION AND SEDIMENT CONTROL PLAN**  
10/44

1305.214





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DATE: 4/10/2015 2:29 PM  
DRAWN BY: JMM  
CHECKED BY: JMM  
PLOTTER: HP DesignJet T1130  
PLOTED BY: JMM



13  
44

1305.214

FOX CREEK ESTATES PLAT 5  
STORM AND SANITARY PLAN AND PROFILE

WAUKEE, IOWA

DATE

04/03/15

AS-BUILT SUBMITTAL

10/09/14

FINAL SUBMITTAL

09/06/13

FOURTH SUBMITTAL

08/16/13

THIRD SUBMITTAL

07/31/13

SECOND SUBMITTAL

07/17/13

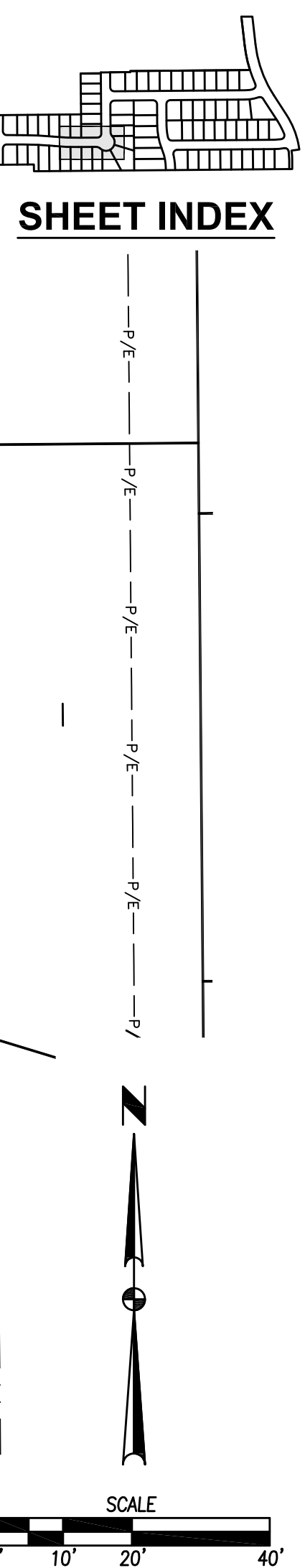
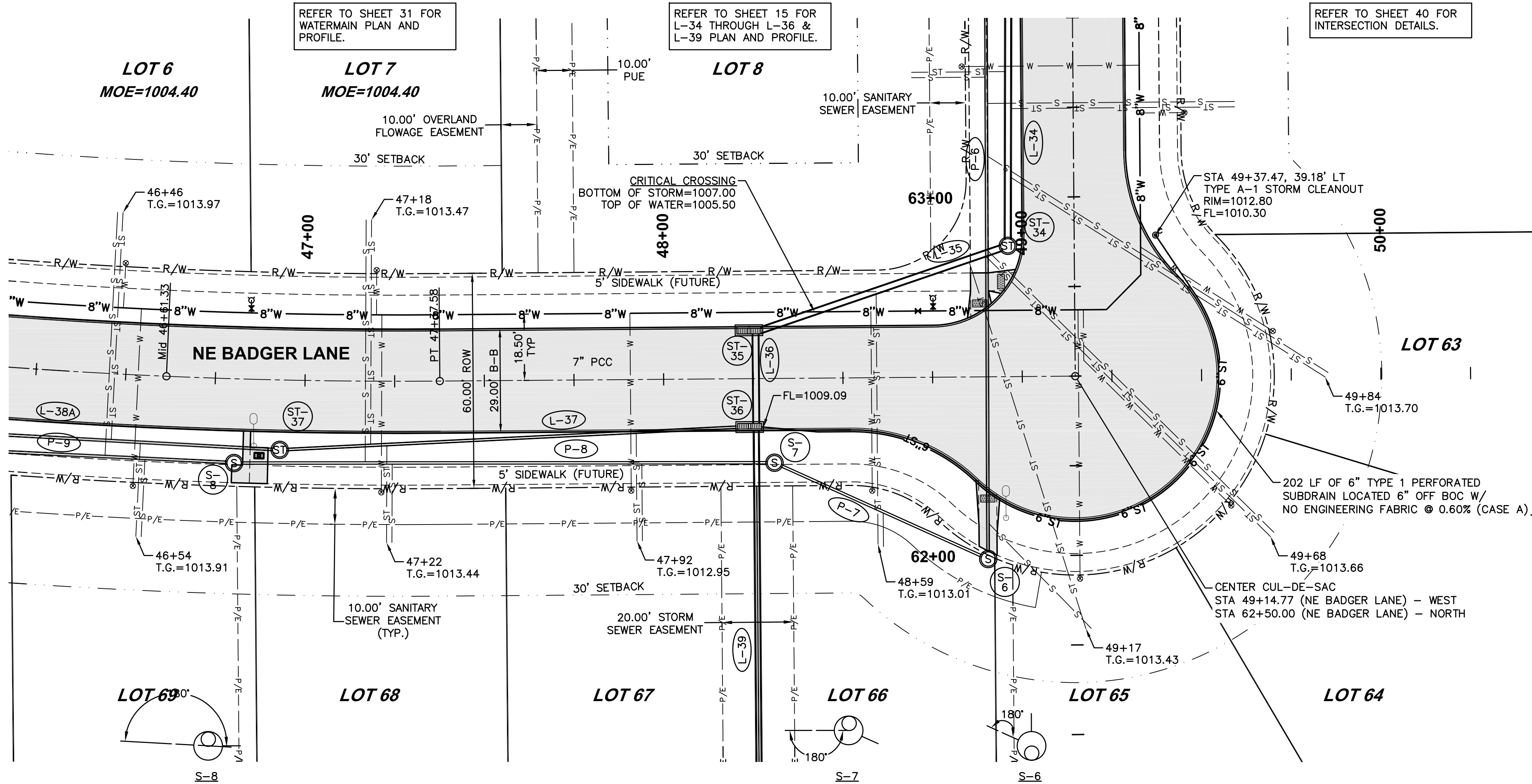
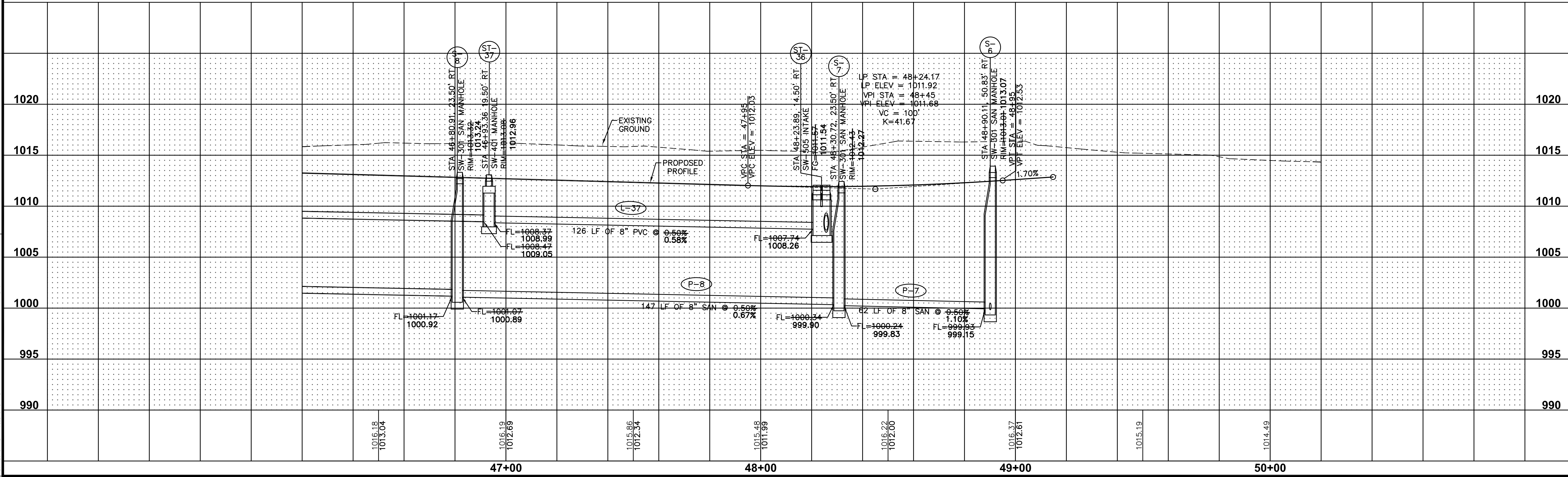
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06/11/13

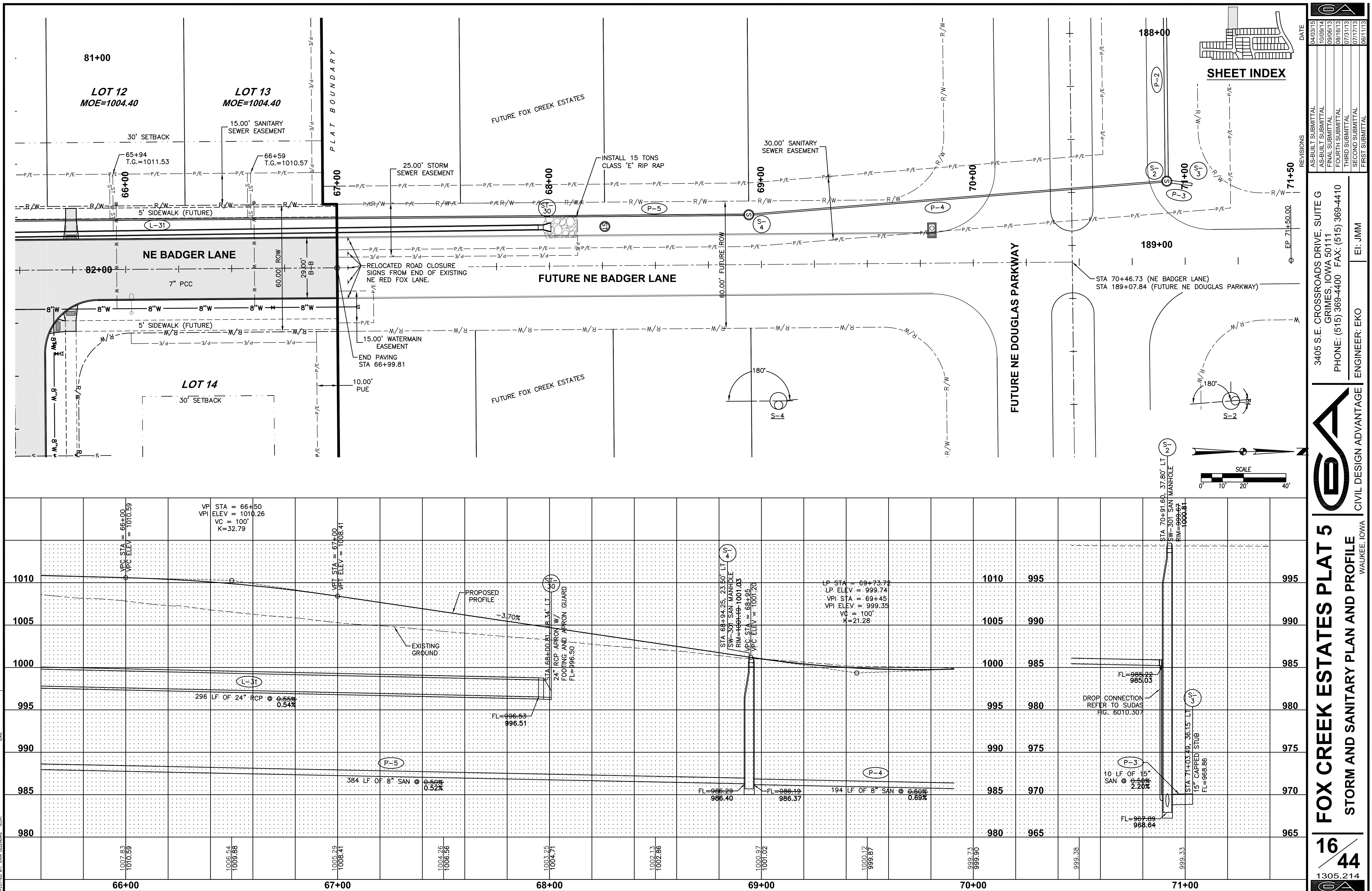
REVISIONS

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

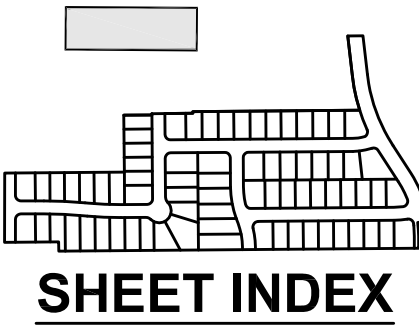
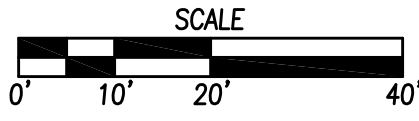
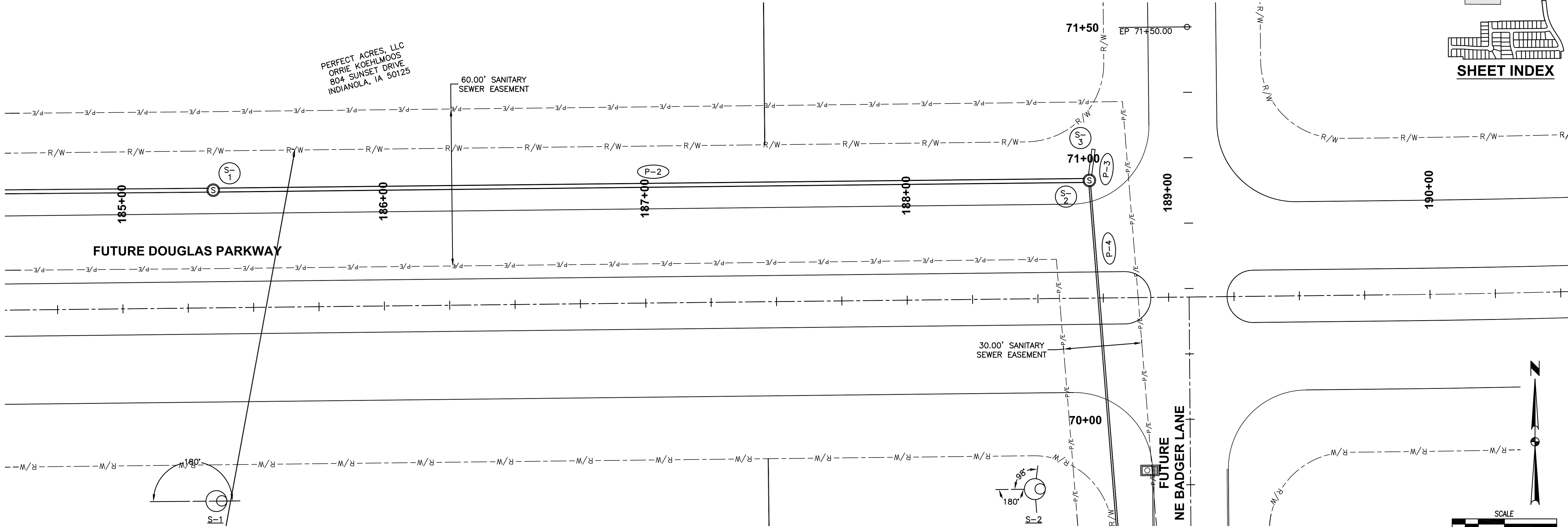
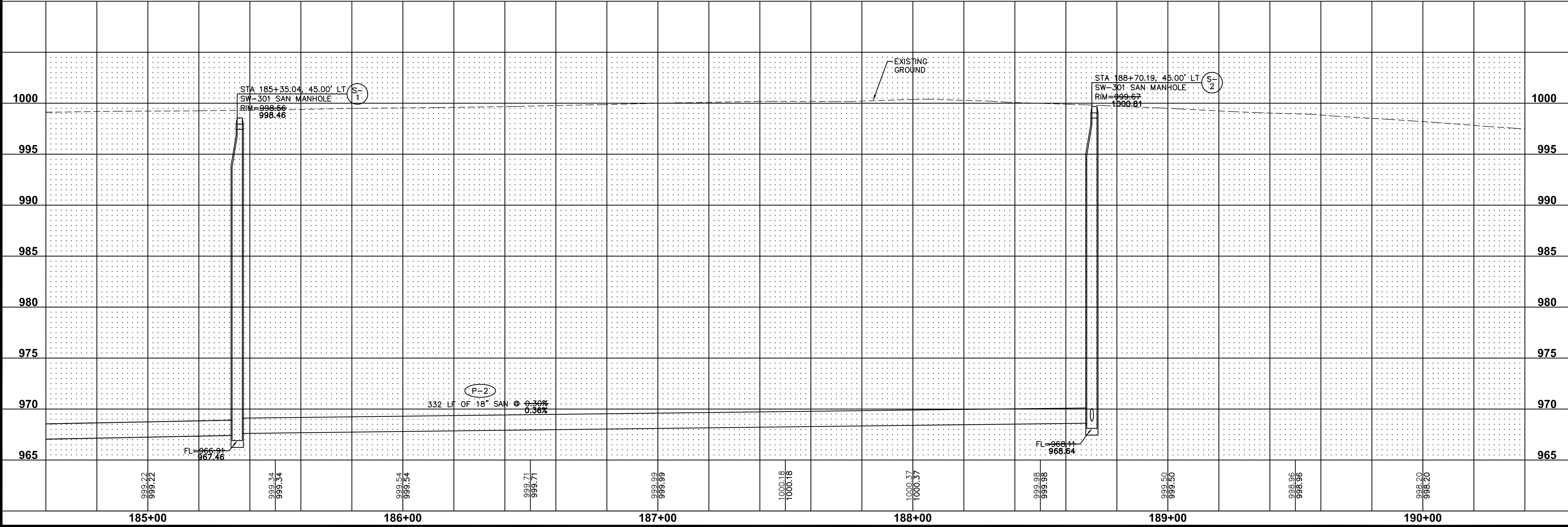
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PLOT BY: JMM







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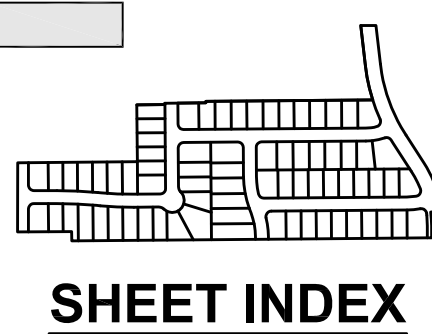
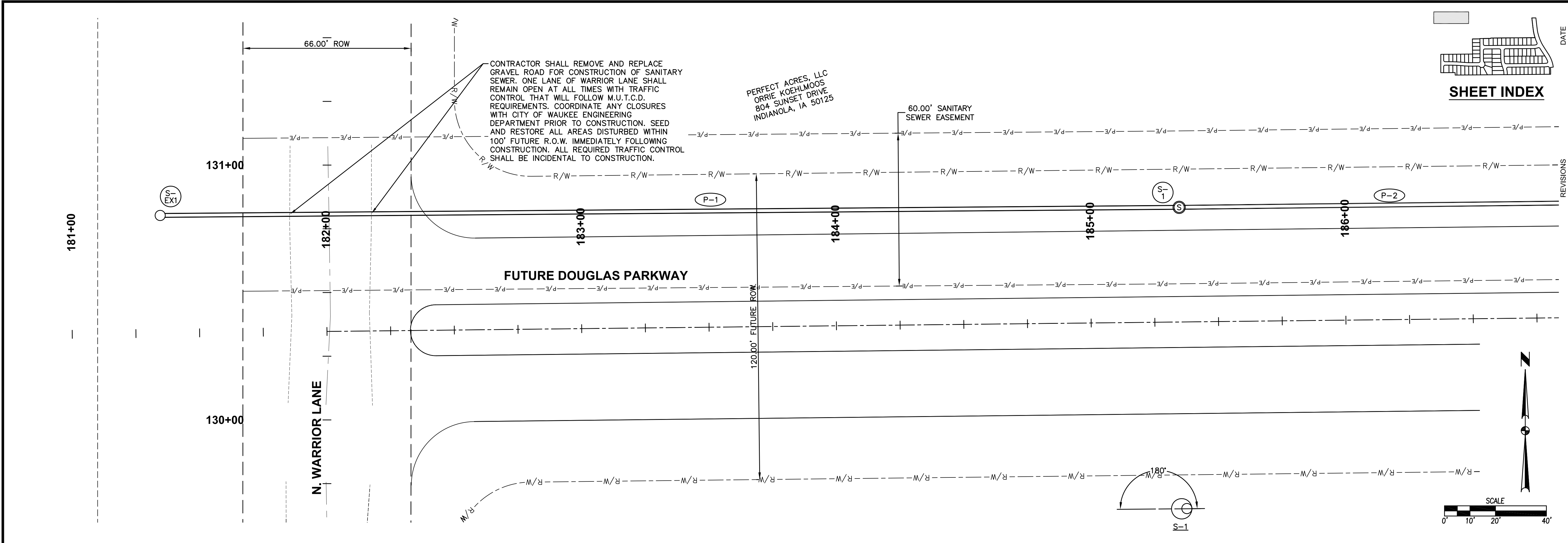
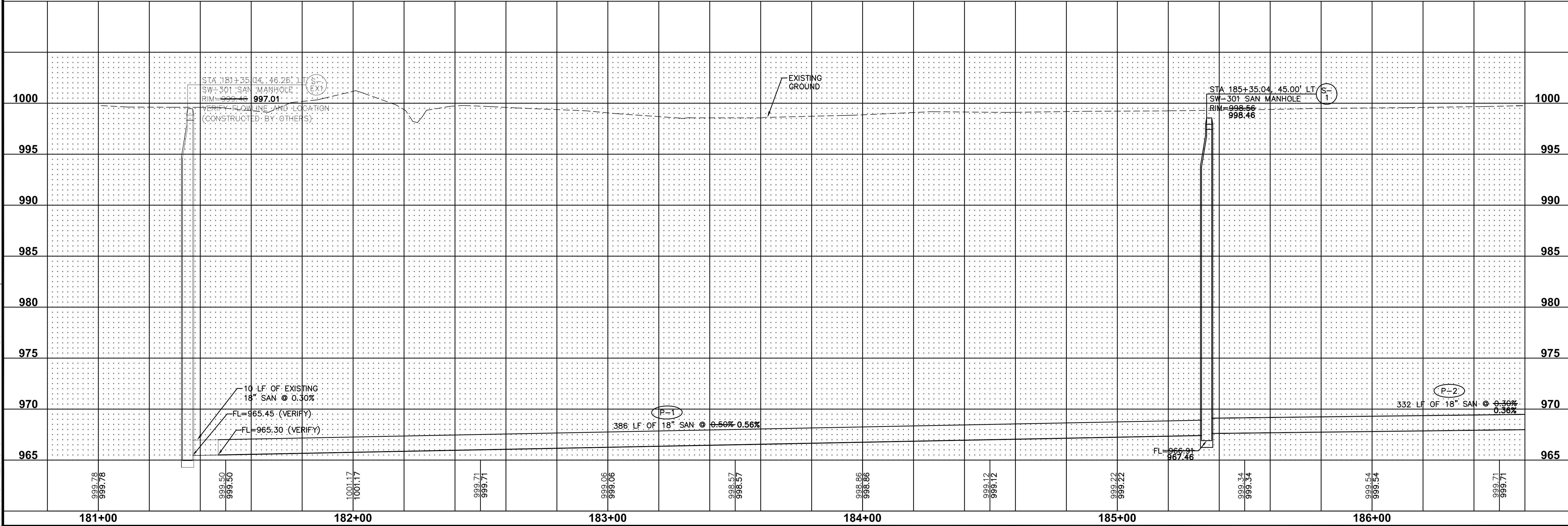
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| 04/03/15 | AS-BUILT SUBMITTAL |
| 10/09/14 | AS-BUILT SUBMITTAL |
| 09/06/13 | FINAL SUBMITTAL    |
| 08/16/13 | FOURTH SUBMITTAL   |
| 07/31/13 | THIRD SUBMITTAL    |
| 07/17/13 | SECOND SUBMITTAL   |
| 06/11/13 | FIRST SUBMITTAL    |

| REVISIONS                                                                                              |         |
|--------------------------------------------------------------------------------------------------------|---------|
| 3405 S.E. CROSSROADS DRIVE, SUITE G<br>GRIMES, IOWA 50111<br>PHONE: (515) 369-4400 FAX: (515) 369-4410 | EI: JMM |

| FOX CREEK ESTATES PLAT 5            |  |
|-------------------------------------|--|
| STORM AND SANITARY PLAN AND PROFILE |  |
| WAUKEE, IOWA                        |  |

| 17/44    |  |
|----------|--|
| 1305.214 |  |

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PLOTTED BY: ERIN GLENKOE DESIGNED BY: JMM



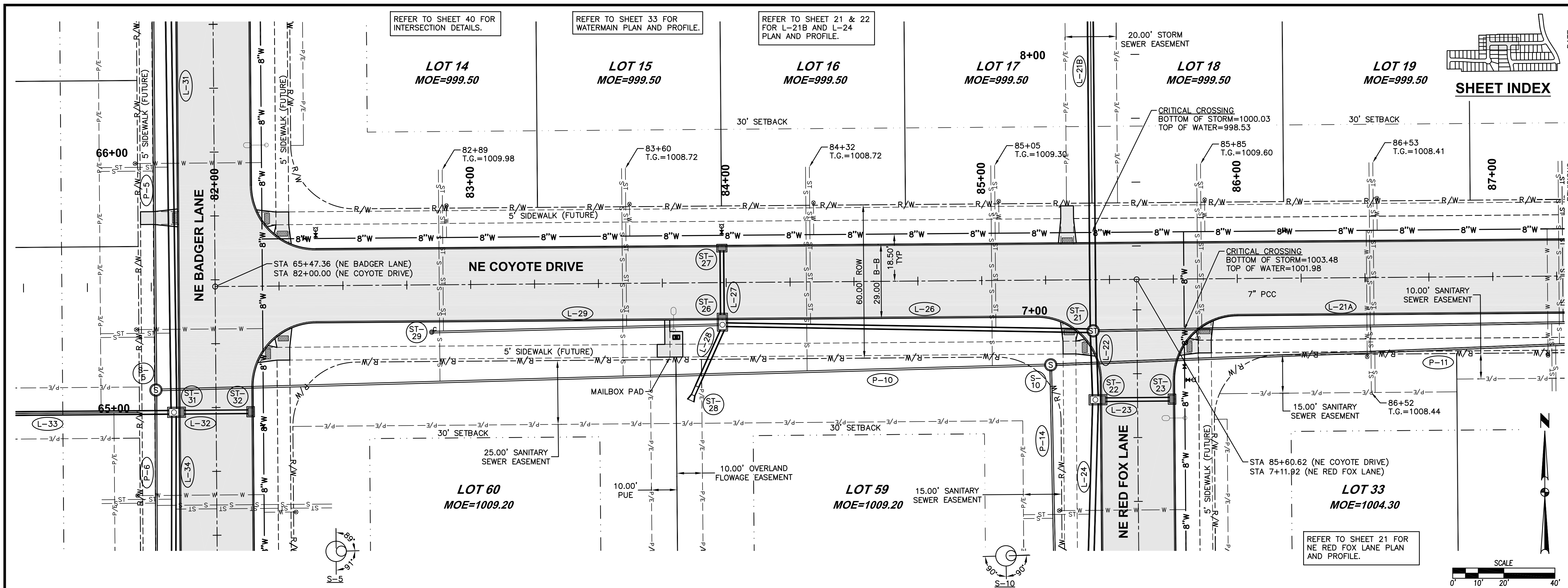
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| 10/09/14 | AS-BUILT SUBMITTAL |
| 09/06/13 | FINAL SUBMITTAL    |
| 08/16/13 | FOURTH SUBMITTAL   |
| 07/31/13 | THIRD SUBMITTAL    |
| 07/17/13 | SECOND SUBMITTAL   |
| 06/11/13 | FIRST SUBMITTAL    |

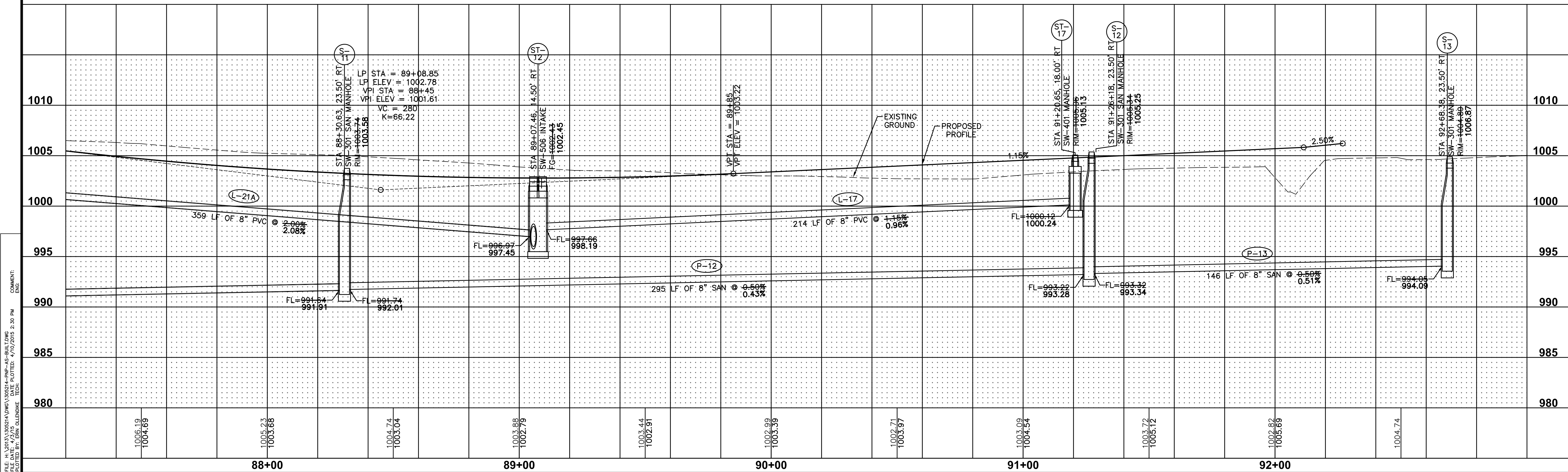
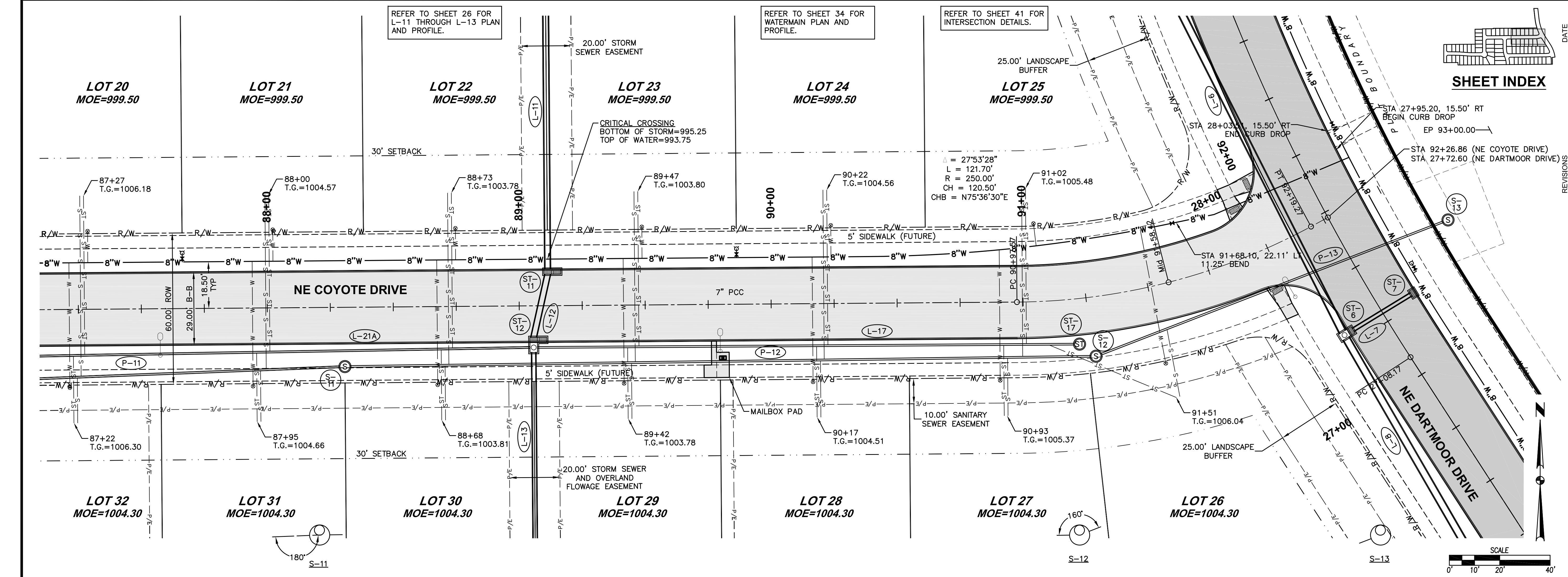
3405 S.E. CROSSROADS DRIVE, SUITE G  
GRIMES, IOWA 50111  
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO  
Ei: JMM

**FOX CREEK ESTATES PLAT 5**  
STORM AND SANITARY PLAN AND PROFILE  
WAUKEE, IOWA

18/44  
1305.214





FILE: H:\2013\130524\130524-IMP-AS-BUILDING  
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PLOT BY: JMM

DATE

04/03/15

AS-BUILT SUBMITTAL

10/09/14

FINAL SUBMITTAL

09/06/13

FOURTH SUBMITTAL

08/16/13

THIRD SUBMITTAL

07/31/13

SECOND SUBMITTAL

07/17/13

FIRST SUBMITTAL

06/11/13

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

ENGINEER: EKO

EI: JMM

FOX CREEK ESTATES PLAT 5

STORM AND SANITARY PLAN AND PROFILE

WAUKEE, IOWA

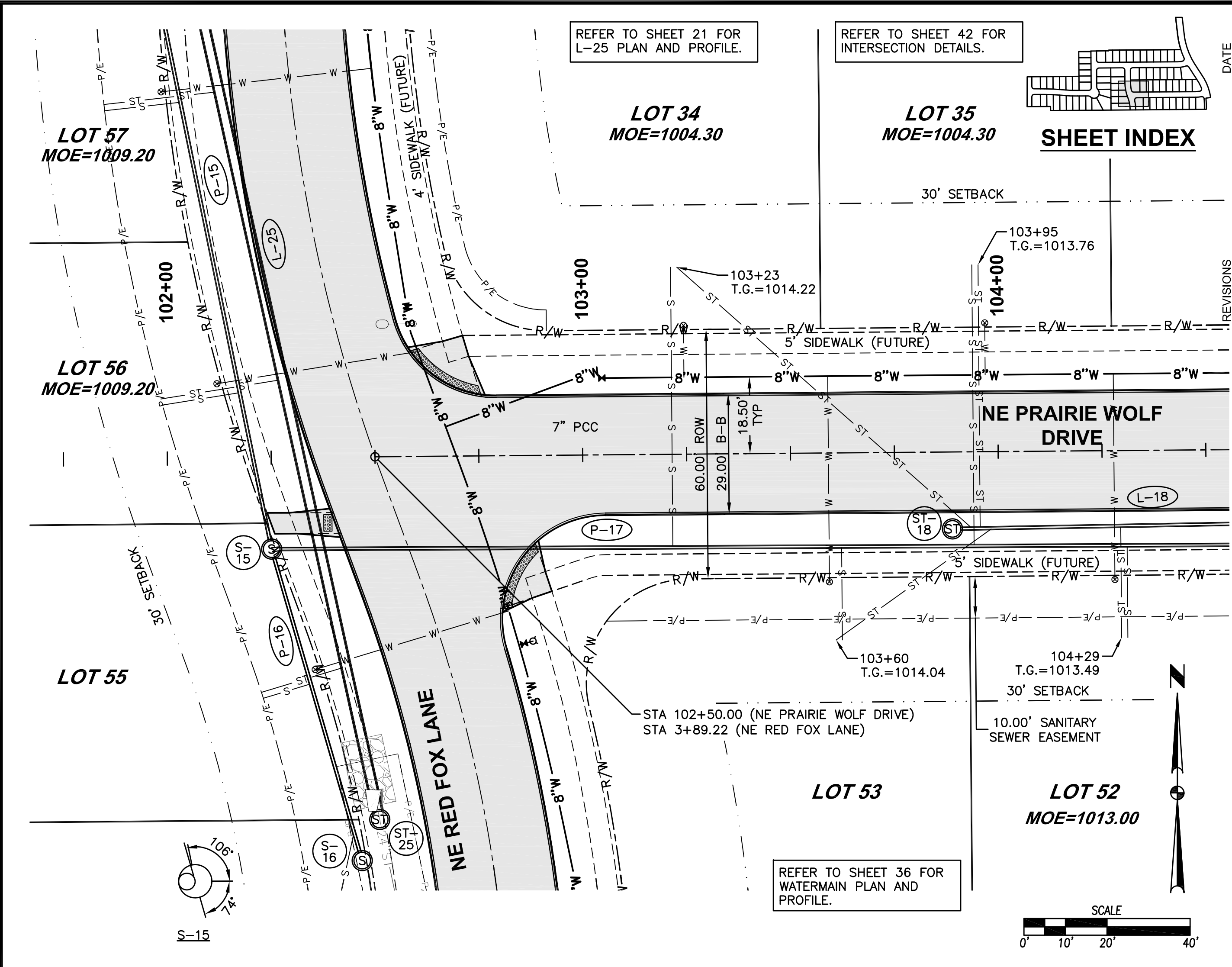
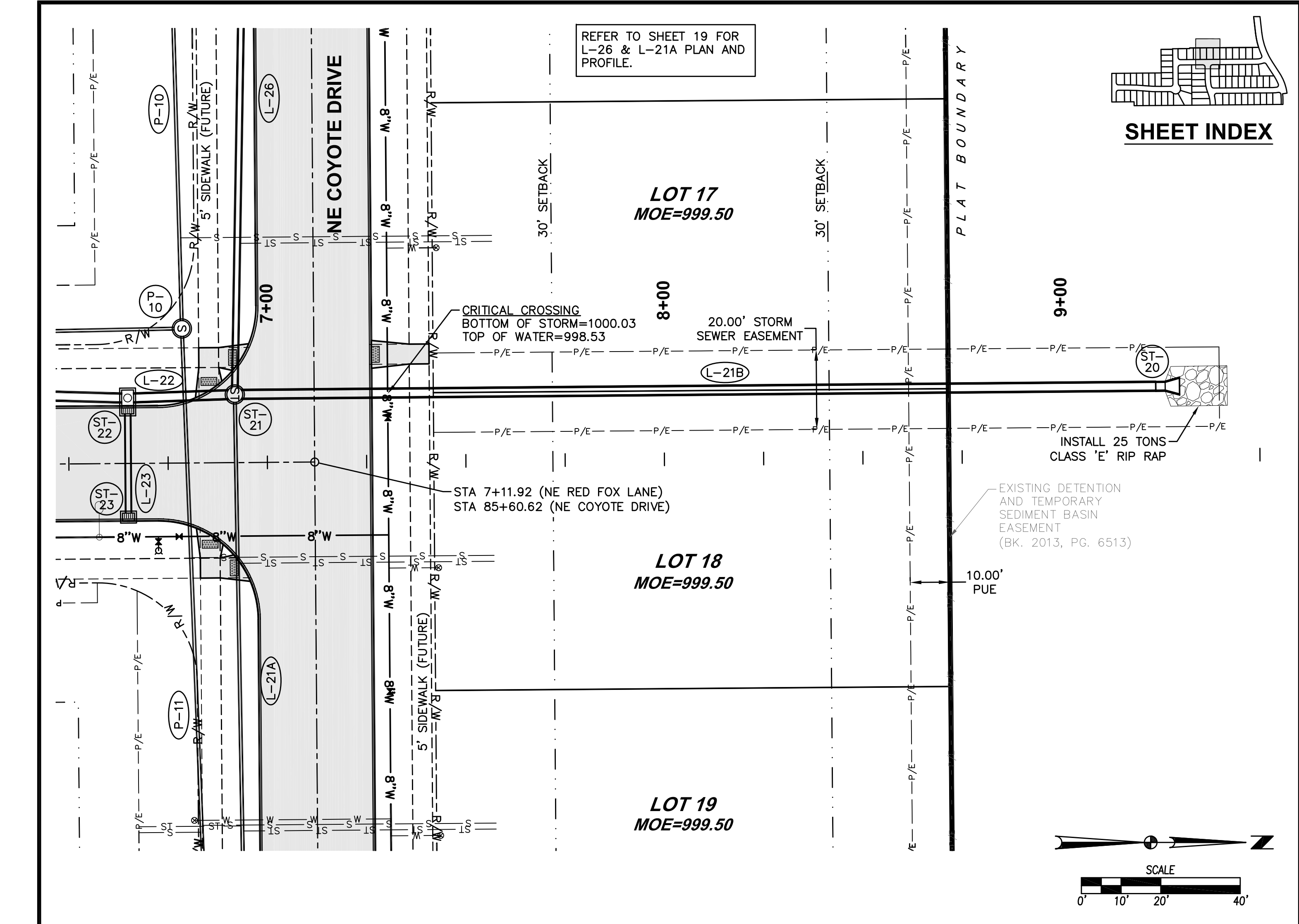
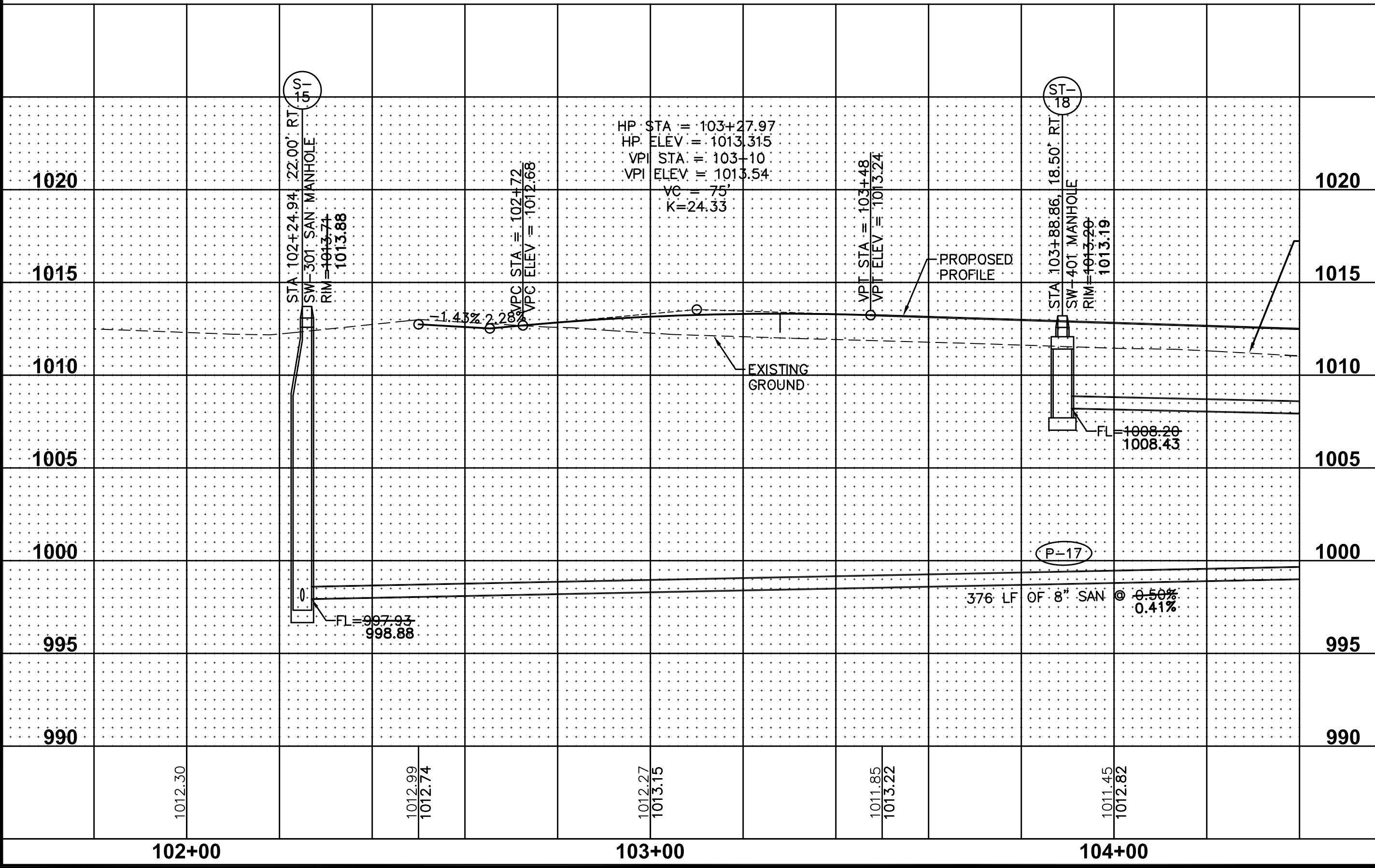
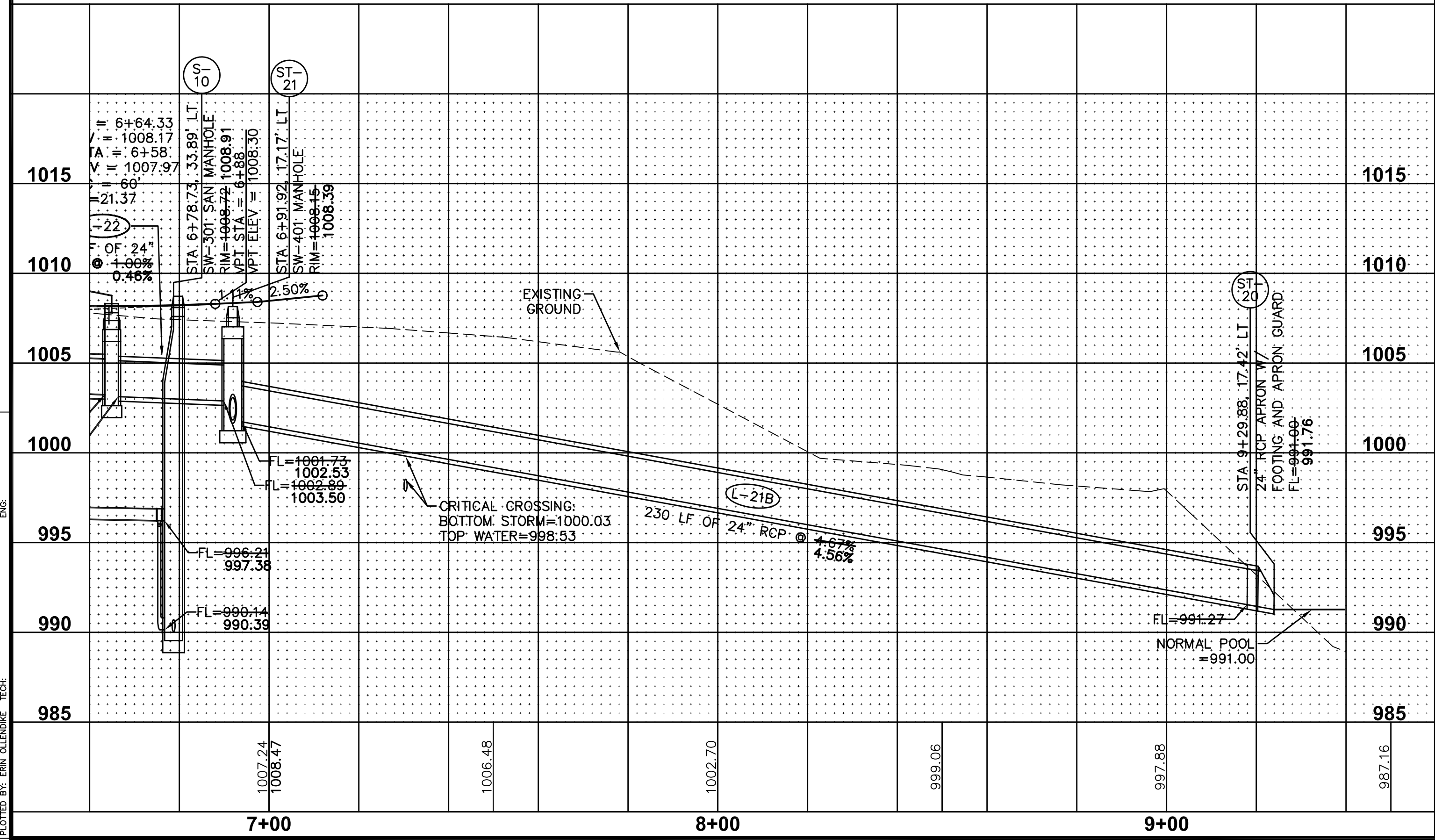
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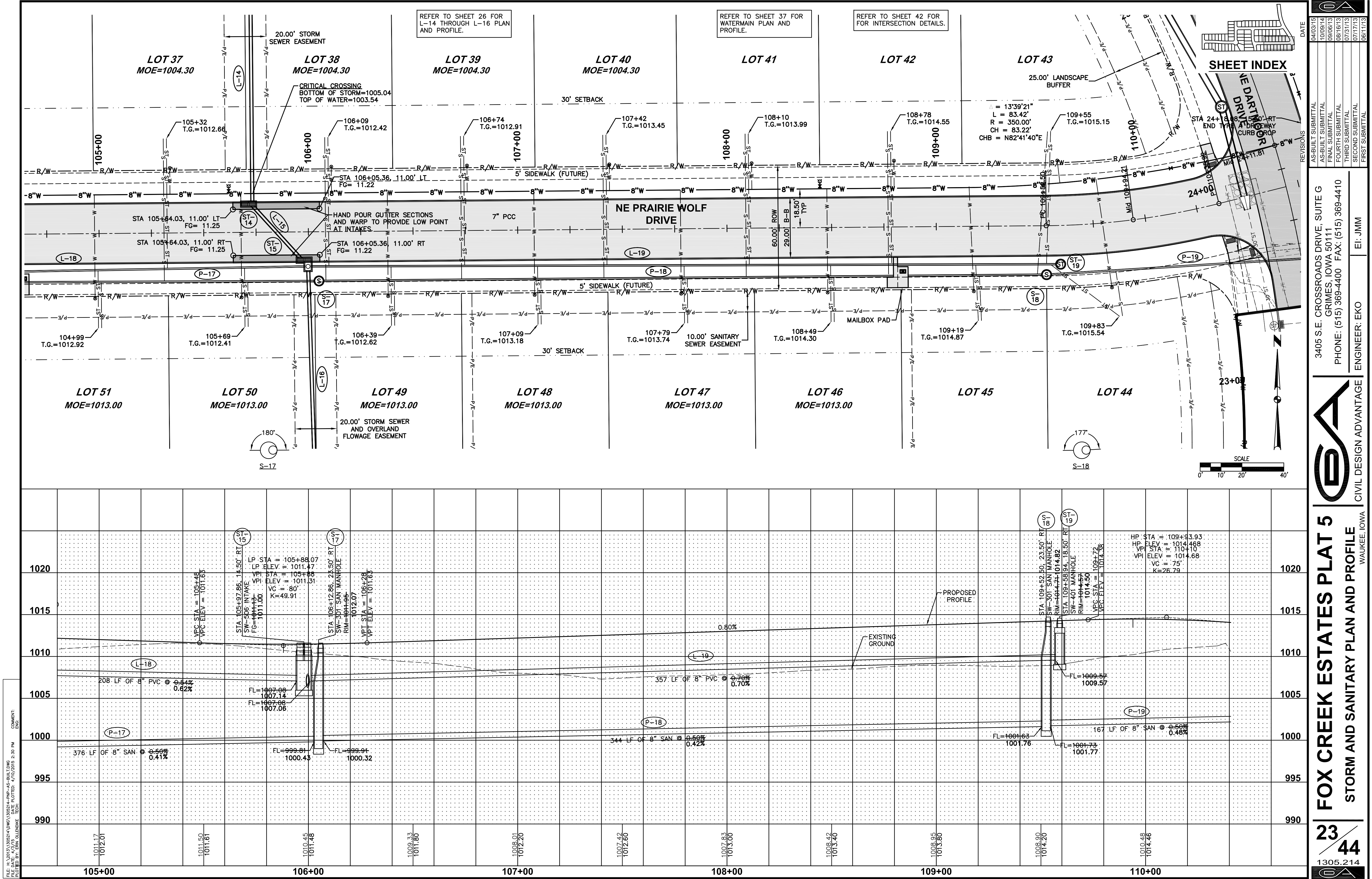
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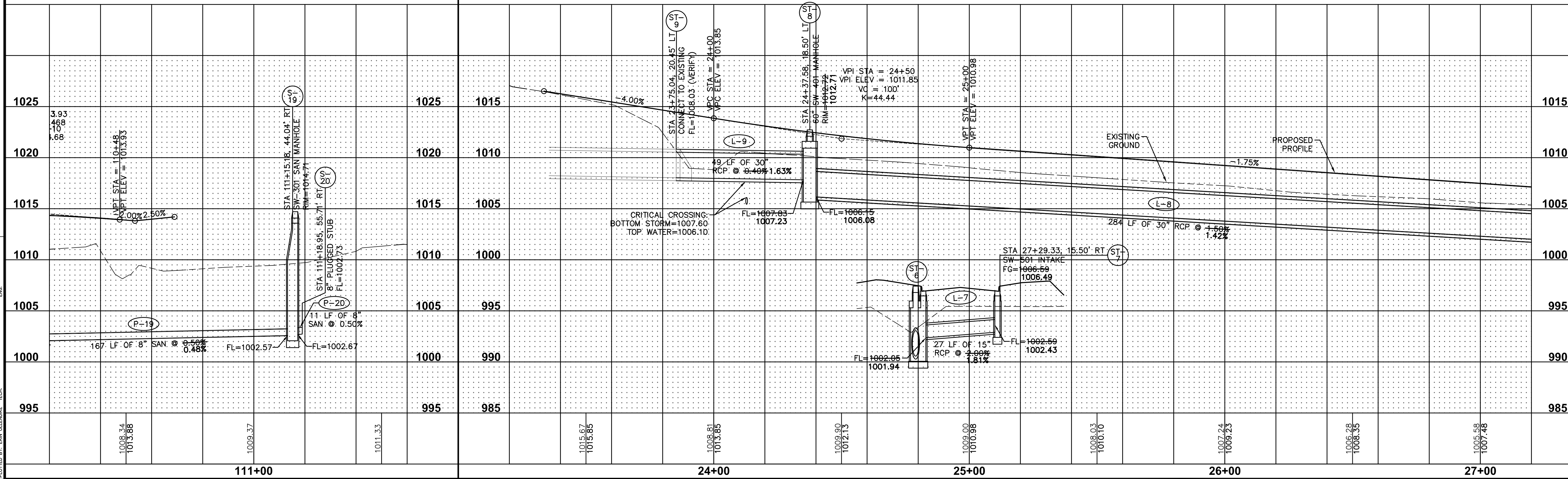
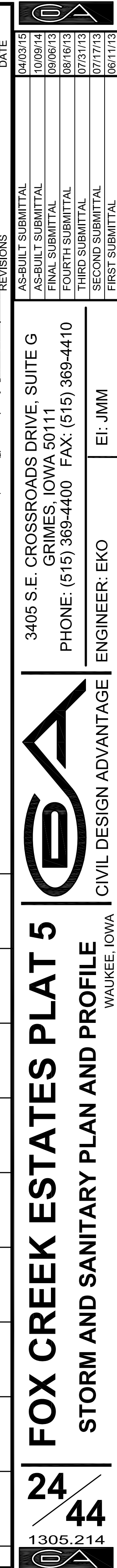
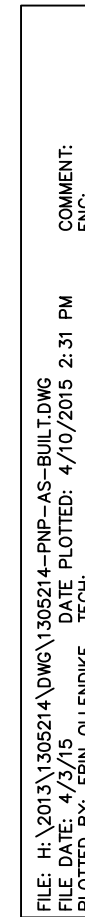
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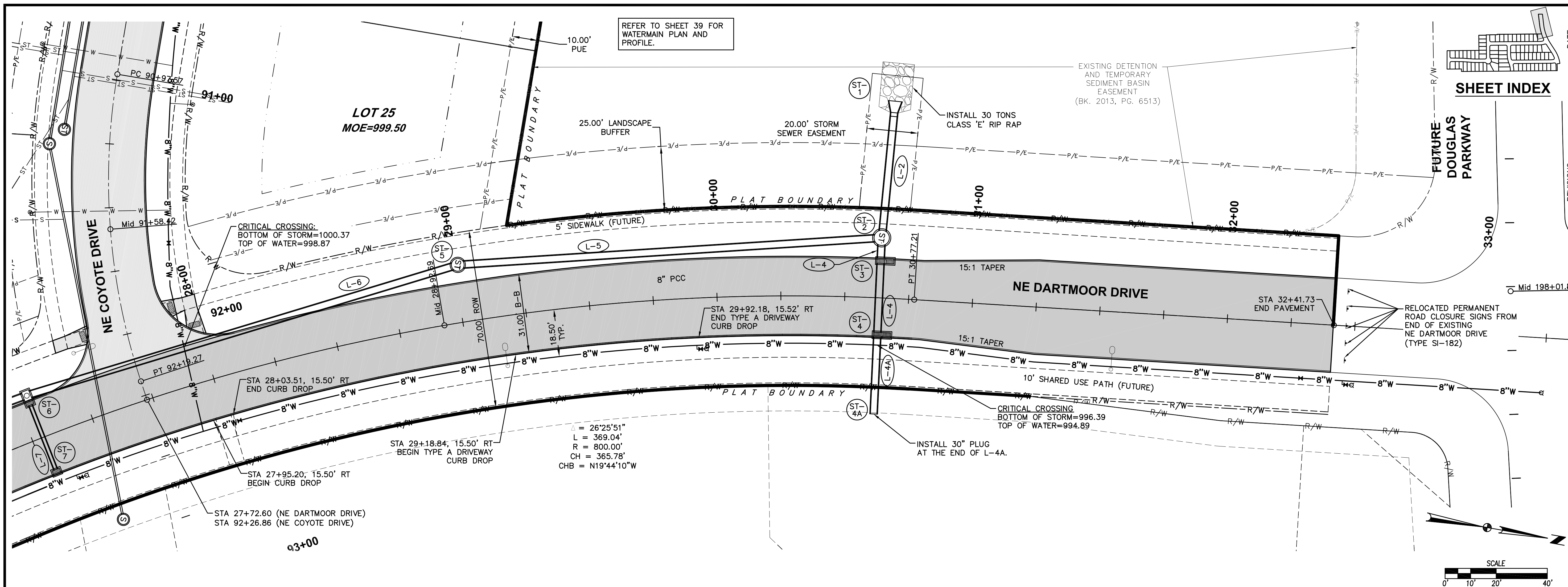


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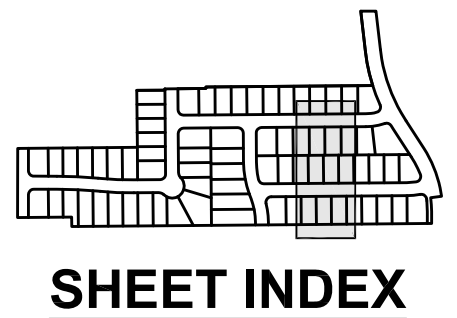
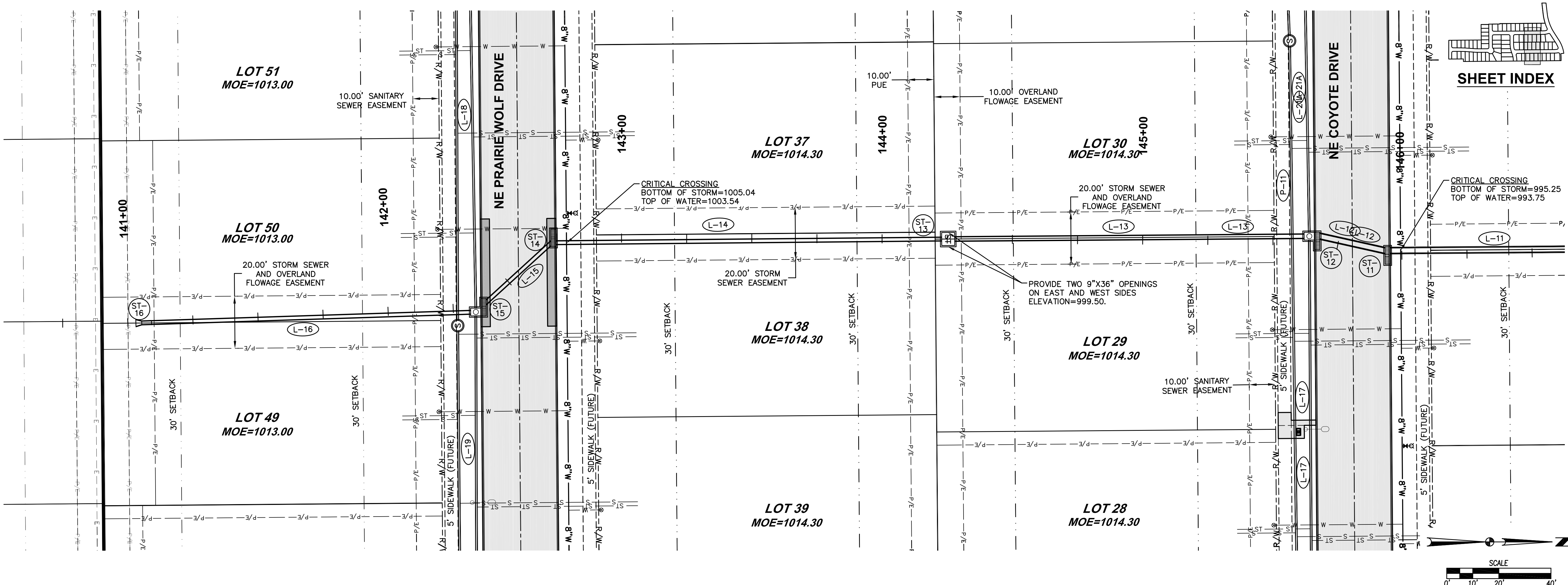
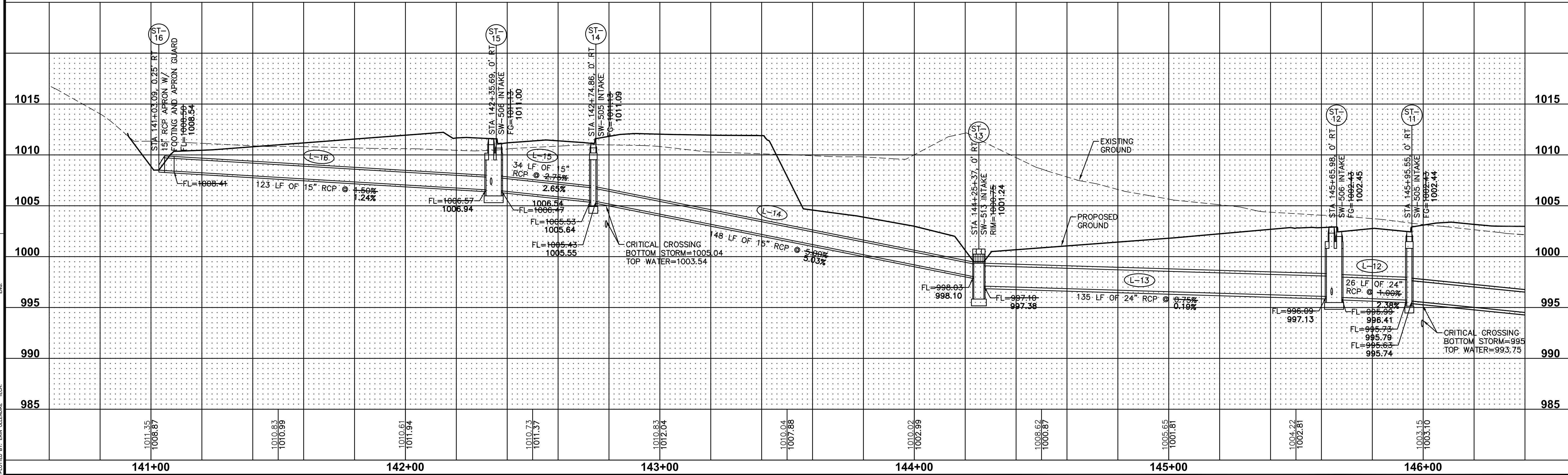








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PLOT BY: JMM



| REVISIONS          |          | DATE     |
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| AS-BUILT SUBMITTAL | 10/09/14 | 04/03/15 |
| AS-BUILT SUBMITTAL | 10/09/14 | 10/09/14 |
| FINAL SUBMITTAL    | 09/06/13 | 09/06/13 |
| FOURTH SUBMITTAL   | 08/16/13 | 08/16/13 |
| THIRD SUBMITTAL    | 07/31/13 | 07/31/13 |
| SECOND SUBMITTAL   | 07/17/13 | 07/17/13 |
| FIRST SUBMITTAL    | 06/11/13 | 06/11/13 |

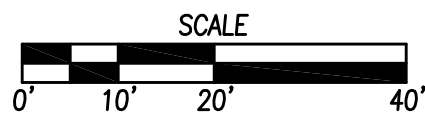
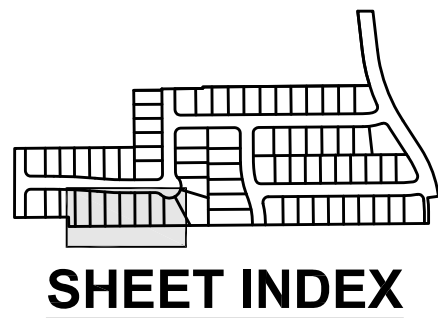
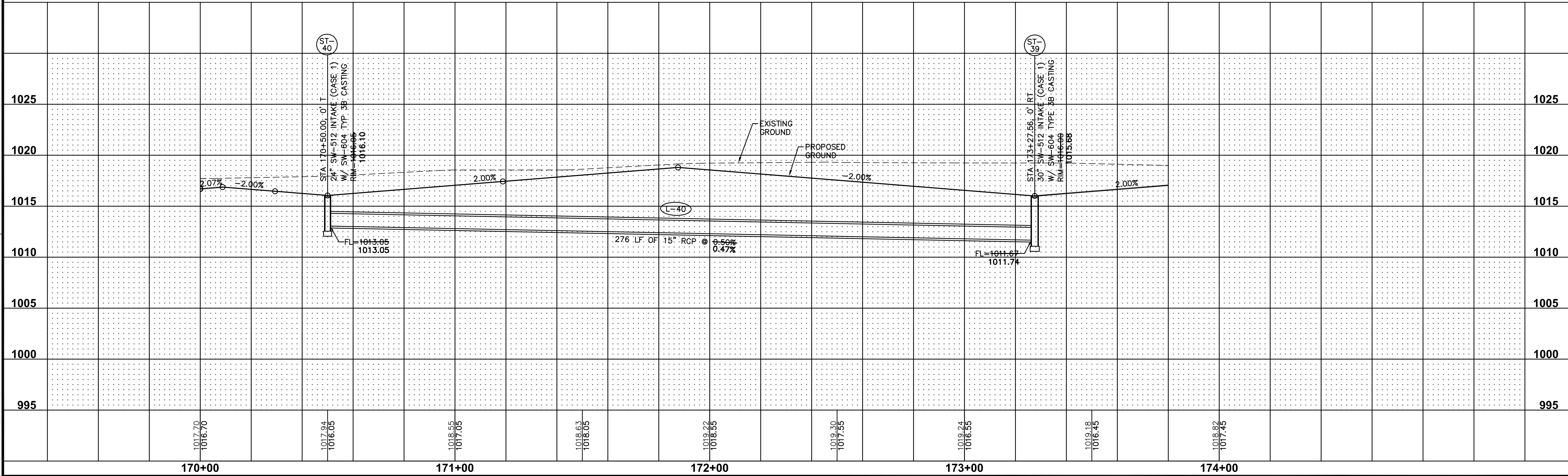
3405 S.E. CROSSROADS DRIVE, SUITE G  
GRIMES, IOWA 50111  
PHONE: (515) 369-4400 FAX: (515) 369-4410  
ENGINEER: EKO  
E.I.: JMM

**FOX CREEK ESTATES PLAT 5**  
STORM AND SANITARY PLAN AND PROFILE  
WAUKEE, IOWA

26/44  
1305.214



FILE: H:\2013\130524\DWG\130524-IMP-AS-BUILD.DWG COMMENT: DATE: 4/10/2015 2:31 PM  
PLOTTER: HP DesignJet 2400C PLOTTED BY: JMM



DATE

04/03/15

REVISIONS

|                    |          |
|--------------------|----------|
| AS-BUILT SUBMITTAL | 10/09/14 |
| AS-BUILT SUBMITTAL | 09/06/13 |
| FINAL SUBMITTAL    | 08/16/13 |
| FOURTH SUBMITTAL   | 07/31/13 |
| THIRD SUBMITTAL    | 07/17/13 |
| SECOND SUBMITTAL   | 07/17/13 |
| FIRST SUBMITTAL    | 06/11/13 |

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

ENGINEER: EKO

EI: JMM

E&A

CIVIL DESIGN ADVANTAGE

FOX CREEK ESTATES PLAT 5

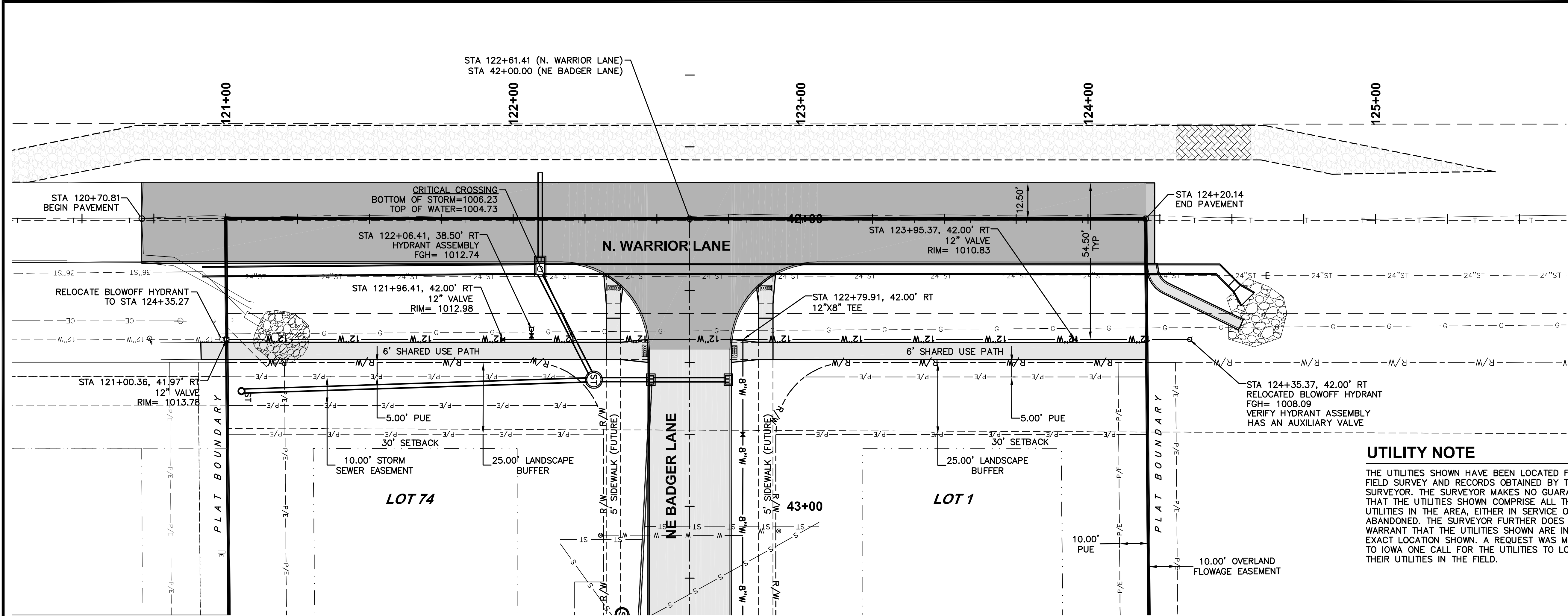
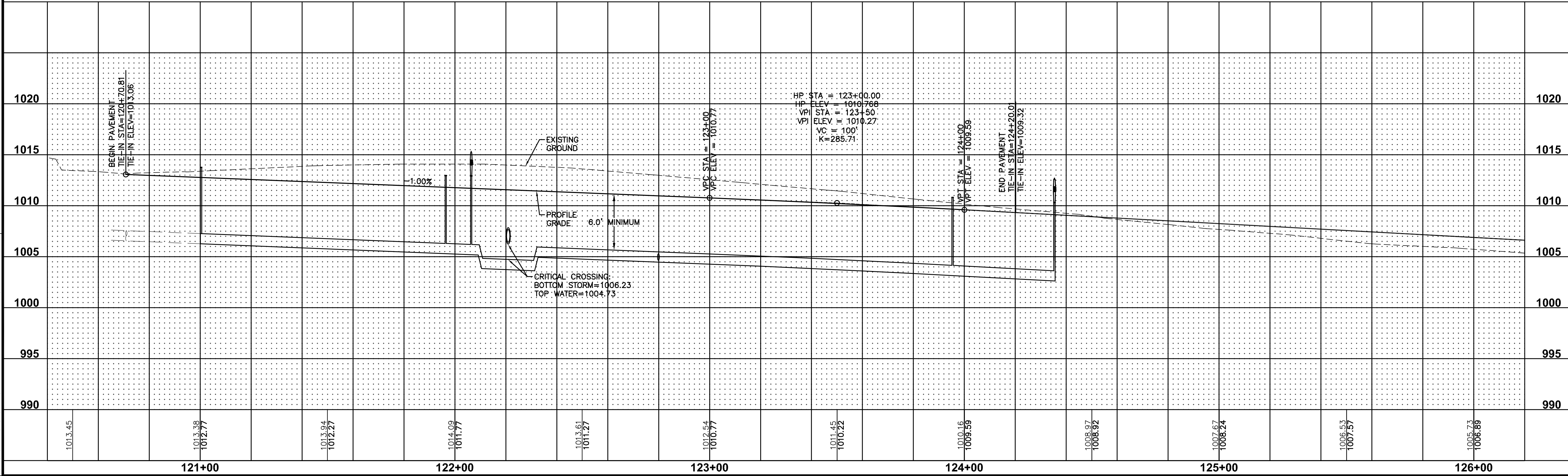
STORM AND SANITARY PLAN AND PROFILE

28

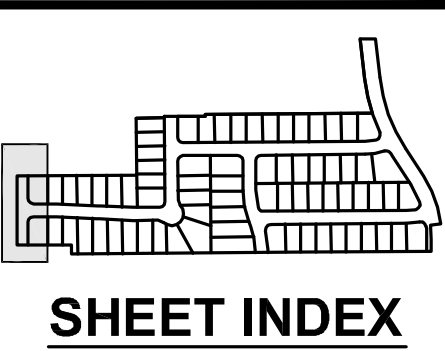
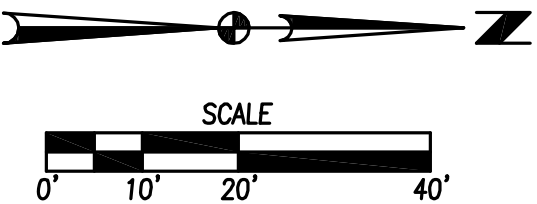
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1305.214

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PLOTTER: HP DesignJet 5000 PLOTTED BY: GALE HEROLD



**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.



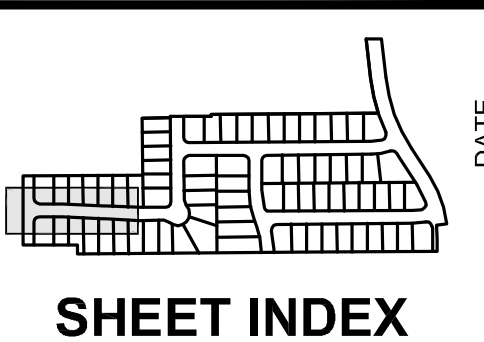
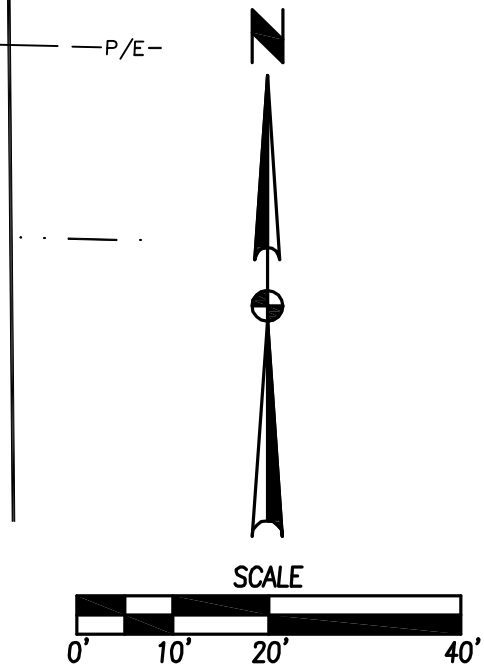
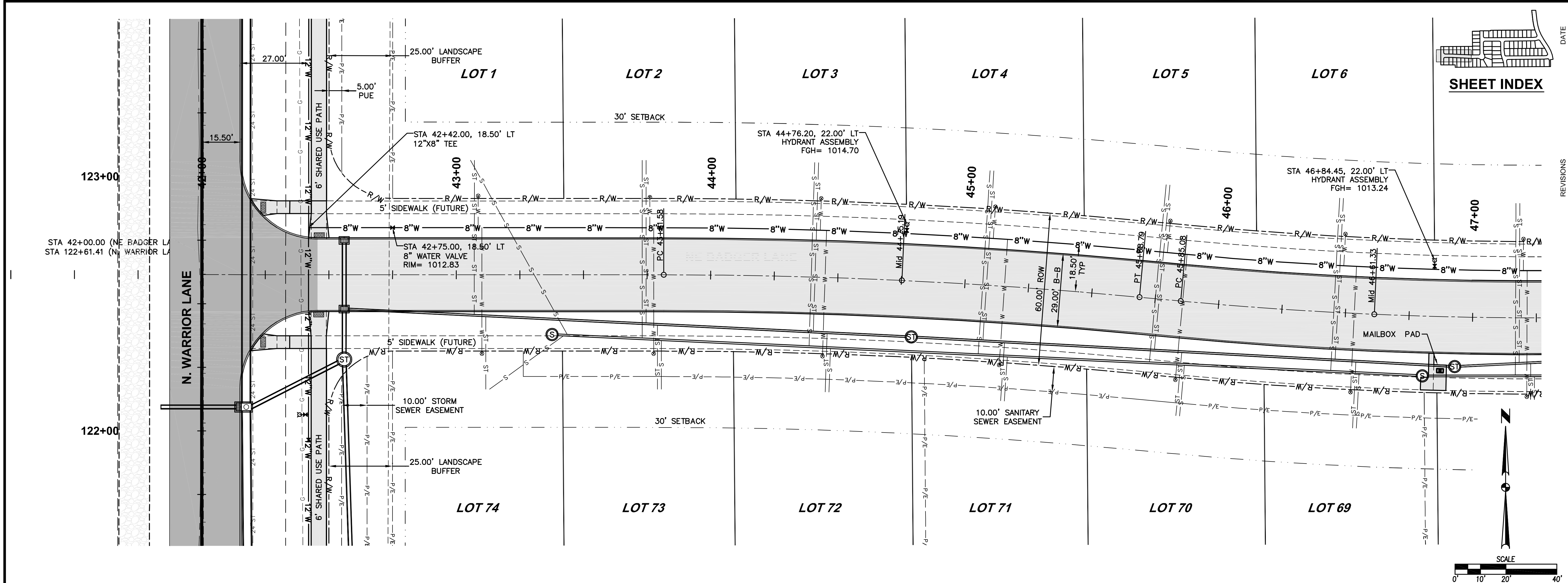
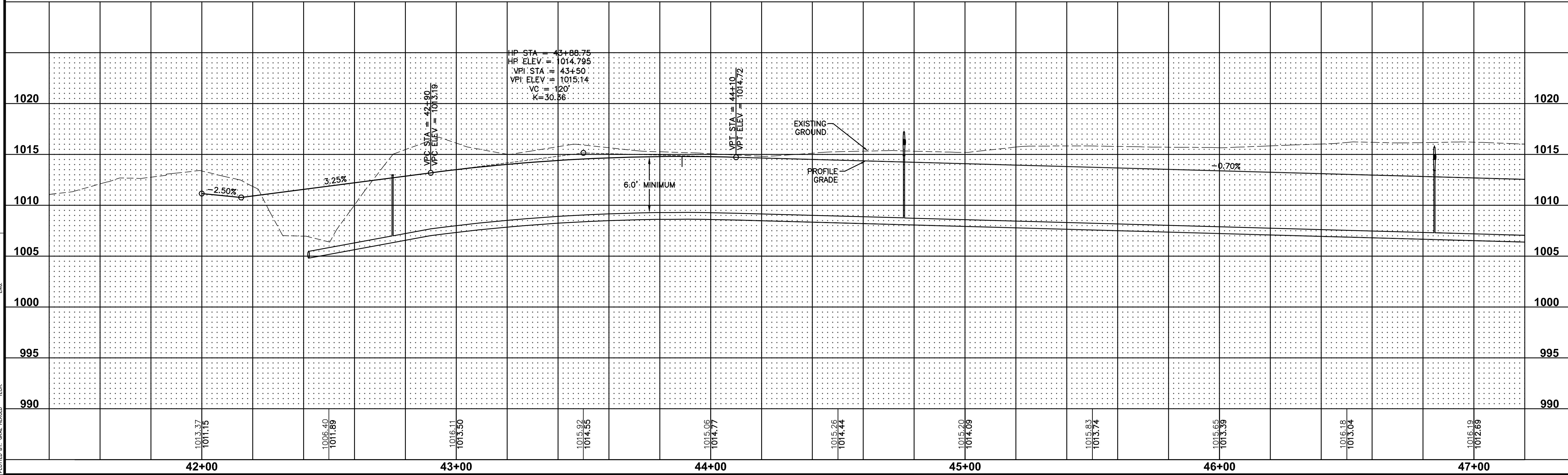
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| FINAL SUBMITTAL    | 09/06/13 | 09/06/13 |
| FOURTH SUBMITTAL   | 08/16/13 | 08/16/13 |
| THIRD SUBMITTAL    | 07/31/13 | 07/31/13 |
| SECOND SUBMITTAL   | 07/17/13 | 07/17/13 |
| FIRST SUBMITTAL    | 06/11/13 | 06/11/13 |

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

**FOX CREEK ESTATES PLAT 5**  
**WATER MAIN PLAN AND PROFILE**  
WAUKEE, IOWA

29/44  
1305.214

FILE: H:\2013\130524\DWG\130524-PMP-WATER.DWG COMMENT: DATE: 9/29/2019 2:47 PM  
PLOTTER: HP DesignJet 5000 PLOTTED BY: GALE HEROLD



| REVISIONS |                    |
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| DATE      | DESCRIPTION        |
| 04/03/15  | AS-BUILT SUBMITTAL |
| 10/09/14  | AS-BUILT SUBMITTAL |
| 09/06/13  | FINAL SUBMITTAL    |
| 08/16/13  | FOURTH SUBMITTAL   |
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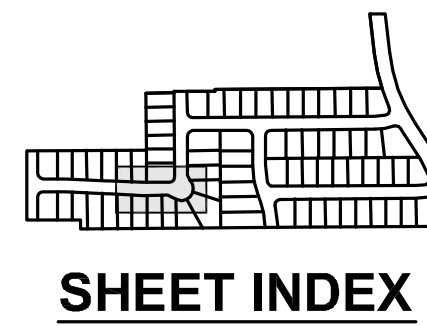
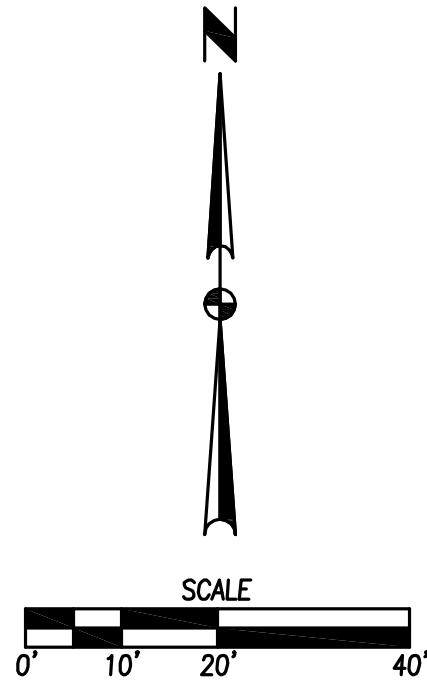
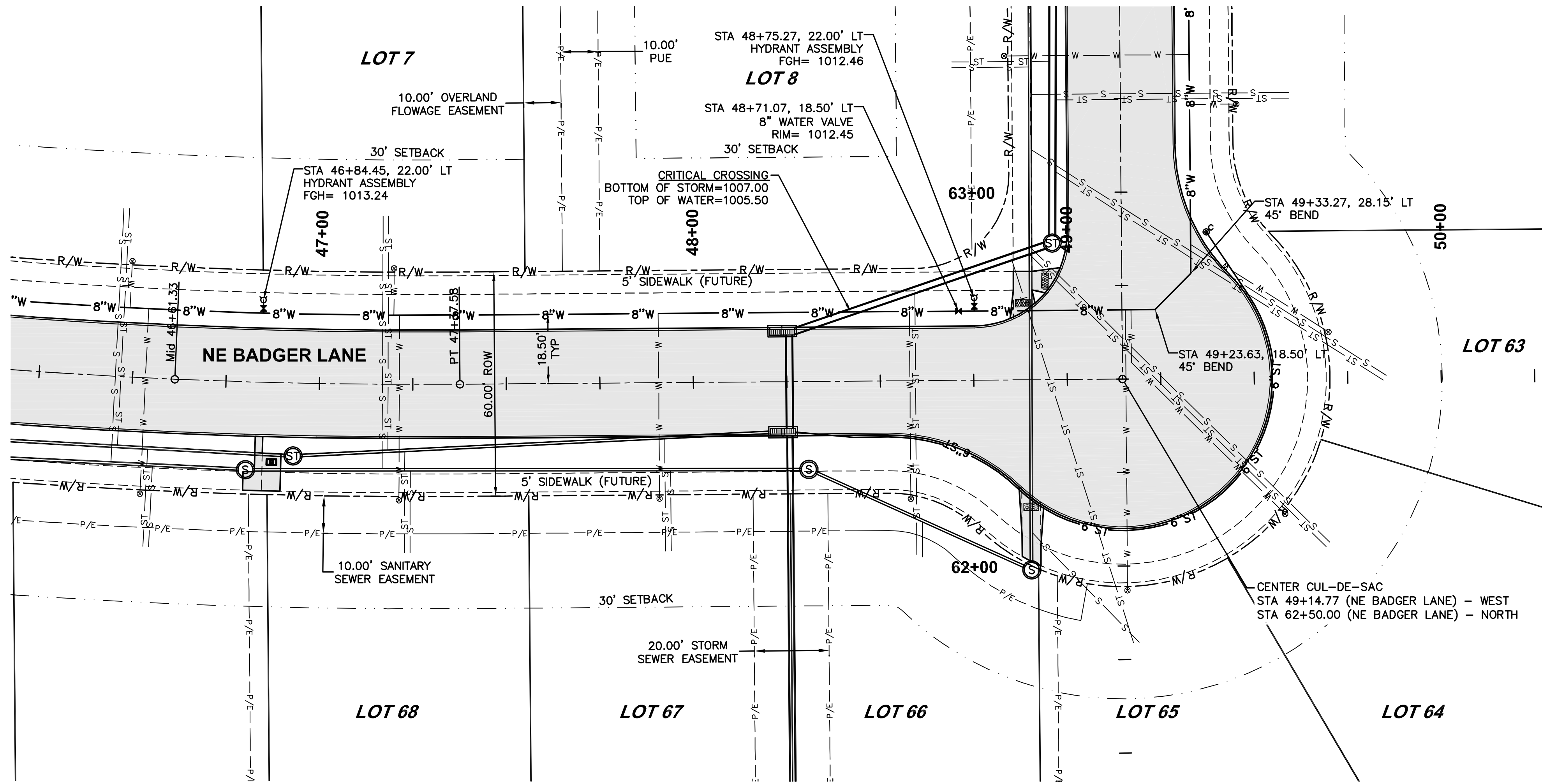
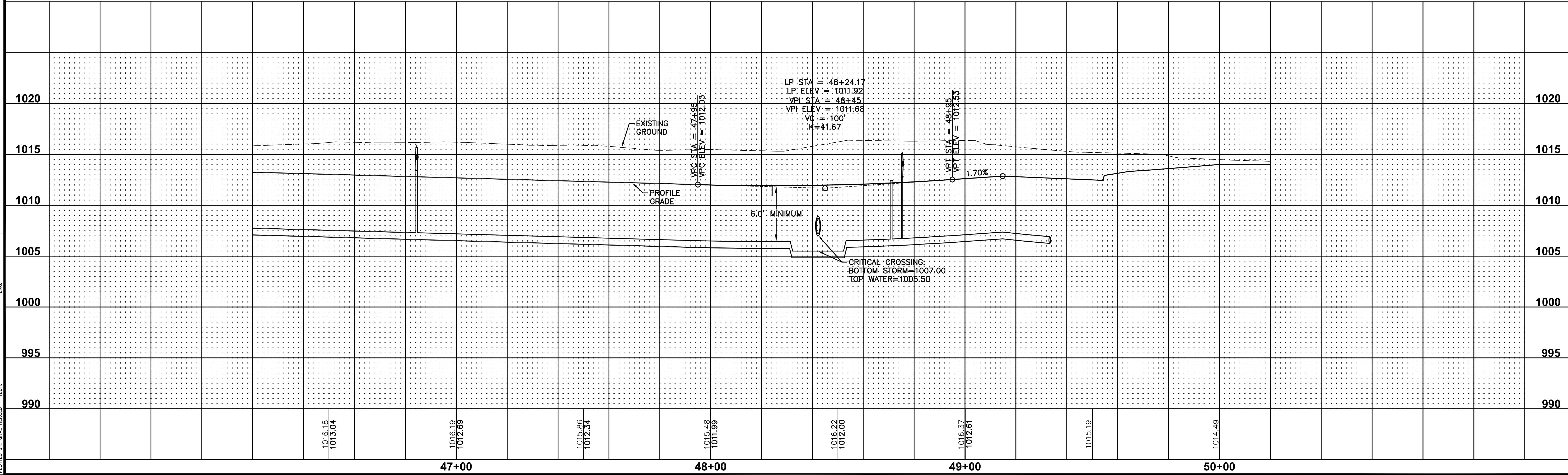
**FOX CREEK ESTATES PLAT 5**  
WATER MAIN PLAN AND PROFILE  
WAUKEE, IOWA

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

30  
44

1305.214

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PLOT BY: GALE HEROLD



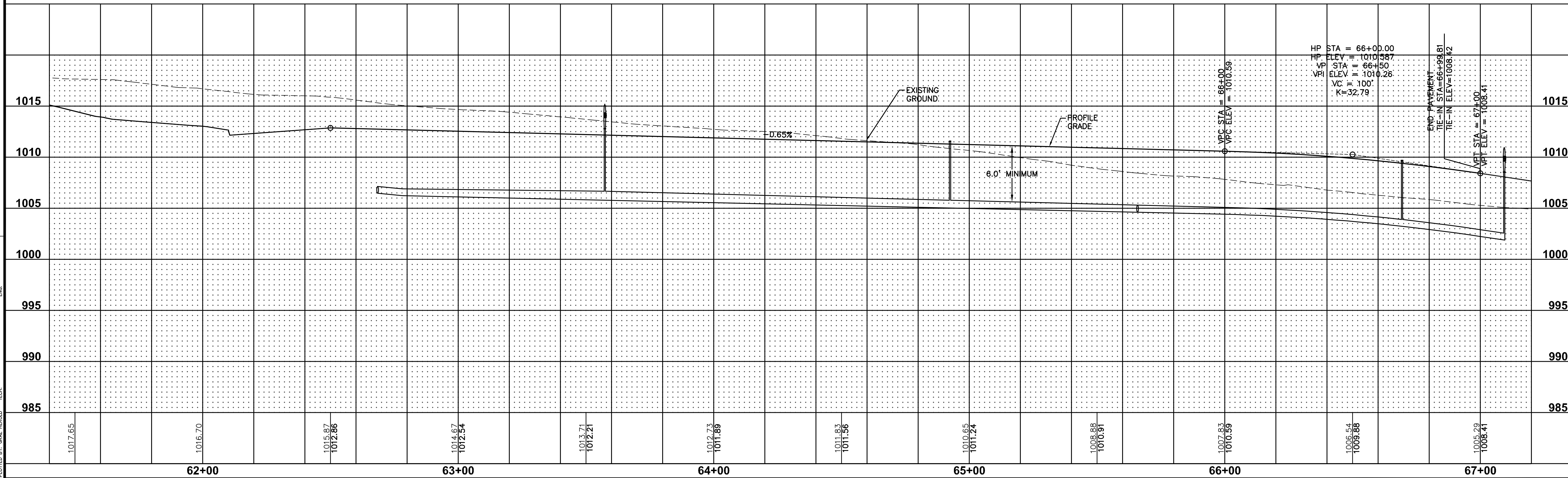
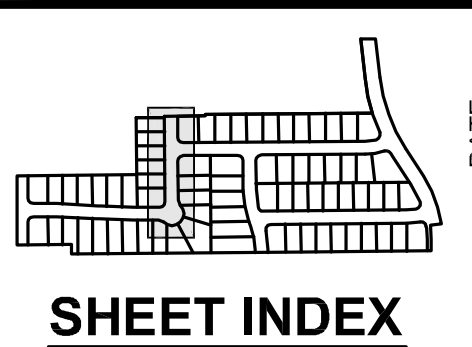
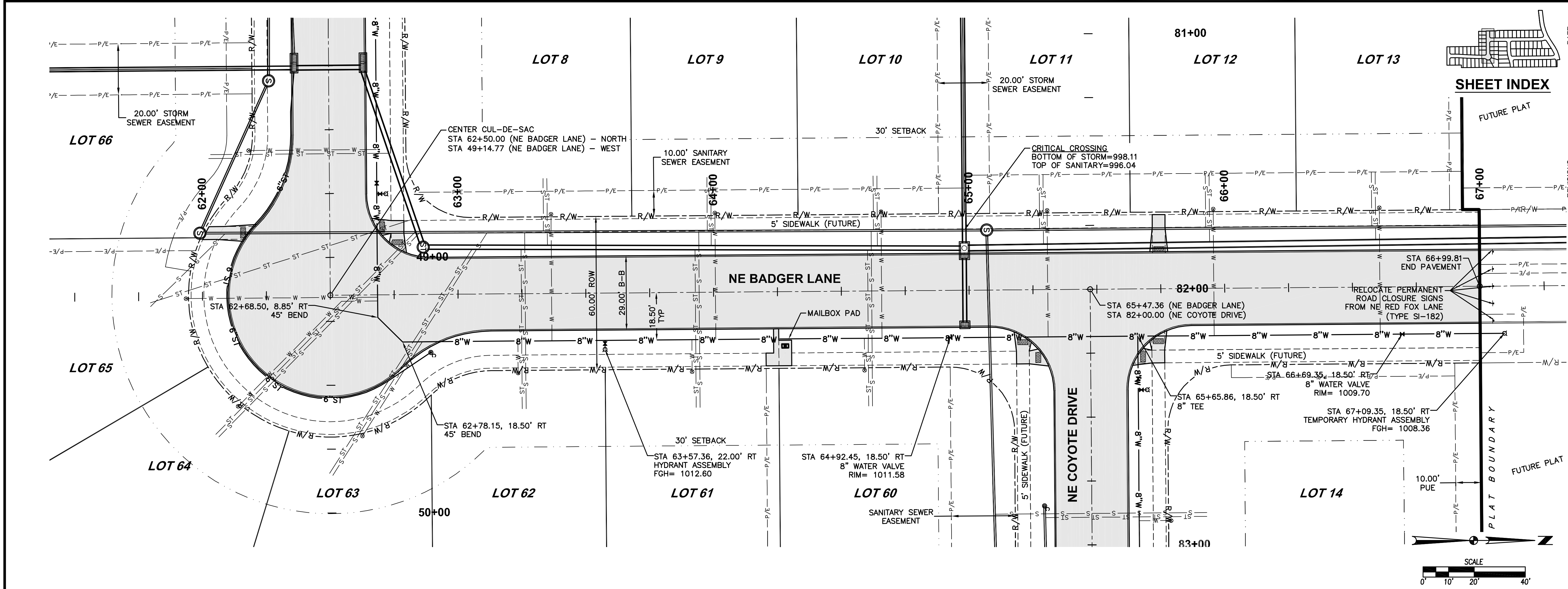
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| AS-BUILT SUBMITTAL | 10/09/14 | 04/03/15 |
| AS-BUILT SUBMITTAL | 09/06/13 | 10/09/14 |
| FINAL SUBMITTAL    | 08/16/13 | 09/06/13 |
| FOURTH SUBMITTAL   | 07/23/13 | 08/16/13 |
| THIRD SUBMITTAL    | 07/17/13 | 07/23/13 |
| SECOND SUBMITTAL   |          | 07/17/13 |
| FIRST SUBMITTAL    |          | 06/11/13 |

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

**FOX CREEK ESTATES PLAT 5**  
**WATER MAIN PLAN AND PROFILE**  
WAUKEE, IOWA

**31/44**  
1305.214

FILE: H:\2013\130524\DWG\130524-PWP-WATER.DWG COMMENT: DATE: 9/29/2019 2:48 PM  
PLOTTER: HP DesignJet 5000 PLOTTED BY: JMM



| DATE     | REVISIONS          | ENGINEER |
|----------|--------------------|----------|
| 04/03/15 | AS-BUILT SUBMITTAL | EI: JMM  |
| 10/09/14 | AS-BUILT SUBMITTAL |          |
| 09/06/13 | FINAL SUBMITTAL    |          |
| 08/16/13 | FOURTH SUBMITTAL   |          |
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| 06/11/13 | FIRST SUBMITTAL    |          |

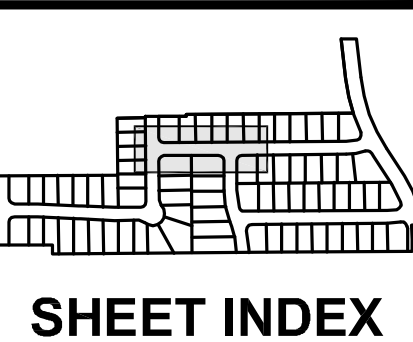
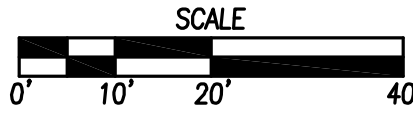
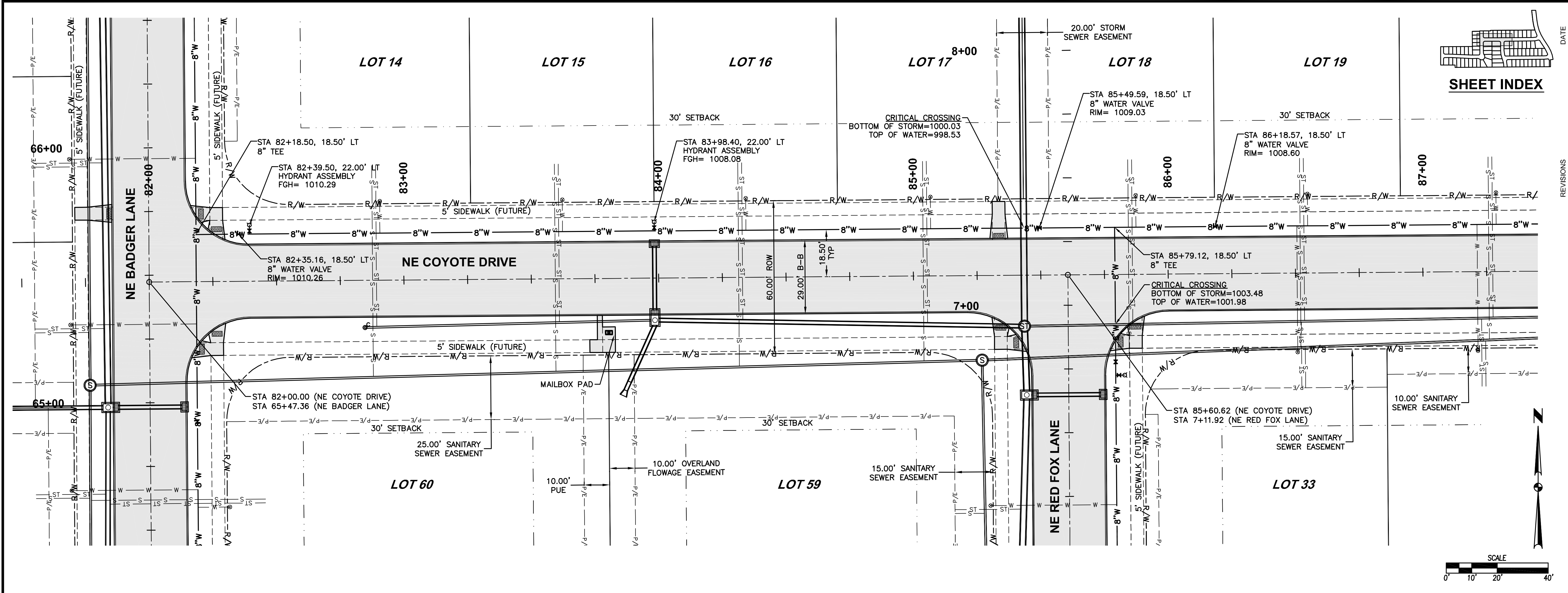
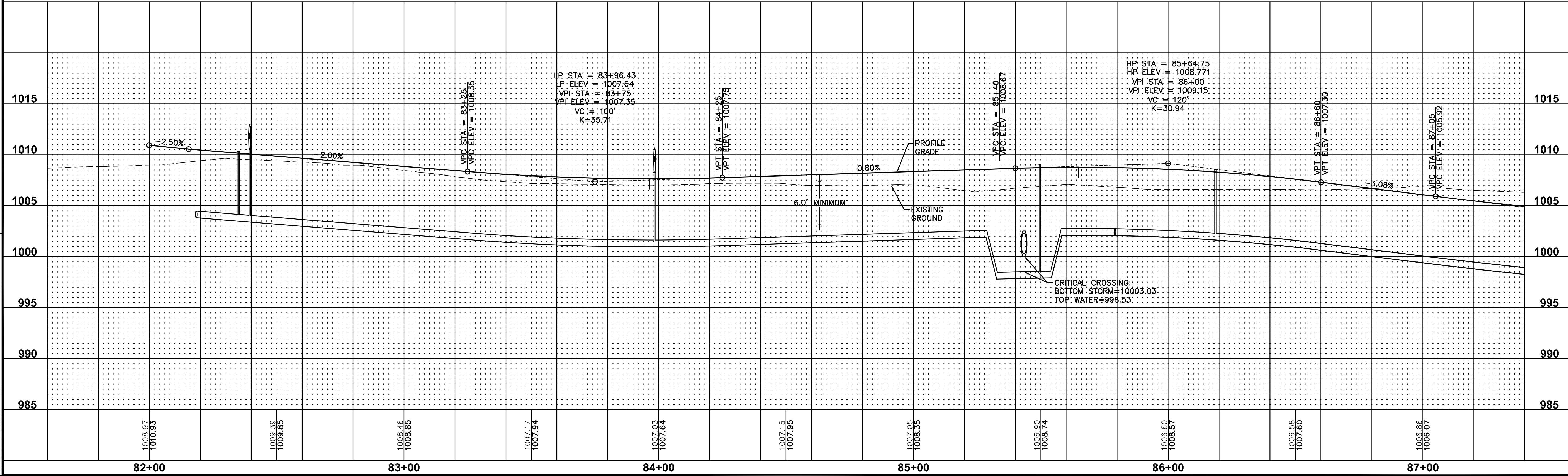
**FOX CREEK ESTATES PLAT 5**  
WATER MAIN PLAN AND PROFILE

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

CIVIL DESIGN ADVANTAGE  
WAUKEE, IOWA

32/44  
1305.214

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CHECKED BY: JMM  
PLOT DATE: 9/29/2010 2:48 PM  
PLOT BY: JMM



| REVISIONS |                    |
|-----------|--------------------|
| DATE      | DESCRIPTION        |
| 04/03/15  | AS-BUILT SUBMITTAL |
| 10/09/14  | AS-BUILT SUBMITTAL |
| 09/06/13  | FINAL SUBMITTAL    |
| 08/16/13  | FOURTH SUBMITTAL   |
| 07/23/13  | THIRD SUBMITTAL    |
| 07/17/13  | SECOND SUBMITTAL   |
| 06/11/13  | FIRST SUBMITTAL    |

|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| 3405 S.E. CROSSROADS DRIVE, SUITE G<br>GRIMES, IOWA 50111<br>PHONE: (515) 369-4400 FAX: (515) 369-4410<br>ENGINEER: EKO<br>EI: JMM |
|------------------------------------------------------------------------------------------------------------------------------------|

**CIVIL DESIGN ADVANTAGE**  
WAUKEE, IOWA

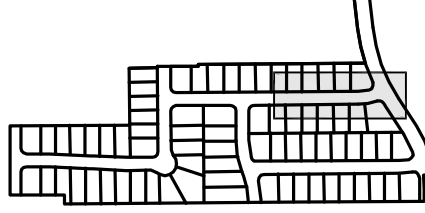
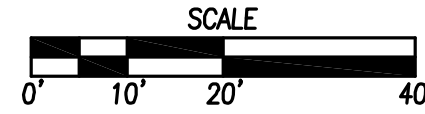
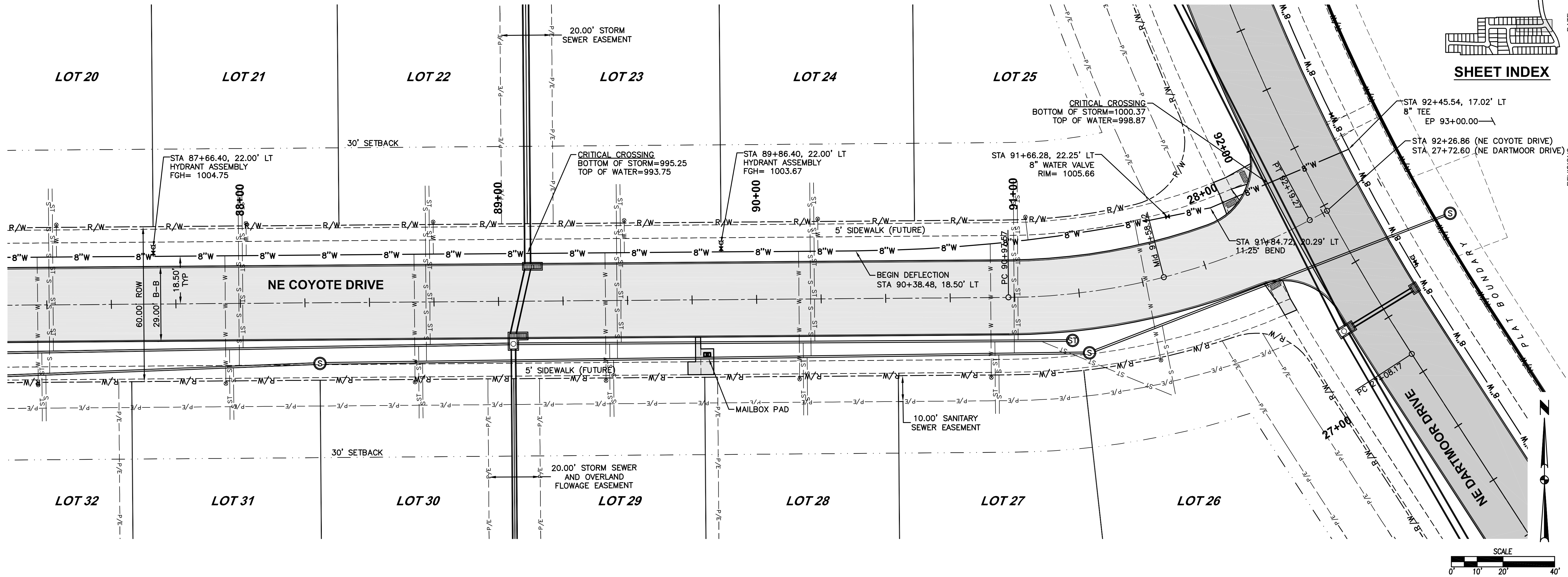
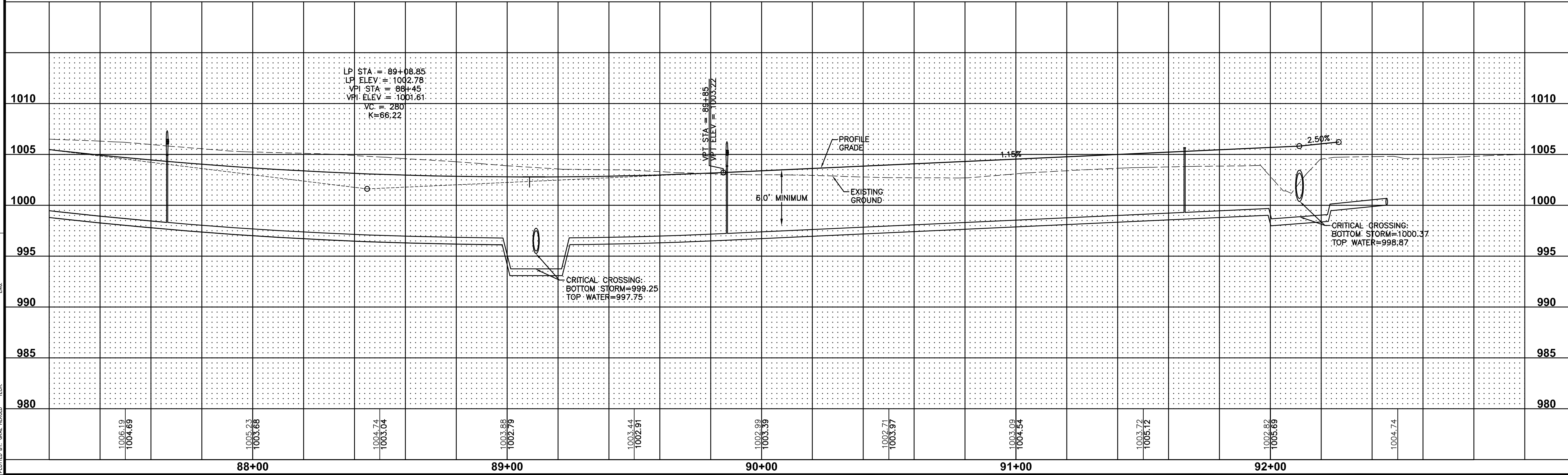
  

**FOX CREEK ESTATES PLAT 5**  
**WATER MAIN PLAN AND PROFILE**

**33**  
**44**  
1305.214

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PLOT BY: GALE HEROLD



SHEET INDEX

| REVISIONS |                    |
|-----------|--------------------|
| DATE      | DESCRIPTION        |
| 04/03/15  | AS-BUILT SUBMITTAL |
| 10/09/14  | AS-BUILT SUBMITTAL |
| 09/06/13  | FINAL SUBMITTAL    |
| 08/16/13  | FOURTH SUBMITTAL   |
| 07/31/13  | THIRD SUBMITTAL    |
| 07/17/13  | SECOND SUBMITTAL   |
| 06/11/13  | FIRST SUBMITTAL    |

|                                                                                                        |                          |
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|--------------------------------------------------------------------------------------------------------|--------------------------|

CIVIL DESIGN ADVANTAGE  
WAUKEE, IOWA

**FOX CREEK ESTATES PLAT 5**

**WATER MAIN PLAN AND PROFILE**

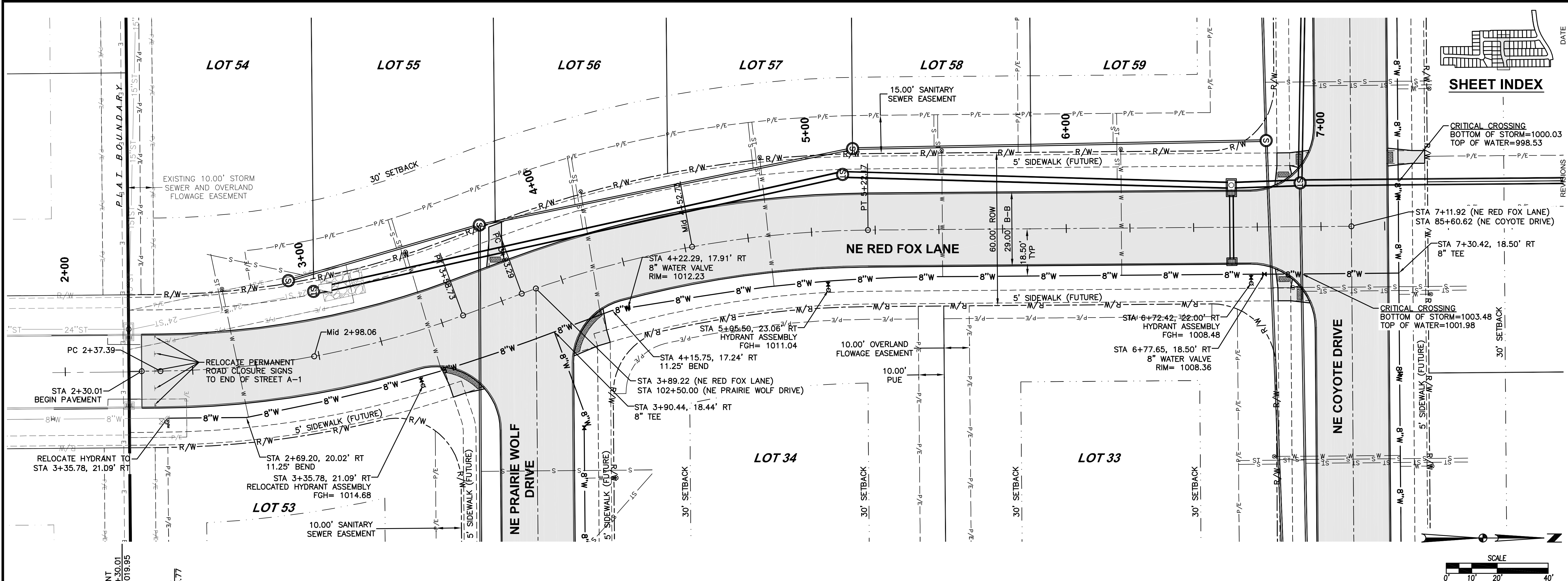
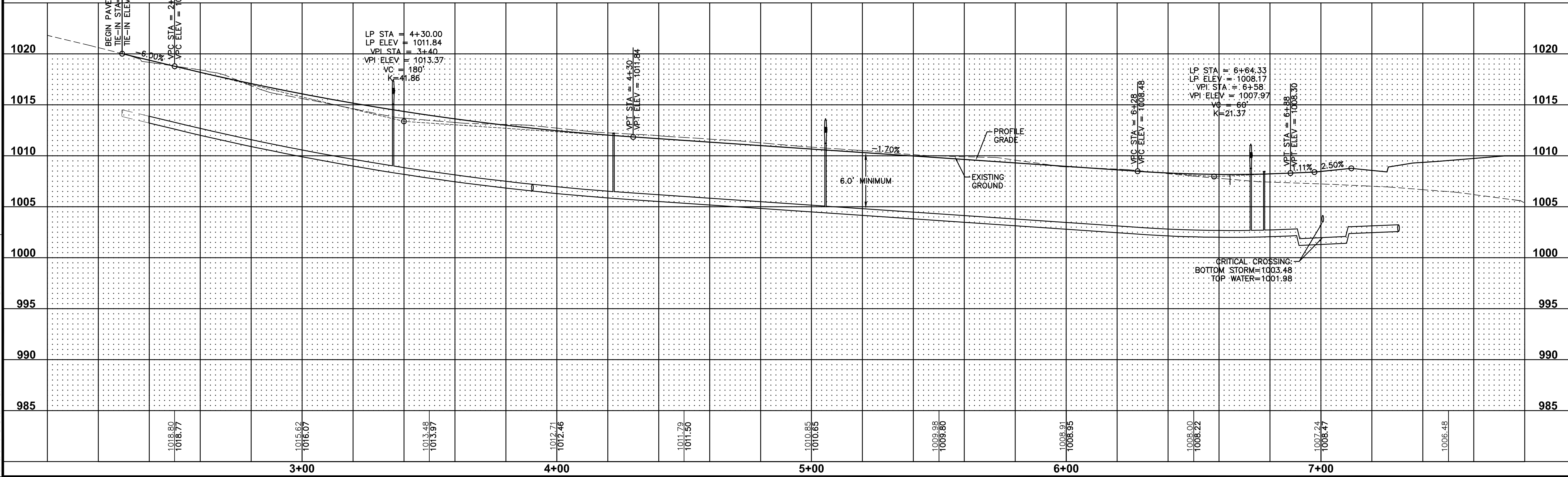
  

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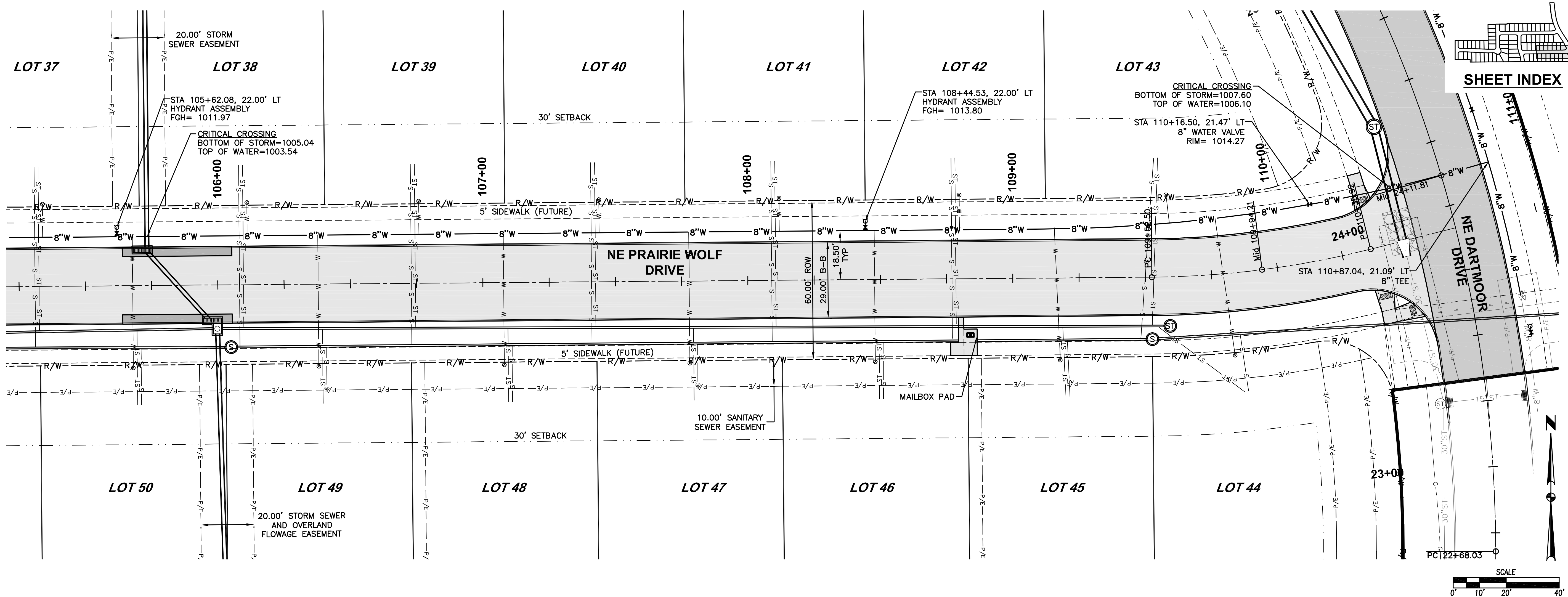
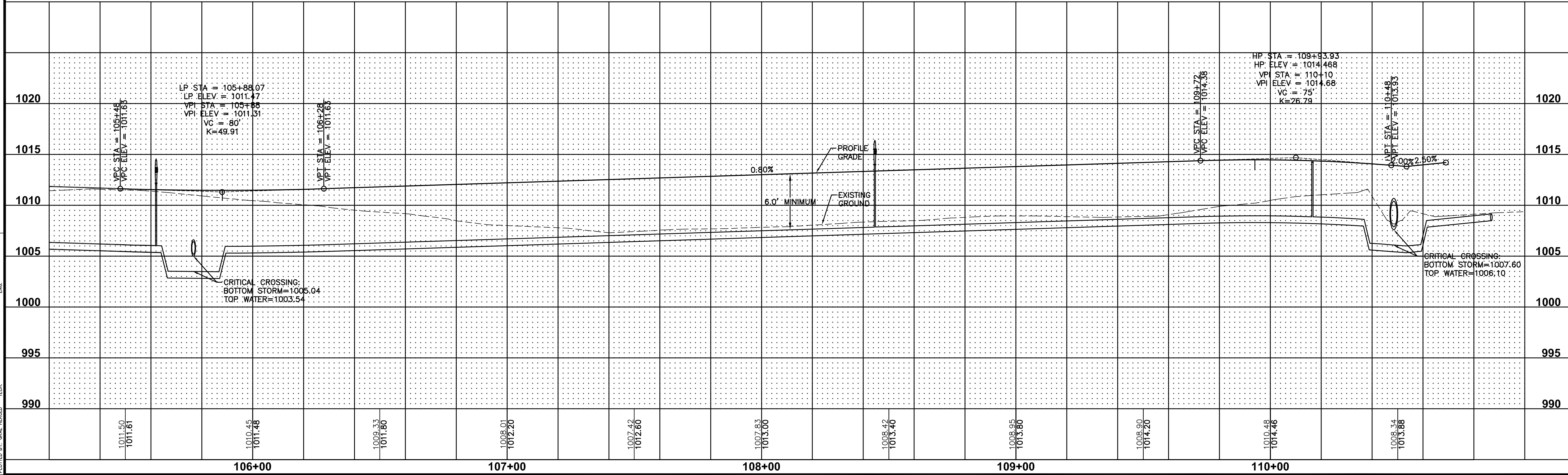
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CHECKED BY: JMM  
PLOTTED BY: JMM



DATE  
04/03/15  
10/09/14  
09/06/13  
08/16/13  
07/31/13  
06/11/13

REVISIONS  
AS-BUILT SUBMITTAL  
AS-BUILT SUBMITTAL  
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

ENGINEER: EKO

EI: JMM

FOX CREEK ESTATES PLAT 5

WATER MAIN PLAN AND PROFILE

1305.214

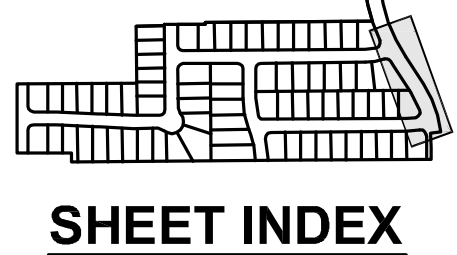
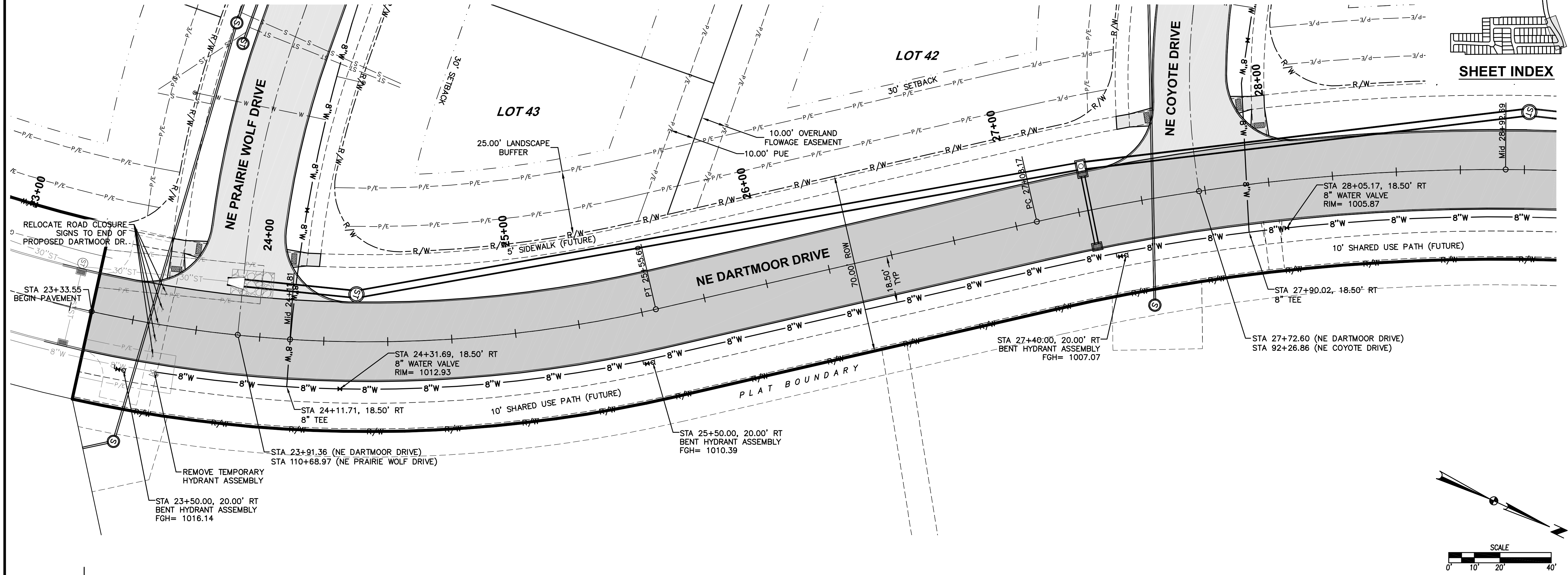
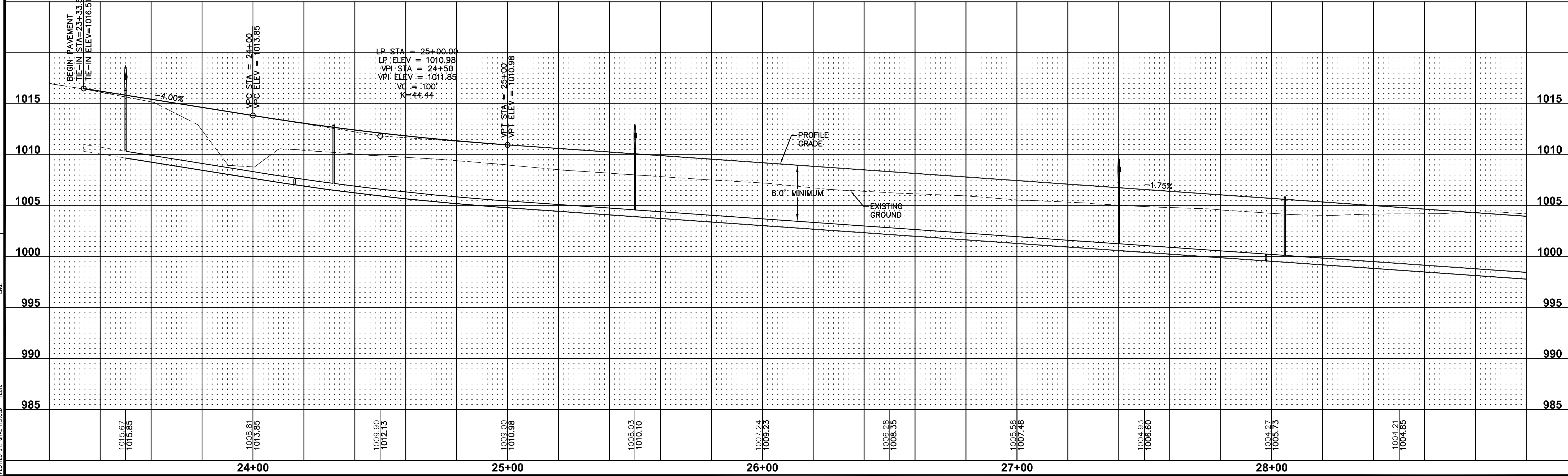
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CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

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PLOTED BY: GALE HEROLD



| REVISIONS          |          | DATE     |
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| AS-BUILT SUBMITTAL | 10/09/14 | 04/03/15 |
| AS-BUILT SUBMITTAL | 09/06/13 | 10/09/14 |
| FINAL SUBMITTAL    | 08/16/13 | 09/06/13 |
| FOURTH SUBMITTAL   | 07/31/13 | 08/16/13 |
| THIRD SUBMITTAL    | 07/17/13 | 07/31/13 |
| SECOND SUBMITTAL   |          | 07/17/13 |
| FIRST SUBMITTAL    |          | 06/11/13 |

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

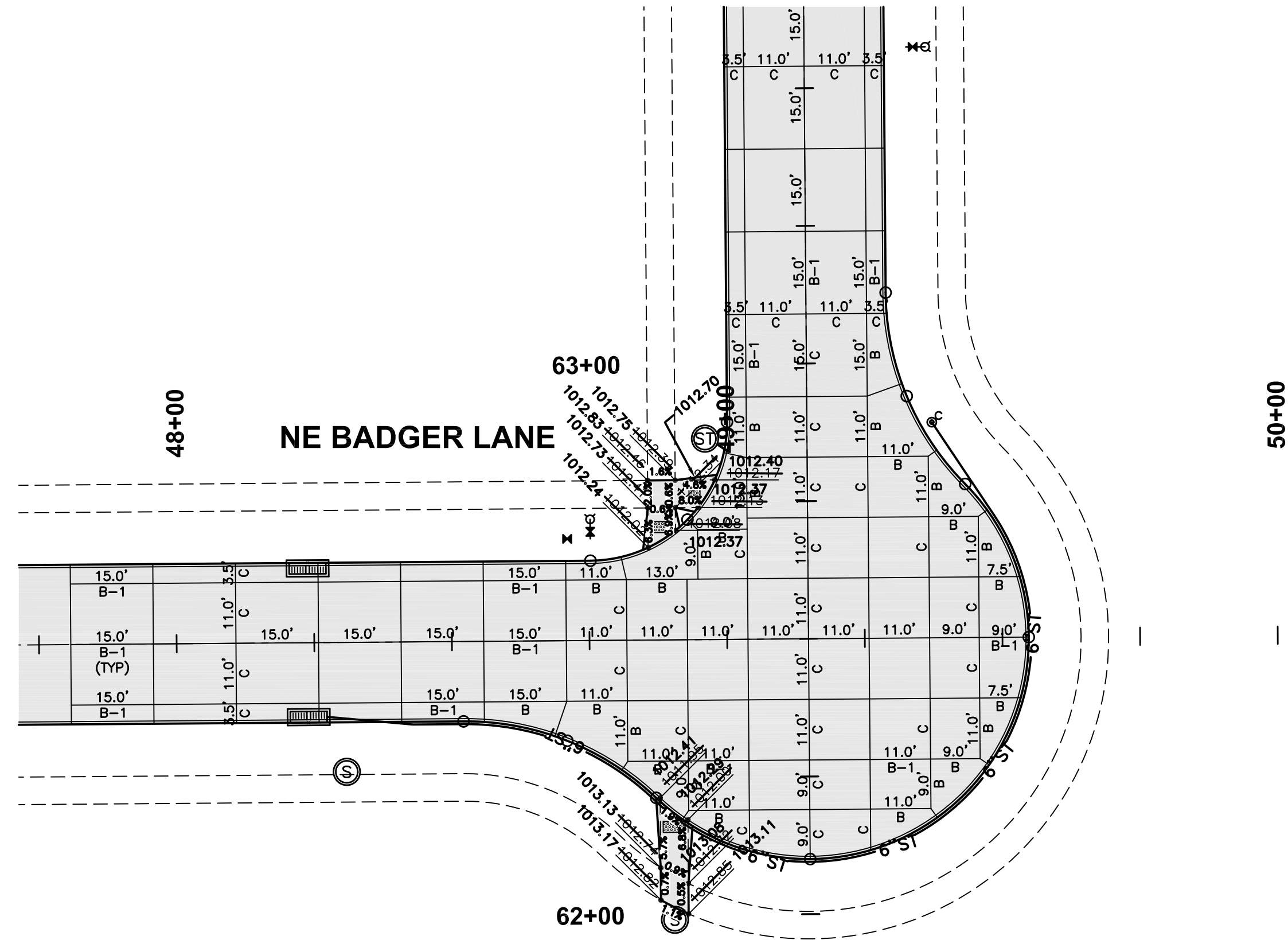
**FOX CREEK ESTATES PLAT 5**  
**WATER MAIN PLAN AND PROFILE**  
WAUKEE, IOWA

**38/44**  
1305.214

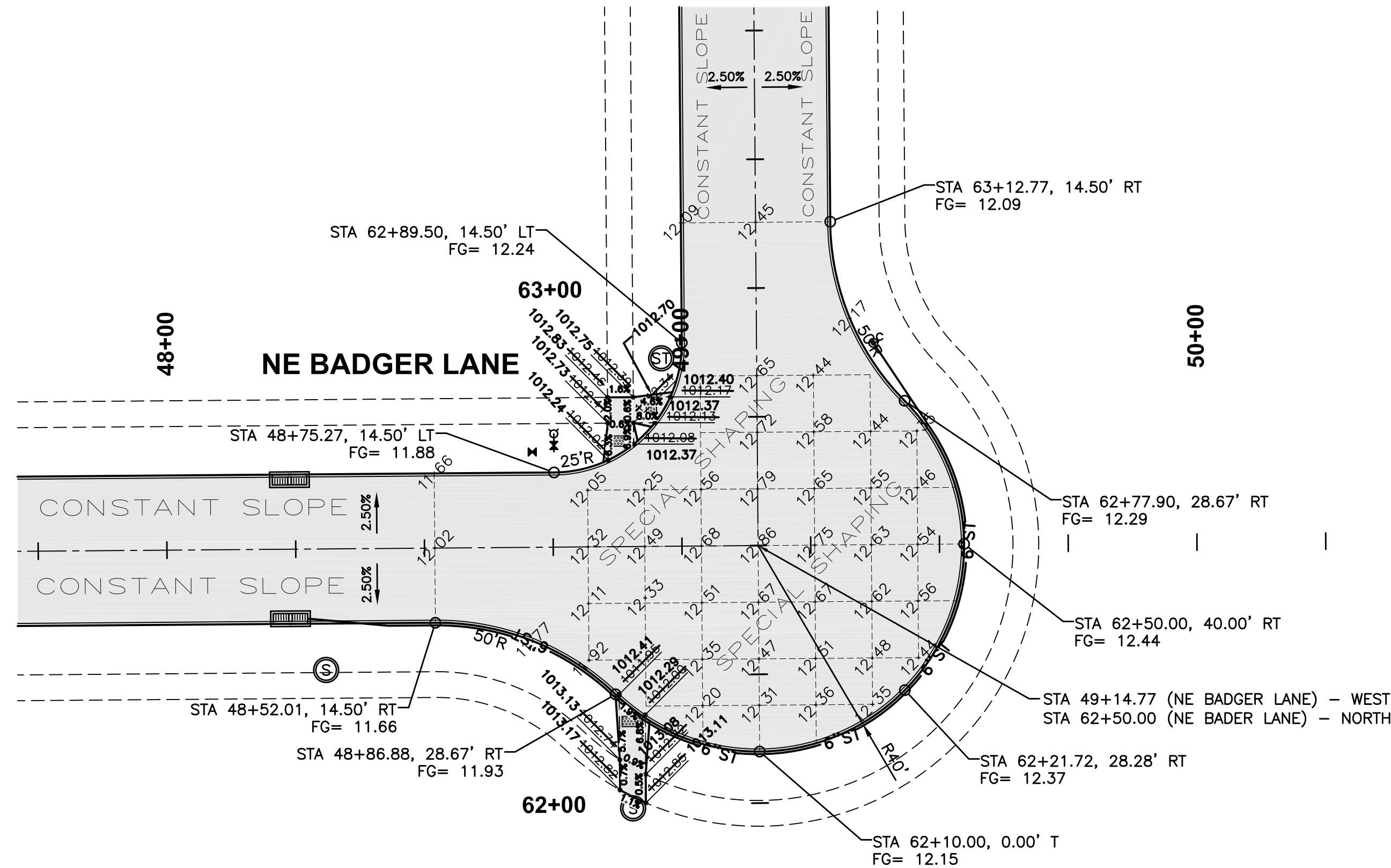


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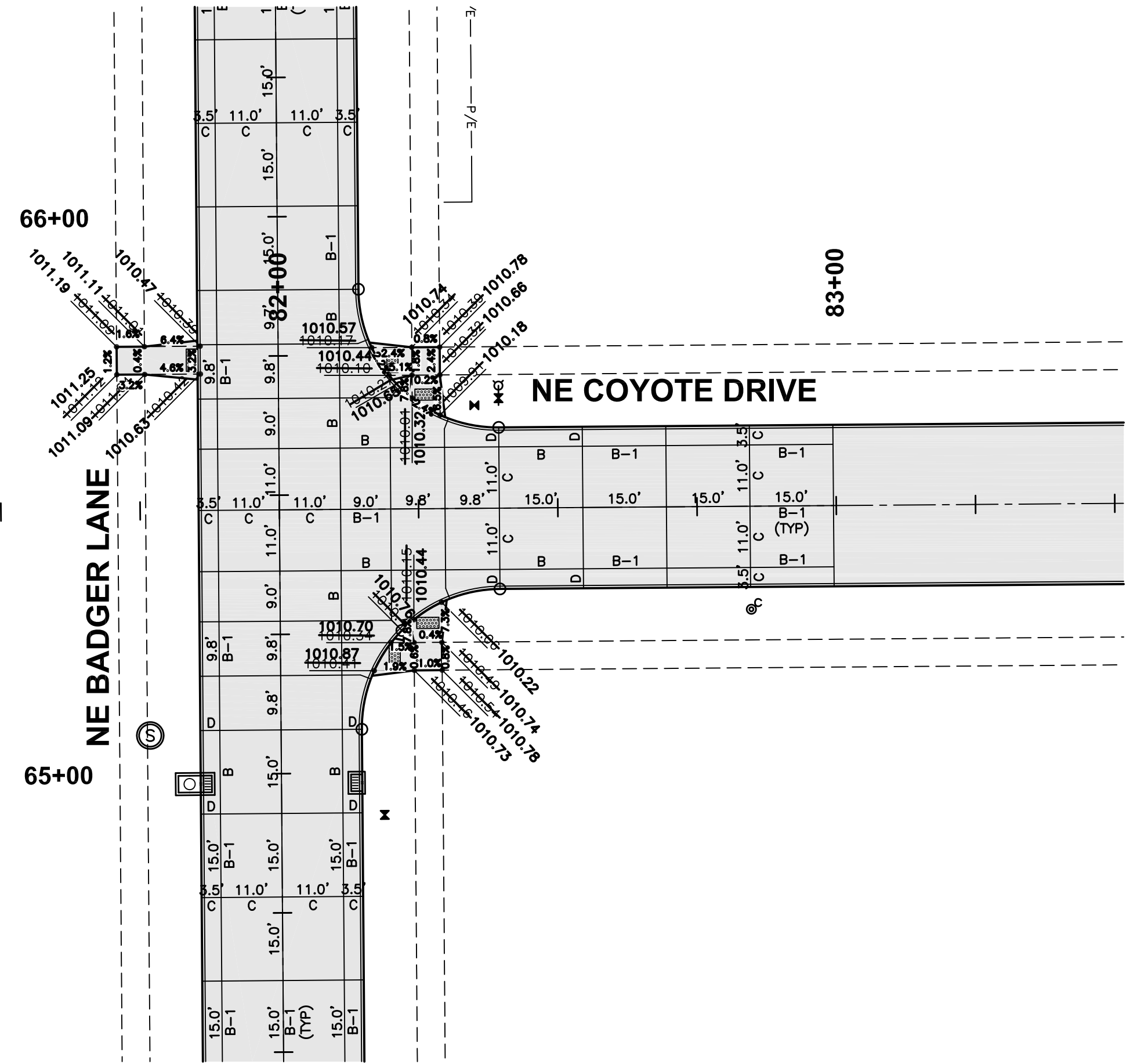
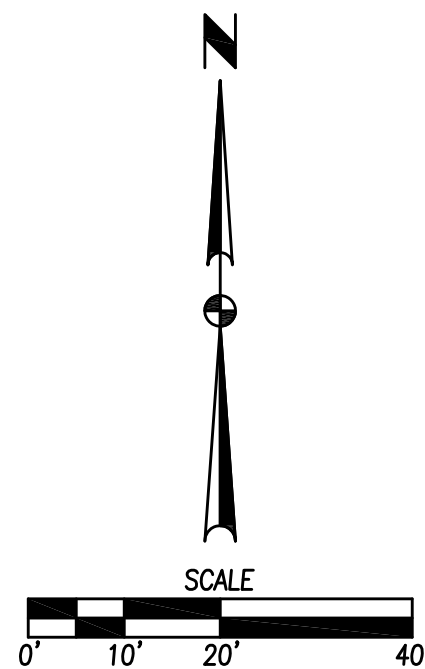
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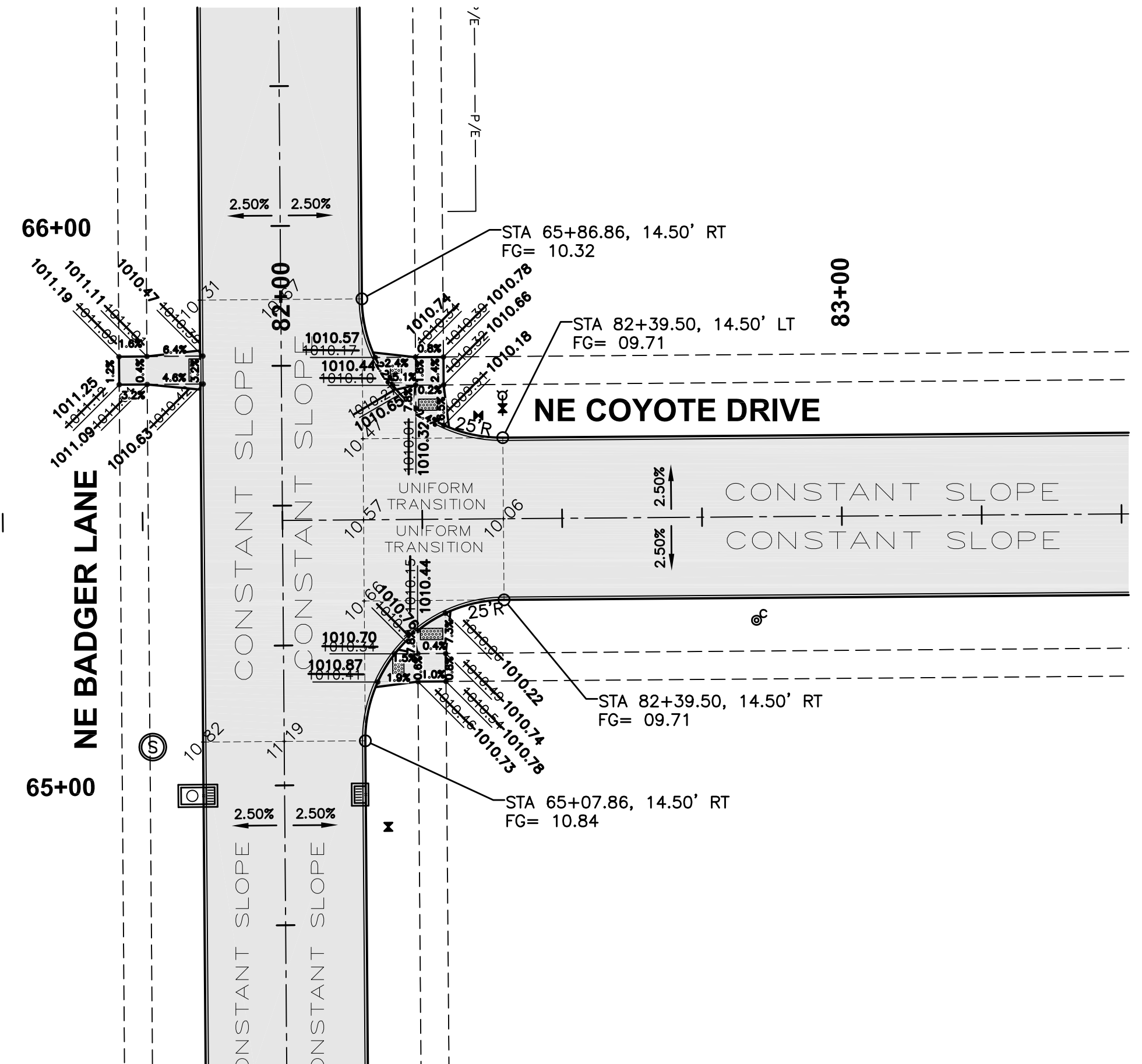
GEOMETRICS AND STAKING LAYOUT

NOTES:

1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
2. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.



JOINTING LAYOUT



GEOMETRICS AND STAKING LAYOUT

| DATE     |                    |
|----------|--------------------|
| 04/03/15 | AS-BUILT SUBMITTAL |
| 10/09/14 | AS-BUILT SUBMITTAL |
| 09/06/13 | FINAL SUBMITTAL    |
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| 07/31/13 | THIRD SUBMITTAL    |
| 07/17/13 | SECOND SUBMITTAL   |
| 06/11/13 | FIRST SUBMITTAL    |

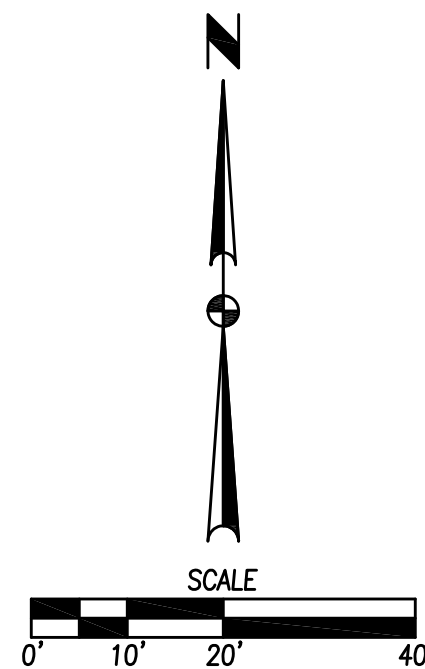
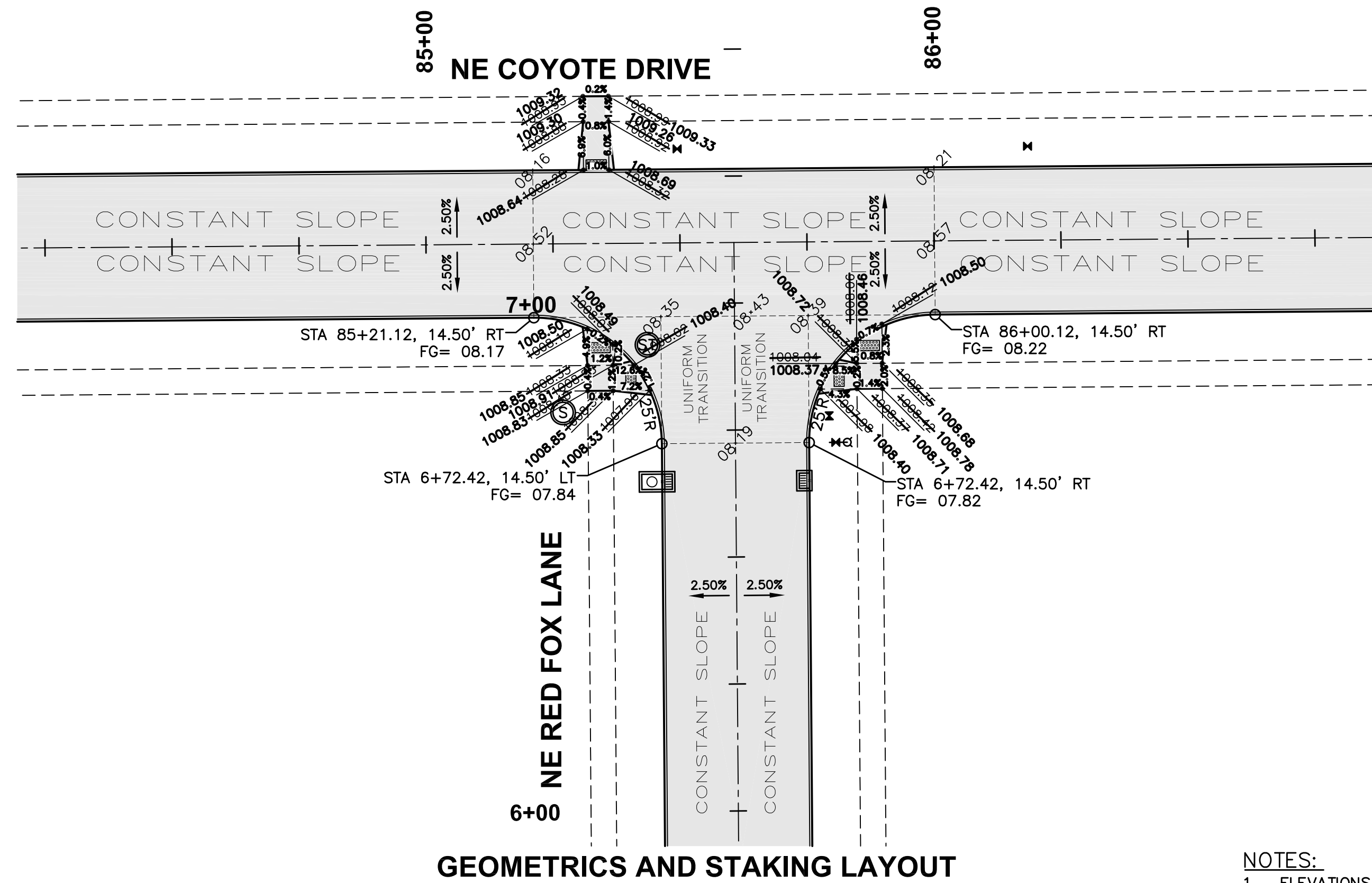
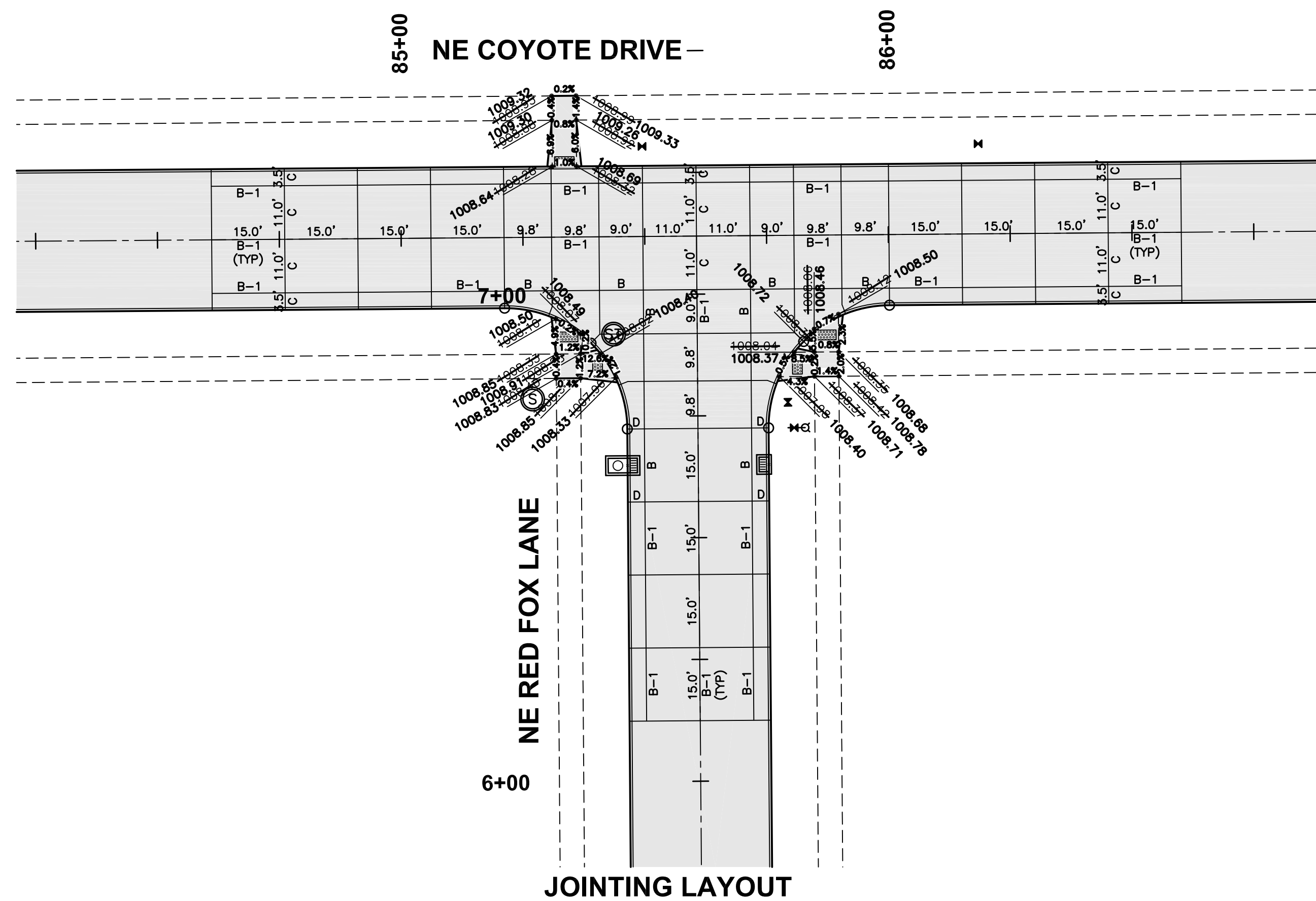
| REVISIONS                                                                                              |               |
|--------------------------------------------------------------------------------------------------------|---------------|
| 3405 S.E. CROSSROADS DRIVE, SUITE G<br>GRIMES, IOWA 50111<br>PHONE: (515) 369-4400 FAX: (515) 369-4410 | ENGINEER: EKO |
| EII: JMM                                                                                               |               |

CIVIL DESIGN ADVANTAGE

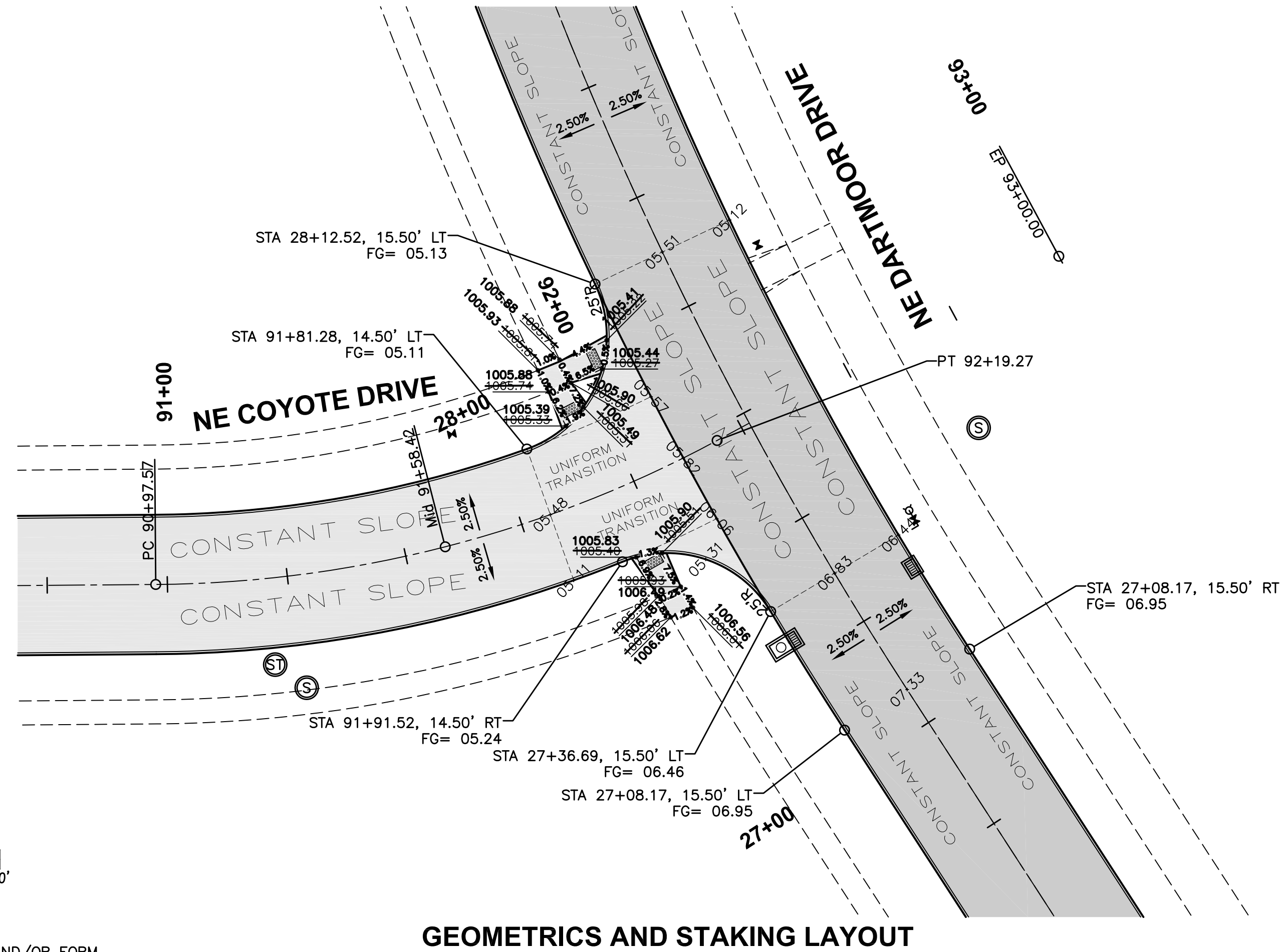
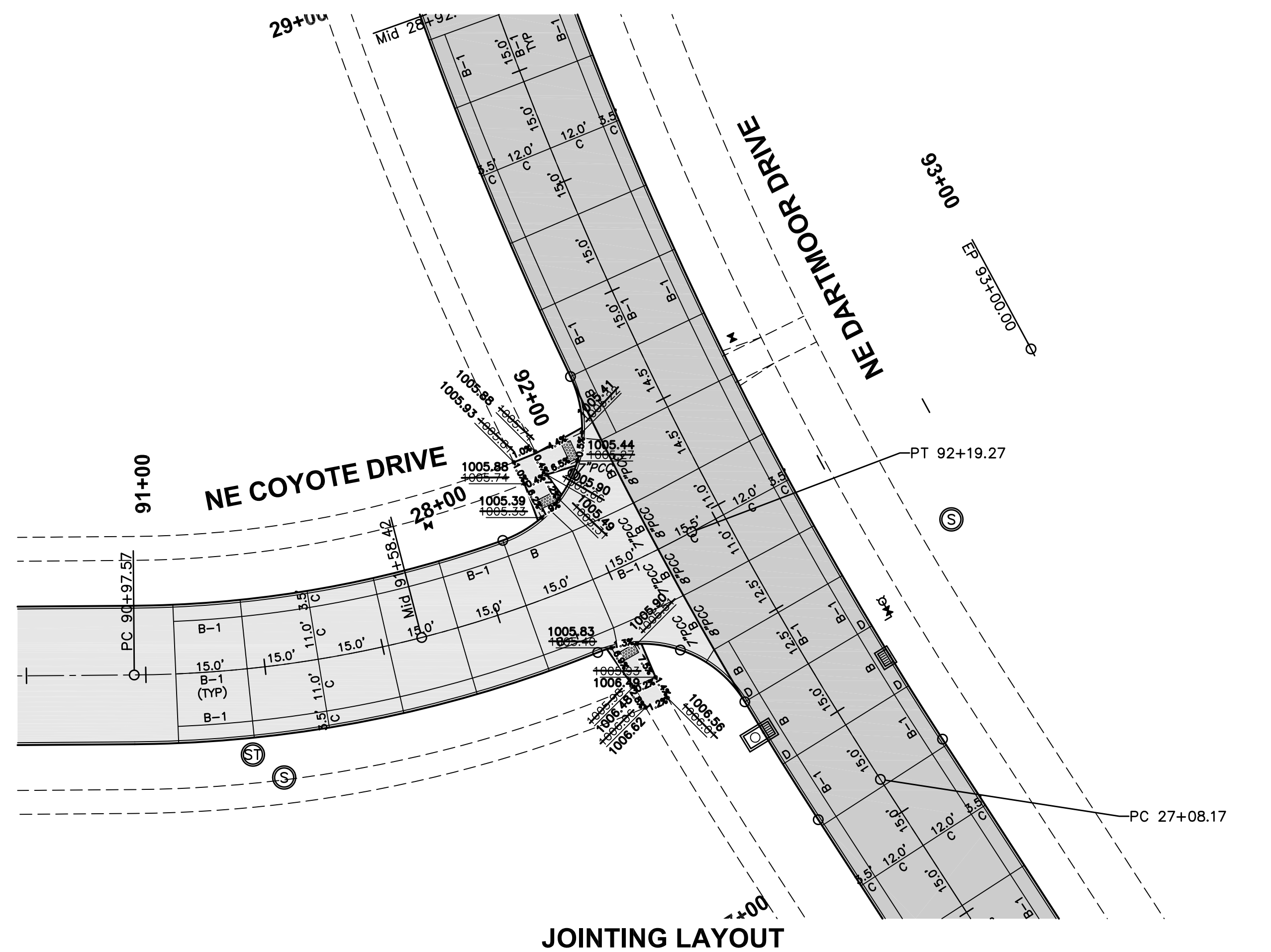
FOX CREEK ESTATES PLAT 5  
INTERSECTION DETAILS

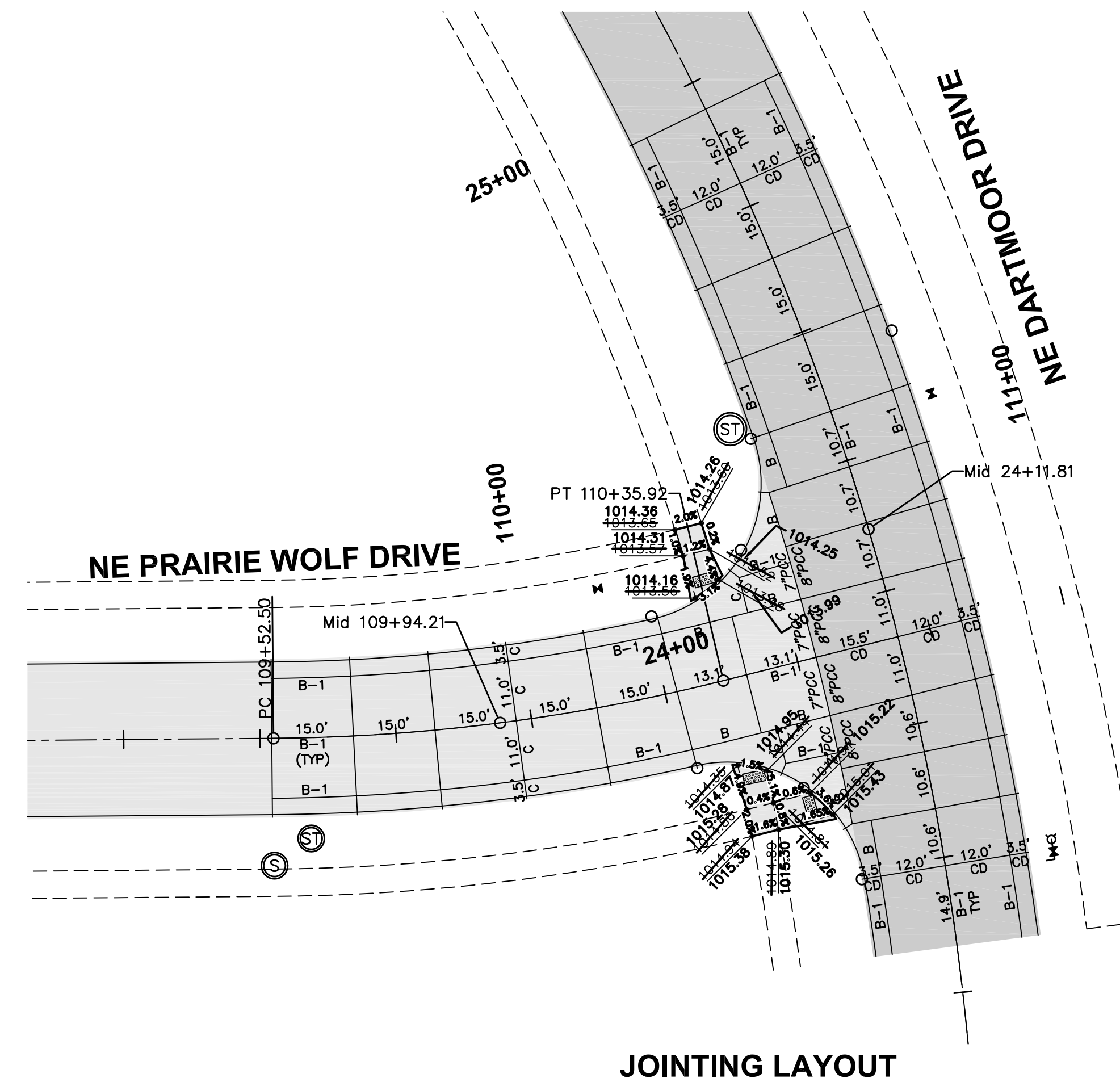
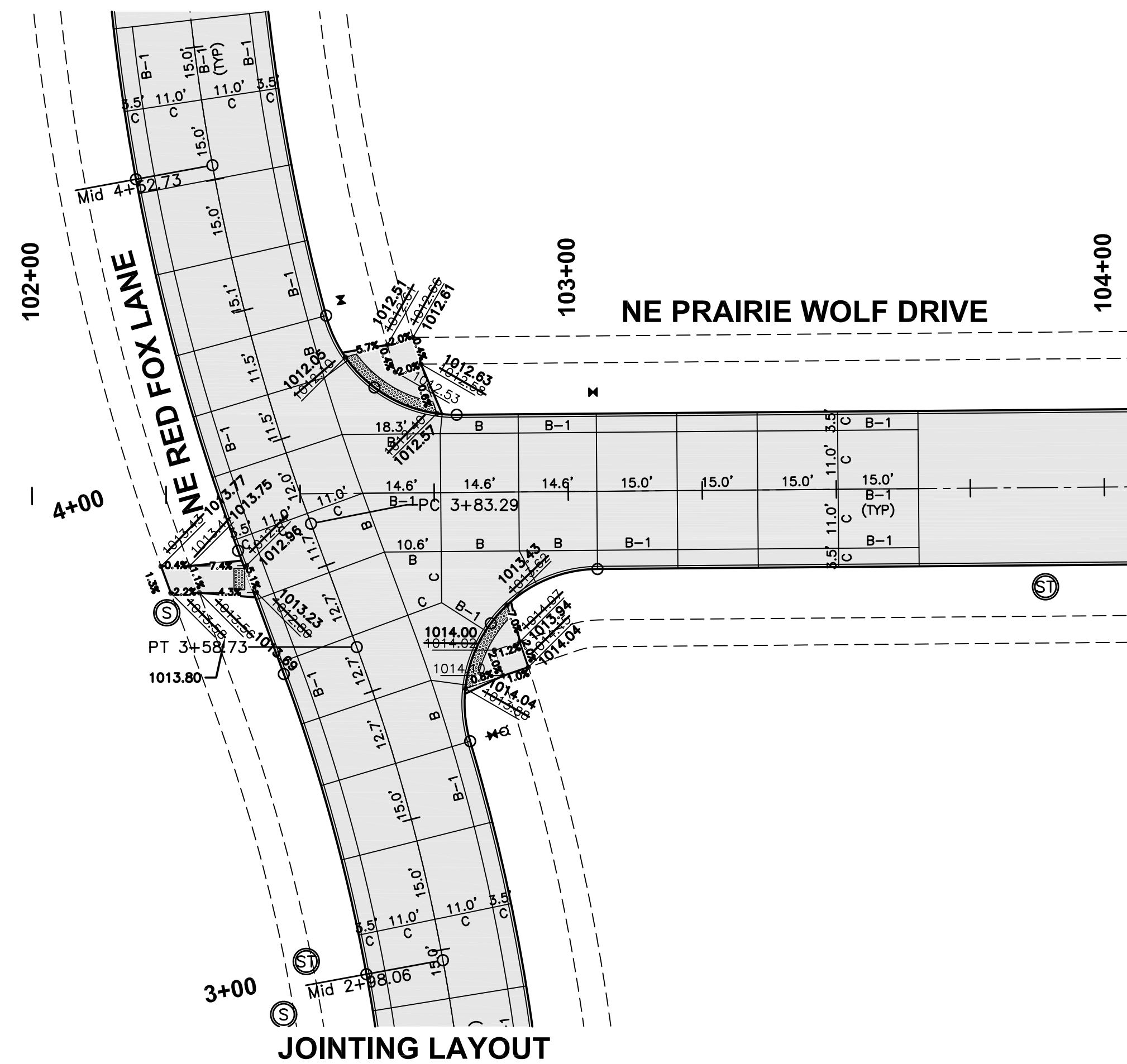
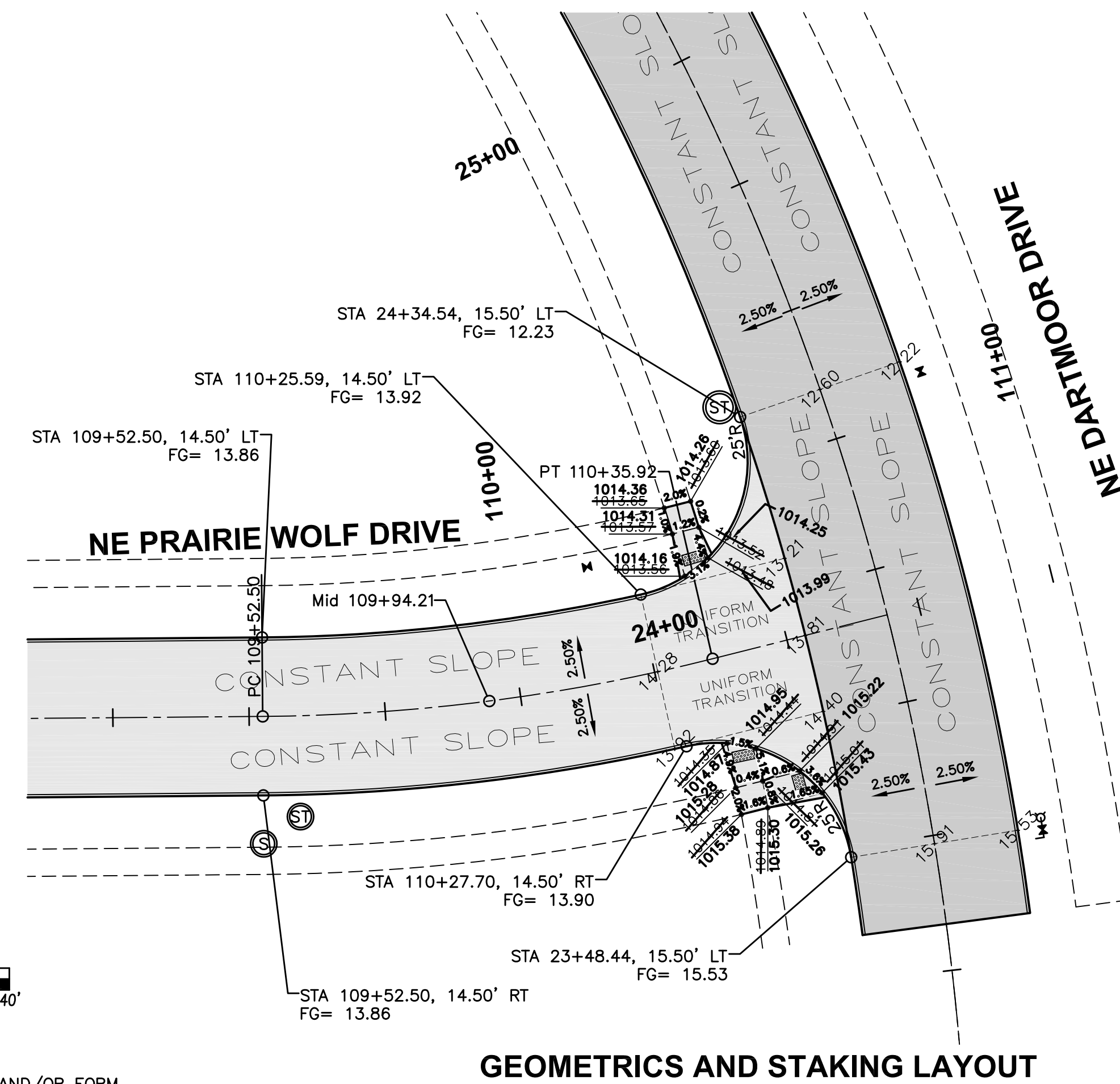
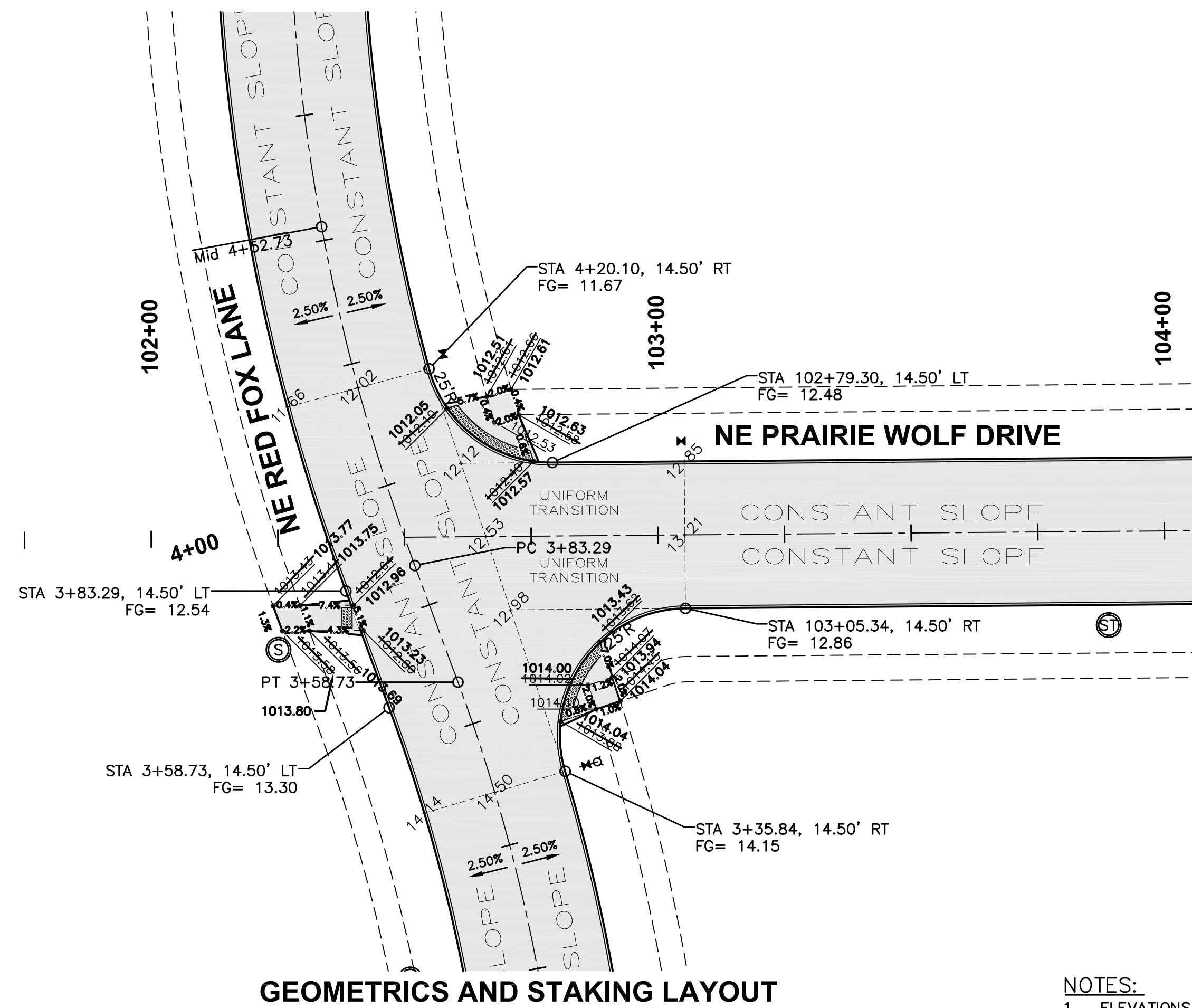
WAUKEE, IOWA

40/44  
1305.214



- NOTES:
- ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
  - REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.





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COMMENT:

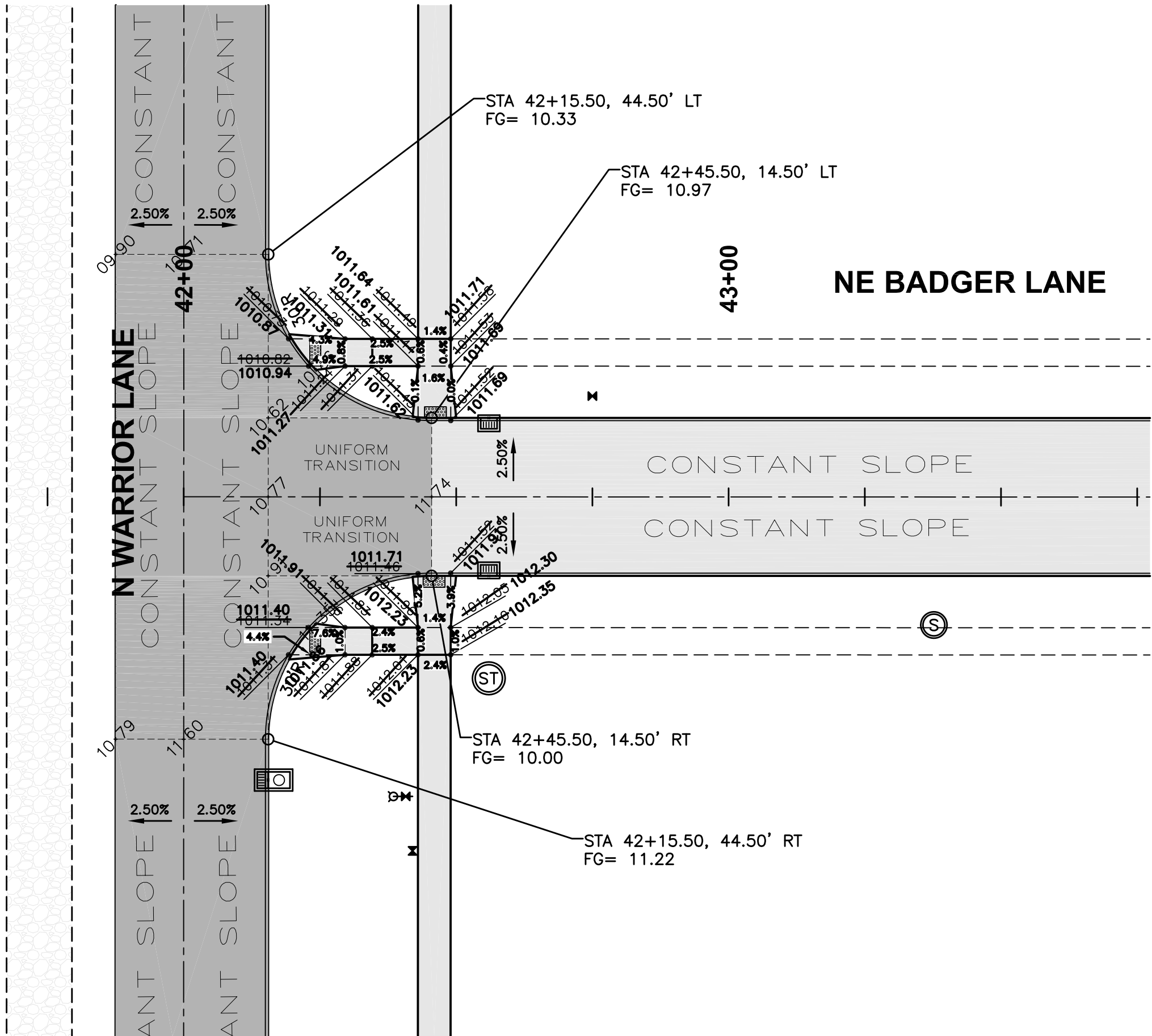
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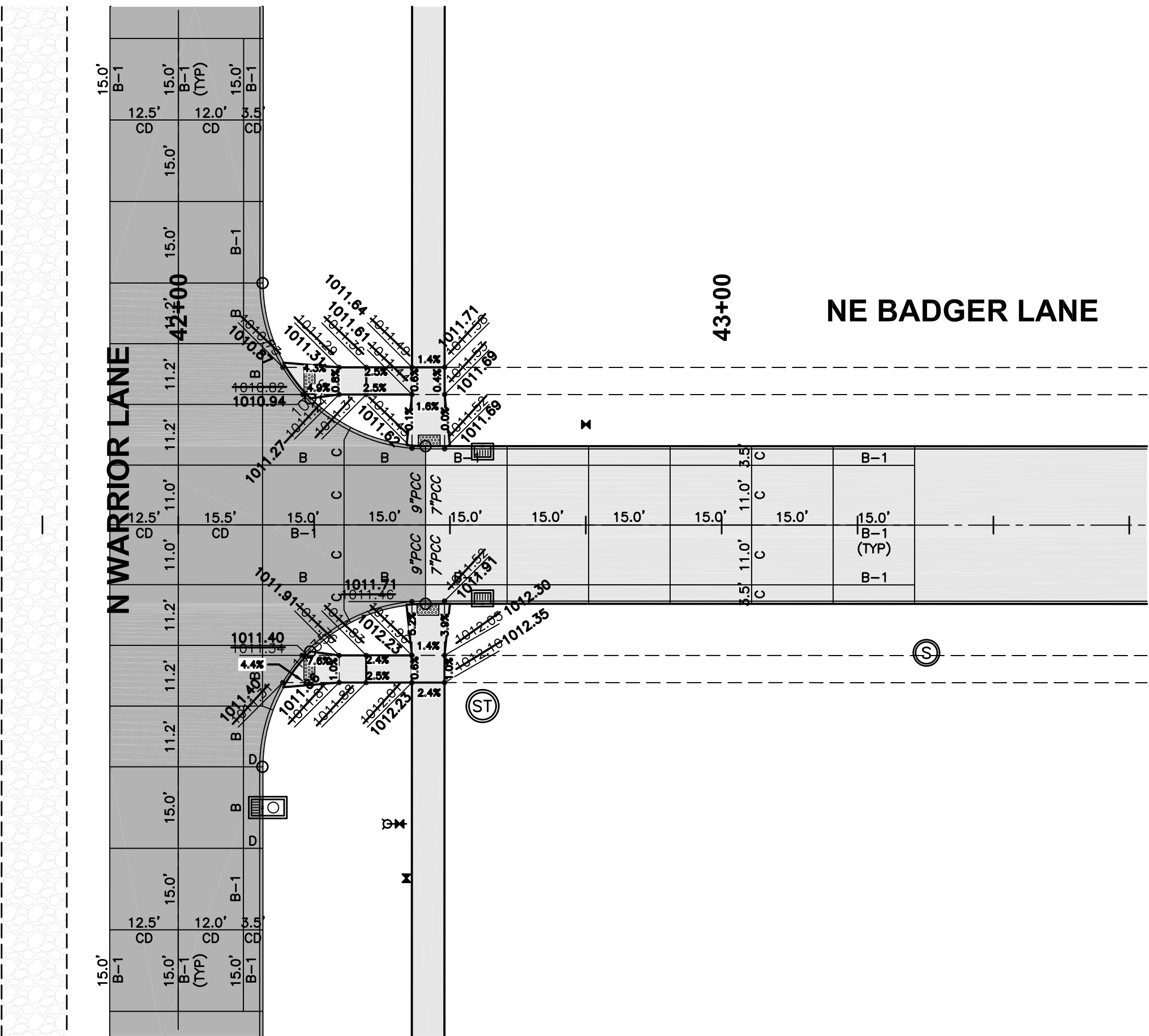
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| REVISIONS          | DATE     |
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| AS-BUILT SUBMITTAL | 04/03/15 |
| AS-BUILT SUBMITTAL | 10/09/14 |
| FINAL SUBMITTAL    | 09/06/13 |
| FOURTH SUBMITTAL   | 08/16/13 |
| THIRD SUBMITTAL    | 07/31/13 |
| SECOND SUBMITTAL   | 07/17/13 |
| FIRST SUBMITTAL    | 05/01/13 |

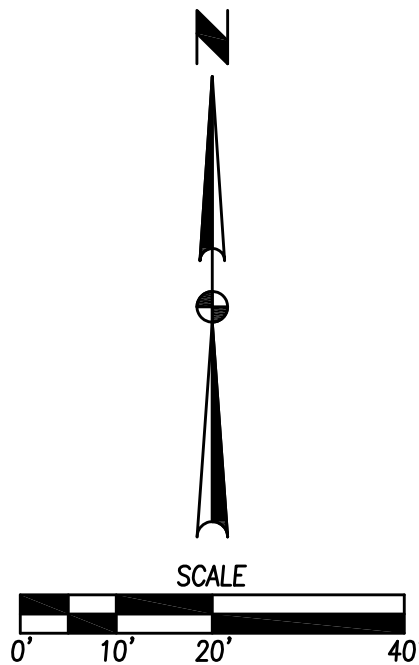
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PLOTED BY: PRA GLENKOE



GEOMETRICS AND STAKING LAYOUT

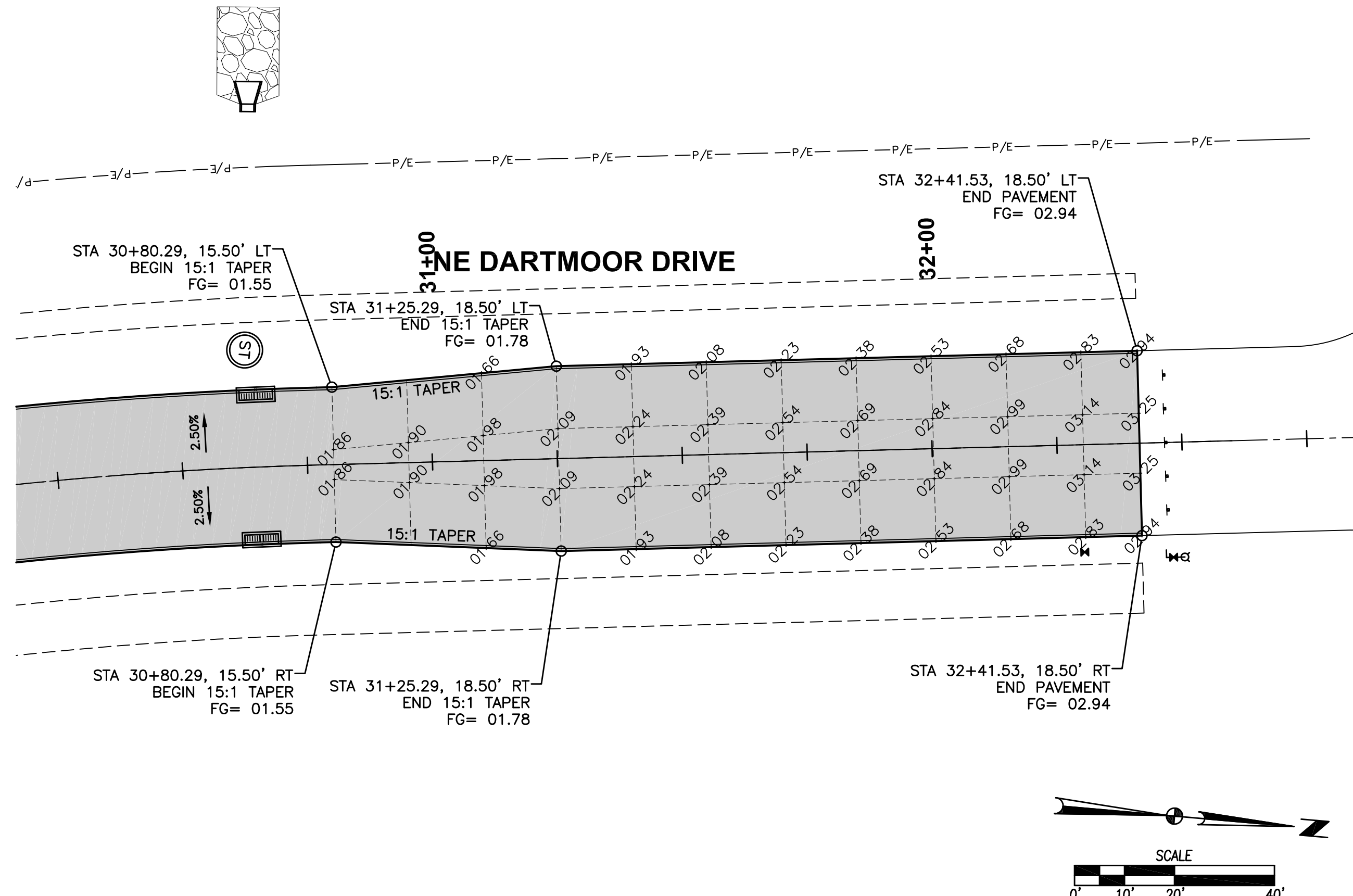


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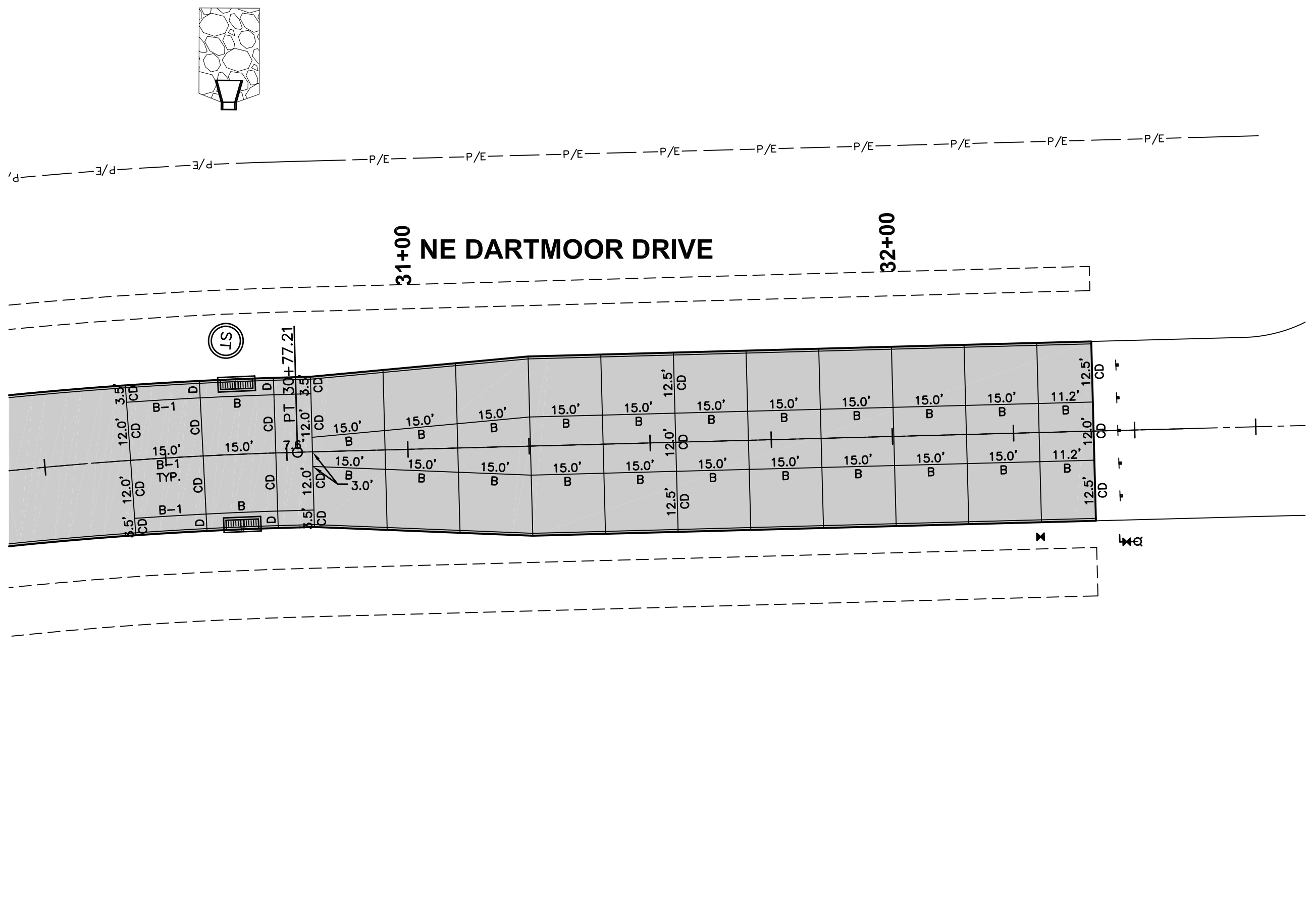


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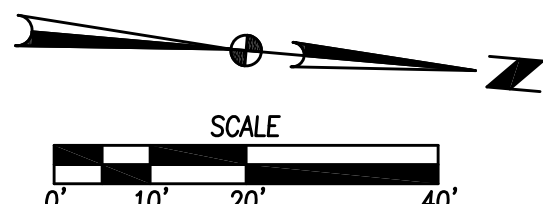
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GEOMETRICS AND STAKING LAYOUT

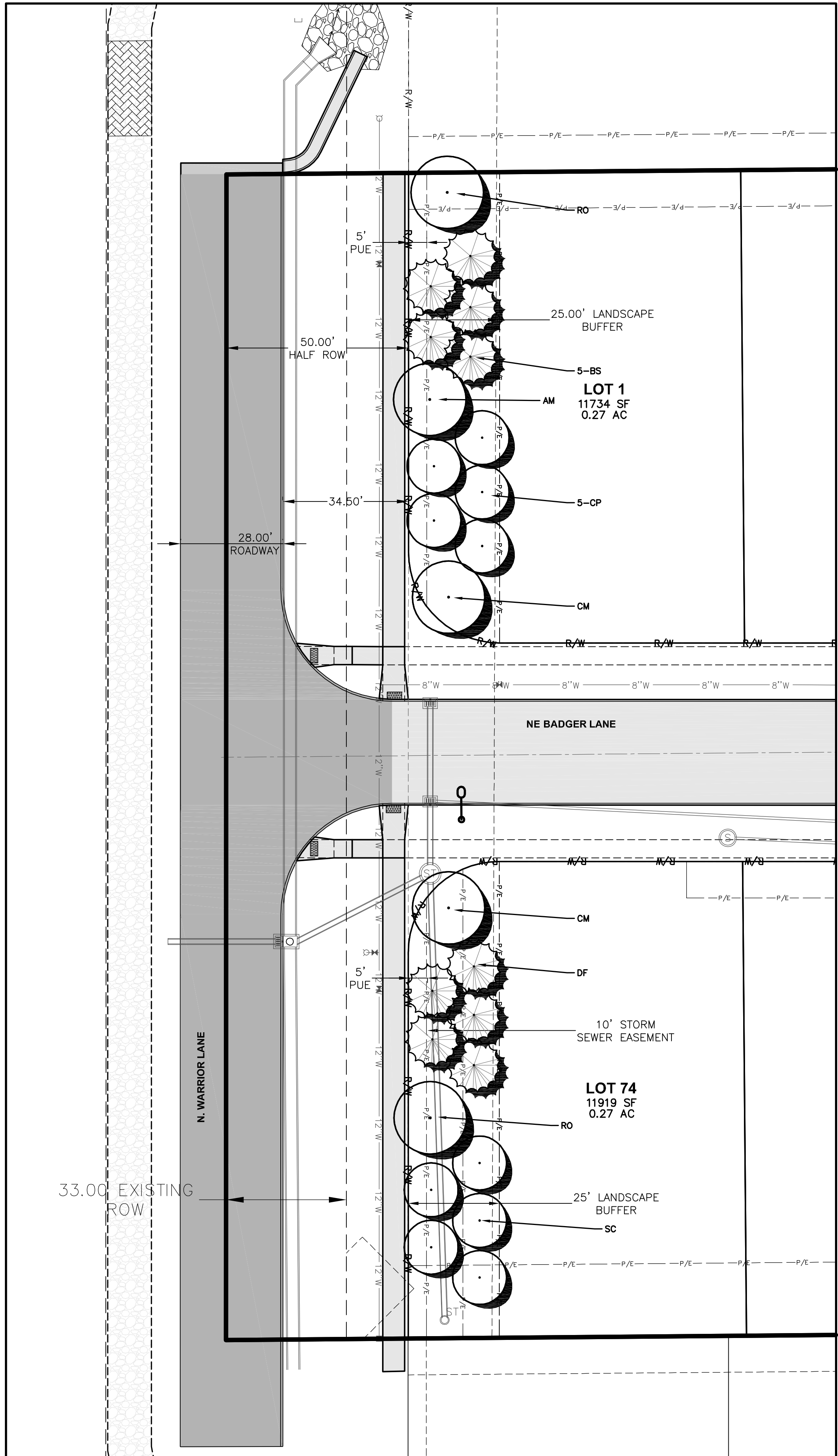


JOINTING LAYOUT



REVISIONS

| DATE     | REVISIONS          |
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| 07/31/13 | THIRD SUBMITTAL    |
| 07/17/13 | SECOND SUBMITTAL   |
| 06/11/13 | FIRST SUBMITTAL    |



#### LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING
6. SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES TO A (MIN) DEPTH OF 3"
7. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
8. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
9. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.

#### BUFFER REQUIREMENTS

1 OVERSTORY TREE, 2 EVERGREEN TREES AND 2 ORNAMENTAL TREES PER 50 LF

##### NE DARTMOOR DRIVE BUFFER (769 LF)

OVERSTORY TREES REQUIRED =15  
EVERGREEN TREES REQUIRED =31  
ORNAMENTAL TREES REQUIRED =31

OVERSTORY TREES PROVIDED =15  
EVERGREEN TREES PROVIDED =33  
ORNAMENTAL TREES PROVIDED =31

##### NE WARRIOR LANE BUFFER (259 LF)

OVERSTORY TREES REQUIRED =5  
EVERGREEN TREES REQUIRED =10  
ORNAMENTAL TREES REQUIRED =10

OVERSTORY TREES PROVIDED =5  
EVERGREEN TREES PROVIDED =10  
ORNAMENTAL TREES PROVIDED =10

#### PLANT SCHEDULE

| CODE | QTY | NAME                 | SIZE     | COND |
|------|-----|----------------------|----------|------|
| AM   | 7   | AUTUMN BLAZE MAPLE   | 1.5" CAL | B&B  |
| CP   | 23  | CHANTICLEER PEAR     | 1.5" CAL | B&B  |
| BS   | 21  | COLORADO BLUE SPRUCE | 6' HT.   | B&B  |
| CM   | 7   | CRIMSON KING MAPLE   | 2" CAL   | B&B  |
| RO   | 6   | RED OAK              | 2" CAL   | B&B  |
| DF   | 20  | DOUGLAS FIR          | 6' HT.   | B&B  |
| SC   | 18  | SPRING SNOW CRAB     | 1.5" CAL | B&B  |

