NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

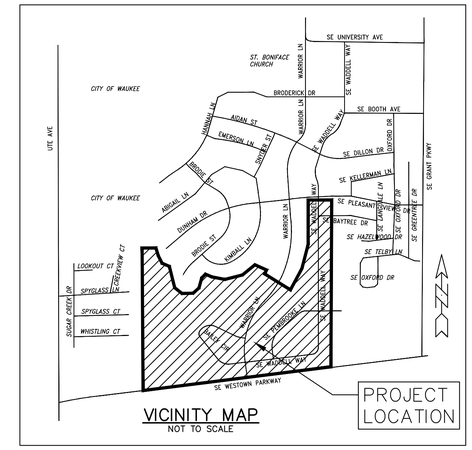
OWNER/DEVELOPER

HUBBELL METROPOLITAN DEVELOPMENT
FUND I, LLC (SERIES E)
6900 WESTOWN PARKWAY
WEST DES MOINES, IOWA 50266
515/243-3228

ABBREVIATIONS

NOTE: ALL ARE WITH OR WITHOUT PERIODS.
℄ = CENTERLINE
℄ = FLOWLINE
℄ = PROPERTY LINE
B/WALL = BOTTOM OF WALL (AT GROUND/FACE)
BOC = BACK OF CURB
CIP = CAST-IN-PLACE (CONCRETE)
DHWL = DESIGN HIGH WATER LEVEL
DIP = DUCTILE IRON PIPE
DWY. = DRIVEWAY
EASE OR ESMT = EASEMENT
EL OR ELEV = ELEVATION
ENT. = ENTRANCE
EOP = EDGE OF PAVEMENT
FES = FLARED END SECTION
FOC = FACE OF CURB
G = GUTTER
GND = GROUND
HOR OR HORIZ = HORIZONTAL
HWL = HIGH WATER LEVEL
INV = INVERT/FLOWLINE
P = PAVEMENT
PVC = POLYVINYL CHLORIDE (PIPE)
PKWY = PARKWAY
RCB = REINFORCED CONCRETE BOX
RCP = REINFORCED CONCRETE PIPE
ROW OR R/W = RIGHT-OF-WAY
S/W = SIDEWALK
SAN = SANITARY SEWER OR SERVICE
SMF = STORMWATER MANAGEMENT FACILITY
SWFE = STORMWATER FLOWAGE EASEMENT
SWPPP = STORMWATER POLLUTION PREVENTION PLAN
STM = STORM SEWER OR SERVICE
T/C = TOP OF CURB
T/W = TOP OF WALK
T/WALL = TOP OF WALL
TYP = TYPICAL
VCP = VITRIFIED CLAY PIPE
VER OR VERT = VERTICAL
WTR = WATERMAIN OR WATER SERVICE

CONSTRUCTION PLANS
OF
GLYNN VILLAGE PLAT 10
CITY OF WAUKEE
DALLAS COUNTY, IOWA
FOR
HUBBELL REALTY COMPANY



VICINITY MAP
NOT TO SCALE

PROJECT BENCHMARK:

SE TAB BOLT ON HYDRANT AT SW CORNER WARRIOR LANE & SE UNIVERSITY AVENUE
ELEVATION = 1028.39 (NAVD 88 – IOWA STATE PLANE COORDINATE SYSTEM)

UTILITY CONTACTS:

ELECTRIC:
MIDAMERICAN ENERGY; JIM KEISLAR; 515/252-6472; JAKEISLAR@MIDAMERICAN.COM

GAS:
CITY OF WAUKEE; DAVE DEZEEUW – GAS SUPERINTENDENT; 515/707-5014; DDEZEEUW@MIDAMERICAN.COM

SANITARY:
CITY OF WAUKEE FOR DES MOINES METROPOLITAN WASTEWATER RECLAMATION AUTHORITY (WRA); CHARLES (CHUCK) WASKE – WATER/WASTEWATER SUPERINTENDENT; 515/710-9469; CWASKE@WAUKEE.COM

STORM:
CITY OF WAUKEE; JENNY CORKREAN – STORMWATER COORDINATOR; 515/306-8617; JCORKREAN@WAUKEE.COM

WATER:
CITY OF WAUKEE; CHARLES (CHUCK) WASKE – WATER/WASTEWATER SUPERINTENDENT; 515/710-9469; CWASKE@WAUKEE.COM

CAUTION — INDICATES THAT UNDERGROUND UTILITIES WILL LIKELY BE ENCOUNTERED IN THE SHOWN AREA

IOWA 811 ONE CALL SM
Call 811 before you dig.
www.iowaonecall.com

PREPARED BY:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

INDEX OF SHEETS

1. COVER
2. GENERAL NOTES & EST. QUANTITIES
3. TYPICAL SECTIONS
4. PROJECT MAP
5. GRADING PLAN OVERALL AND NOTES
6. GRADING PLAN 1
7. GRADING PLAN 2
8. GRADING PLAN 3
9. GRADING PLAN 4
10. GRADING PLAN 5
11. BAILEY CIRCLE – SANITARY & WATER 1
12. BAILEY CIRCLE – SANITARY & WATER 2
13. BAILEY CIRCLE – SANITARY SEWER EXTENSION
14. WARRIOR LANE – SANITARY & WATER 1
15. WARRIOR LANE – SANITARY & WATER 2
16. WARRIOR WEST – SANITARY
17. WARRIOR EAST – SANITARY
18. SE WADDELL WAY – SANITARY & WATER 1
19. SE WADDELL WAY – SANITARY & WATER 2
20. SE WADDELL WAY – SANITARY & WATER 3
21. SE PEMBROOKE LANE – SANITARY & WATER
22. SE BAYTREE DRIVE – SANITARY & WATER
23. SE WESTOWN PARKWAY – SANITARY & WATER 1
24. SE WESTOWN PARKWAY – SANITARY & WATER 2
25. SE WESTOWN PARKWAY – SANITARY & WATER 3
26. BAILEY CIRCLE – PAVEMENT & STORM 1
27. BAILEY CIRCLE – PAVEMENT & STORM 2
28. BASINS' OUTFALLS – STORM SEWER
29. BAILEY CIRCLE – STORM SECTIONS A
30. BAILEY CIRCLE – STORM SECTIONS B
31. WARRIOR LANE – PAVEMENT & STORM 1
32. WARRIOR LANE – STORM SECTIONS A
33. WARRIOR LANE – STORM SECTIONS B
34. WARRIOR LANE – STORM SECTIONS C
35. WARRIOR LANE – PAVEMENT & STORM 2
36. SE WADDELL WAY – PAVEMENT & STORM 1
37. SE WADDELL WAY – STORM SECTIONS A
38. SE WADDELL WAY – PAVEMENT & STORM 2
39. SE WADDELL WAY – STORM SECTIONS B
40. SE WADDELL WAY – PAVEMENT & STORM 3
41. SE WADDELL WAY – STORM SECTIONS C
42. SE WADDELL WAY – STORM SECTIONS D
43. SE PEMBROOKE LANE – PAVEMENT & STORM
44. SE PEMBROOKE LANE – STORM SECTIONS A
45. SE PEMBROOKE LANE – STORM SECTIONS B
46. SE BAYTREE DRIVE – PAVEMENT & STORM
47. SE BAYTREE DRIVE – STORM SECTIONS
48. SE WESTOWN PARKWAY – PAVEMENT & STORM 1
49. SE WESTOWN PKWY – STORM SECTIONS A
50. SE WESTOWN PARKWAY – PAVEMENT & STORM 2
51. SE WESTOWN PKWY – STORM SECTIONS B
52. SE WESTOWN PARKWAY – PAVEMENT & STORM 3
53. SE WESTOWN PKWY – STORM SECTIONS C
54. SE WESTOWN PKWY – STORM SECTIONS D
55. BAILEY WEST – GREENBELT
56. BAILEY EAST – GREENBELT
57. BAILEY – GREENBELT
58. BAILEY OVERFLOW – GREENBELT
59. PEMBROOKE WEST – GREENBELT
60. PLAT 8 WADDELL WAY – GREENBELT 1
61. PLAT 8 WADDELL WAY – GREENBELT 2
62. EAST OUTLOT – GREENBELT 1
63. EAST OUTLOT – GREENBELT 2
64. PEMBROOKE EAST – GREENBELT
65. PEMBROOKE OUTLOT – GREENBELT
66. WESTOWN BORROW – GREENBELT
67. WADDELL AND WESTOWN – GREENBELT
68. WESTOWN DITCH – GREENBELT 1
69. WESTOWN DITCH – GREENBELT 2
70. 'EAST-8E' DETENTION BASIN – GRADING & STORM
71. 'BAILEY WEST' DETENTION BASIN – GRADING & STORM
72. EXISTING 9' ARCH CMP CULVERT EXTENSION
73. EXISTING CULVERT EXTENSION NOTES & DETAILS
74. WARRIOR LANE – MEDIAN GROUND COVER PLAN
75. WARRIOR OUTLOTS – LANDSCAPING BUFFER PLAN
76. WESTOWN LANDSCAPE BUFFER PLAN
77. INTERSECTION DETAILS 1
78. INTERSECTION DETAILS 2
79. ENTRANCE DETAILS 1 – SE WESTOWN PARKWAY
80. CURB RAMP DETAILS 1
81. CURB RAMP DETAILS 2
82. CURB RAMP DETAILS 3
83. CURB RAMP DETAILS 4 – POOL ACCESS
84. EMERGENCY OVERFLOW LOCATION DETAILS 1
85. EMERGENCY OVERFLOW LOCATION DETAILS 2
86. ROAD CLOSURE AND DETOUR DETAILS
87. DETAILS 1
88. DETAILS 2
89. DETAILS 3
90. DETAILS 4
91. DETAILS 5
92. DETAILS 6
93. DETAILS 7
94. DETAILS 8
95. DETAILS 9
96. DETAILS 10
97. DETAILS 11
98. DETAILS 12
99. DETAILS 13
100. DETAILS 14

A. INITIAL SWPPP-EROSION CONTROL PLAN
B. SWPPP SITE PLAN
C. SWPPP & STABILIZATION SITE PLAN

PROJECT MANAGER CONTACT
ANDREW HUBBELL
515/221-6656

NOTE: SEE 'STORMWATER POLLUTION PREVENTION PLAN' (SWPPP SHEETS) FOR EROSION CONTROL MEASURES.

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.

LICENSED PROFESSIONAL ENGINEER — DOUGLAS J. SALTSGAVER — 11993 — IOWA

DOUGLAS J. SALTSGAVER, P.E. DATE

LICENSE NUMBER: 11993

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2016

PAGES OR SHEETS COVERED BY THIS SEAL:
1 – 100, INCLUSIVE; AND INITIAL A – C, INCLUSIVE

RECORD DRAWING

PLANS APPROVED
BY CITY OF WAUKEE
DATE: JANUARY 18, 2016

DATE: February 24, 2016 SHEET 1 OF 100

15-013

GLYNN VILLAGE PLAT 10

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-CVR.dwg, 10/19/2017 10:34:51 AM, PJV

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS; AND THE LATEST EDITION OF IOWA SUDAS STANDARDS AND SPECIFICATIONS. THE CITY OF WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IF ANY DISCREPANCIES ARE FOUND.
2. THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR(S). IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.
3. ALL DEBRIS SPILLED ON THE STREETS OR ADJACENT PROPERTY SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR – AT LEAST AT THE END OF EACH WORK DAY; PRIOR TO ANY RAIN EVENT; AND AS DIRECTED.
4. ALL CONSTRUCTION PROCEDURES AND MATERIALS SHALL MEET OR EXCEED MINIMUM REQUIREMENTS OF THE CITY. THE CONTRACTOR(S) SHALL SUBMIT SHOP DRAWINGS, CUT SHEETS, OR MATERIAL SPECIFICATIONS TO CITY PUBLIC WORKS ON ALL CONSTRUCTION MATERIALS USED PRIOR TO CONSTRUCTION.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT OSHA CODES AND STANDARDS. NOTHING INDICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR(S) FROM COMPLYING WITH ANY AND ALL APPROPRIATE SAFETY REGULATIONS.
6. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ALL REQUIRED WORK ZONE TRAFFIC CONTROL (VEHICULAR, BICYCLE, AND/OR PEDESTRIAN) REQUIRED DURING ANY AND ALL OPERATIONS. THESE SHALL BE INSTALLED PRIOR TO BEGINNING WORK ON THE SITE.
7. THE CONTRACTOR(S) SHALL FURNISH AND PLACE ALL NECESSARY TEMPORARY SIGNS AND BARRICADES DURING CONSTRUCTION IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS. ALL ROADS SHALL BE BARRICADED UNTIL ACCEPTANCE BY CITY. COORDINATE WITH CITY ON REMOVAL OF ANY CONFLICTING SIGNAGE. REMOVE ALL TEMPORARY BARRICADES, SIGNAGE, AND TURNAROUNDS AT THE EXISTING TERMINI OF SE WADDELL WAY, WARRIOR LANE, SE BAYTREE DRIVE, AND SE PEMBROOKE LANE AFTER ALL CONSTRUCTION HAS BEEN ACCEPTED.
8. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR GIVING THE CITY AND OTHER INSPECTION AGENCIES PROPER NOTICE FOR THEIR REQUIRED INSPECTIONS.
9. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL REQUIRED PERMITS FOR PERFORMING THE WORK.
10. ALL PERMITS FROM IDNR, IDOT, COUNTY, CITY, AND/OR OTHER PERMITTING AGENCIES SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR(S) SHALL HAVE PAPER COPY ON SITE BEFORE COMMENCING CONSTRUCTION.
11. ANY DAMAGE DONE TO THE EXISTING AND/OR PROPOSED FENCES, YARDS, OR OTHER IMPROVEMENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
12. THE CONTRACTOR(S) SHALL NOTIFY THE CITY PUBLIC WORKS/ENGINEERING DEPARTMENT 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION, WEEKEND WORK, AND/OR HOLIDAY WORK.
13. THE CONTRACTOR(S) SHALL PROVIDE SUBMITTALS OF CONSTRUCTION MATERIALS PRIOR TO CONSTRUCTION.
14. ALL DISTURBED AREAS SHOULD BE RESTORED BY SEEDING OR SODDING. ANY EXISTING ESTABLISHED LAWNS SHALL BE REPLACED WITH SOD. SOD MAINTENANCE PERIOD SHALL BE WHEN SOD IS DEEMED ESTABLISHED BY THE CITY, BUT SHALL NOT EXTEND BEYOND ONE (1) YEAR.
15. ALL CONSTRUCTION STAKING TO BE DONE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.
16. NPDES NOI GENERAL PERMIT HOLDER IDENTIFIED IN CURRENT SWPPP SHALL PROVIDE WRITTEN VERIFICATION TO THE CITY ON COMPLIANCE WITH THE GENERAL PERMIT #2 TOPSOIL REQUIREMENTS UPON COMPLETION OF THE PROJECT.
17. ANY CHANGES TO THE PROPOSED PLAN SHALL BE SUBMITTED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT IN WRITING PRIOR TO IMPLEMENTATION. CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH CHANGES MADE WITHOUT CITY APPROVAL.
18. SOILS REPORT PREPARED BY TERRACON (DATED FEBRUARY 19, 2004) IS REFERENCED FOR THIS PROJECT. SUBBASE AND SOIL RECOMMENDATIONS SHALL SUPERCEDE ANY CONTRADICTORY NOTES OR DETAILS IN THIS PLAN SET.
    18.1. IN LOCATIONS WHERE ORGANIC SOILS WERE OBSERVED (OR MAY BE ENCOUNTERED), THE CONTRACTOR SHALL PROVIDE AT LEAST 24 INCHES OF CRUSHED STONE BELOW THE PAVEMENT WITH GEOTEXTILE FABRIC ON THE BOTTOM AND SIDES; AND SUBDRAIN ALONG THE CURBS.
19. THE LOCATION AND NUMBER OF CLUSTER MAILBOX UNITS WILL BE COORDINATED AND FINALIZED WITH THE CITY AND USPS. SEE SHEET 87 FOR CLUSTER MAILBOX NOTES AND CITY STANDARD DETAIL.
20. OUTLOTS S, T, U, V, W, X, Y, AND Z ARE AREAS THAT WILL BE PRIMARILY OPEN SPACE; AND OWNED AND MAINTAINED BY THE HOME OWNERS ASSOCIATION.
21. THE CITY SHALL FURNISH AND PLACE ALL NECESSARY STREET SIGNS AT ALL STREET CORNERS.
22. ON SE WESTOWN PARKWAY, ACCESS SHALL BE MAINTAINED TO ALL EXISTING ENTRANCES AT ALL TIMES – SPECIFICALLY RESIDENCES AND THE GUN CLUB TO THE SOUTH.
23. THE POOL HOUSE/CLUBHOUSE, POOL, AND ASSOCIATED PARKING WILL BE SUBMITTED SEPARATELY AND AT A LATER DATE.
24. THE ENTRANCE MONUMENT SIGN FEATURE WILL BE SUBMITTED SEPARATELY AND AT A LATER DATE.
25. SEE ALL OTHER PLAN SHEETS FOR ADDITIONAL NOTES AND INFORMATION.
26. MAINTENANCE/PERFORMANCE BONDS SHALL BE PROVIDED AS REQUIRED BY CITY ORDINANCE OR CODE.
27. ALL TESTING SHALL BE TO CITY OF WAUKEE STANDARDS AND CITY STAFF SHALL PRESENT DURING AND WITNESS ALL TESTING.

PCC PAVING NOTES:

1. ALL SUBGRADE UNDER SLAB TO BE COMPACTED TO AT LEAST 95 PERCENT STANDARD PROCTOR DENSITY FOR A MINIMUM OF 12 INCHES – INSTALLED IN AT LEAST TWO (2) SIX (6") INCH COMPACTED LIFTS. RECOMMENDED MOISTURE CONTENT RANGE 0% TO +4% OF OPTIMUM.
2. MOISTEN SUBGRADE PRIOR TO PLACING CONCRETE.
3. ALL CONCRETE SHALL HAVE MINIMUM 28–DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
4. AGGREGATE SHALL BE CLASS 4.
5. CONCRETE SURFACES SHALL BE BURLAP FINISH. CHECK SURFACE WITH TEMPLATE. NO DEVIATION OVER 1/8" IN TEN (10') FEET IS PERMITTED. ALL CONCRETE SHALL SLOPE TO DRAIN.
6. ALL CONCRETE SHALL BE CURED WITH AN ASTM C309 TYPE 2, WATER BASED WHITE PIGMENTED CURING COMPOUND PER IDOT SEC. 4105.
7. SAW CUT JOINTS AS SOON AS CONCRETE HAS SET ENOUGH TO PREVENT RAVELING AND PRIOR TO ANY CRACKING.
8. SAW CUTS TO BE 1/8" TO 1/4" WIDE; AND DEPTH: LONGITUDINAL T/3, TRANSVERSE T/4.
9. LONGITUDINAL JOINT SPACING SHALL NOT BE GREATER THAN 12 FEET. JOINT LAYOUT SHALL BE PER SUDAS, OR AS APPROVED BY THE ENGINEER AND CITY. ADDITIONALLY, TRANSVERSE SPACING SHALL NOT BE GREATER THAN 15 FEET.
10. BARS AT LONGITUDINAL JOINTS TO BE 5/8" (#5) X 30" DEFORMED AT 30 INCHES O.C. ALL BARS SHALL BE EPOXY COATED.
11. ALL JOINTS SHALL BE FILLED WITH W–R MEADOWS D–164 HOT POUR RUBBER BASE JOINT SEALER OR APPROVED EQUAL.
12. THE CONTRACTOR SHALL BARRICADE SLAB(S) FOR AT LEAST 14 DAYS AFTER PLACING CONCRETE.
13. PAVING THICKNESS SHALL BE PER THE TYPICAL SECTIONS, OR AS NOTED.
    13.1. ALL ROADWAYS SHALL INCLUDE 12 INCHES OF SUBGRADE PREPARATION – INSTALLED IN AT LEAST TWO (2) SIX (6") INCH COMPACTED LIFTS.
    13.2. ANY AND ALL PATCHES SHALL MATCH THE EXISTING PAVEMENT SECTION.
    13.3. ALL STREET PAVEMENTS SHALL BE SEVEN (7") INCHES NON–REINFORCED PCC PAVEMENT, UNLESS OTHERWISE NOTED.
        13.3.1. INSTALL TYPE 'L' JOINTS ALONG CURBING AND AT SHOWN LOCATIONS.
        13.3.2. INSTALL TYPE 'BT', KT', OR 'L' JOINTS ALONG CENTERLINE AND AT SHOWN LOCATIONS DEPENDING ON PAVEMENT THICKNESS AND CONSTRUCTION STAGING.
    13.4. WARRIOR LANE SHALL USE NINE (9") INCHES NON–REINFORCED PCC PAVEMENT WITH 'CD' BASKETS.
    13.5. SE WESTOWN PARKWAY SHALL USE NINE (9") INCHES NON–REINFORCED PCC PAVEMENT WITH 'CD' BASKETS.
    13.6. SIDEWALKS SHALL BE FOUR (4") INCHES PCC AND FIVE (5) FEET WIDE, UNLESS OTHERWISE NOTED (WHERE NOT THROUGH DRIVE). SIDEWALKS SHALL AT LEAST MATCH DEPTH OF DRIVEWAY/ENTRY WHEN SHOWN IN DRIVEWAY/ENTRY.
    13.7. TRAILS SHALL BE PAVED WITH SIX (6") INCHES PCC AND SHALL BE EIGHT (8) FEET WIDE, UNLESS OTHERWISE NOTED.
14. OTHERWISE: ENTRANCES/DRIVES AT SEVEN (7") INCHES NON–REINFORCED PCC PAVEMENT (INCLUDING SIDEWALK IN DRIVE); PARKING SPACES AT FIVE (5") INCHES NON–REINFORCED PCC PAVEMENT; AND RESIDENTIAL LOT DRIVES AT SIX (6") INCHES NON–REINFORCED PCC PAVEMENT.
15. ALL ROADWAY PAVEMENT IN 50 FEET ROW SHALL BE 26 FEET BOC–BOC WITH INTEGRAL SLOPED CURB (AS DETAILED), UNLESS OTHERWISE NOTED.
    15.1. WARRIOR LANE ROADWAY PAVEMENT SHALL MATCH PREVIOUS SECTION FOR ROADWAY TO THE NORTH – DUAL 18.5 FEET BOC–BOC WITH STANDARD CURB AND GUTTER AND 33 FEET LANDSCAPED MEDIAN.
        15.1.1. MODIFIED TO DUAL 26.0 FEET BOC–BOC WITH STANDARD CURB AND GUTTER AND 18 FEET LANDSCAPED MEDIAN BETWEEN SE WESTOWN PARKWAY AND BAILEY CIRCLE/SE WADDELL WAY.
    15.2. SE WESTOWN PARKWAY SHALL BE PARTIALLY PAVED – 15.5 FEET CENTERLINE–TO–BOC WITH STANDARD CURB AND GUTTER TO THE NORTH; AND 12 FEET CENTERLINE–TO EDGE OF PAVEMENT AND 4.5 FOOT AGGREGATE SHOULDER TO THE SOUTH.
16. THE CONTRACTOR(S) SHALL SUBMIT DESIGN MIX AS DESIGNED BY INDEPENDENT TESTING LABORATORY PRIOR TO PLACING ANY CONCRETE.
17. ALL WORK TO COMPLY WITH CURRENT ACI STANDARDS.
18. FULL DEPTH SAW CUT (TO SQUARE ENDS) AND TIE INTO EXISTING PAVEMENT, AS REQUIRED.
19. SAWCUTTING SLURRY SHALL BE CONTAINED TO AVOID DISCHARGE INTO THE STORM SEWER SYSTEM.
20. ALL PAVEMENT REPLACEMENT SHALL COMPLY WITH CITY OF WAUKEE STANDARD SPECIFICATIONS.

DEMOLITION:

1. THE CONTRACTOR(S) WILL BE RESPONSIBLE FOR CLEARING & GRUBBING THE SITE; AND THE REMOVAL & DISPOSAL OF ANY DELETERIOUS AND EXCESS MATERIALS LEGALLY FROM THE SITE.
2. ALL EXISTING BUILDINGS, FENCES, AND RELATED FEATURES WITHIN THE LIMITS OF THE BOUNDARY FOR PLAT 10 SHALL BE REMOVED AS PART OF THE PLAT IMPROVEMENTS.
3. ALL MATERIALS SHALL BE LEGALLY DISPOSED OF AT A CONTRACTOR(S) SUPPLIED DISPOSAL SITE THAT IS APPROVED TO ACCEPT REMOVED MATERIALS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES, CHARGES, TESTING, AND TRANSPORTATION ASSOCIATED WITH THE REMOVED MATERIALS. ALL LOADS SHALL BE COVERED.
5. ANY AND ALL EXISTING SEPTIC SYSTEMS SHALL BE REMOVED (NOT ABANDONED) COMPLETELY AND SHALL COMPLY WITH DALLAS COUNTY ENVIRONMENTAL HEALTH DEPARTMENT REGULATIONS.
6. ANY AND ALL EXISTING WELLS SHALL BE REMOVED AND PLUGGED TO A DEPTH AT LEAST 20 FEET BELOW LOWEST LOT ELEVATION AND SHALL COMPLY WITH DALLAS COUNTY ENVIRONMENTAL HEALTH DEPARTMENT REGULATIONS.
7. ONLY FULL DEPTH SAW CUTS TO NEAREST JOINT LINE(S) SHALL BE USED PRIOR TO REMOVAL OF PAVEMENT, DRIVEWAYS, AND SIDEWALKS.
8. THE CONTRACTOR IS TO IDENTIFY AND COORDINATE REMOVAL AND/OR TRIMMING OF TREES ALONG THE PROJECT BOUNDARY WITH CITY STAFF. THE CONTRACTOR SHOULD ALSO IDENTIFY NOTIFICATION AND COORDINATION OF ANY FENCE REMOVALS WITH THE CITY AND AFFECTED LANDOWNERS.
9. SAWCUTTING SLURRY SHALL BE CONTAINED TO AVOID DISCHARGE INTO THE STORM SEWER SYSTEM.

H.C. STALLS, RAMPS, AND SIDEWALK NOTES:

1. ALL INTERSECTION SIDEWALK RAMPS AND RELATED TURNING SPACE/CONNECTIONS SHALL BE INSTALLED AS PART OF THE PLAT/ROADWAY IMPROVEMENTS; AND AT LOCATIONS AND/OR LIMITS AS NOTED.
2. GENERAL SIDEWALK CONSTRUCTION IS THE RESPONSIBILITY OF INDIVIDUAL LOT OWNERS. SEE 'PCC PAVING NOTES' FOR DEPTHS.
3. ANY SIDEWALKS AND/OR TRAIL FRONTING OPEN AND/OR PUBLIC SPACES WHICH WILL NOT BE DEVELOPED INTO BUILDABLE LOTS IN THE FUTURE WILL HAVE SIDEWALK AND/OR TRAIL INSTALLED BY THE DEVELOPER WITH THE PUBLIC IMPROVEMENTS. SEE 'PCC PAVING NOTES' FOR DEPTHS.
4. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR FOLLOWING THE PROPOSED SPOT ELEVATIONS. SPOT ELEVATIONS GOVERN OVER CONTOURS AND NOTED SLOPES.
5. ALL PEDESTRIAN FACILITIES – INCLUDING, BUT NOT LIMITED TO: SIDEWALK SLOPES, DROP CURBS, GRADING, STRIPING, SIGNAGE, AND RAMP DETAILS – SHALL BE CONSTRUCTED TO MEET THE CURRENT REQUIREMENTS/STANDARDS OF SUDAS, MUTCD, DOJ, ADAAG, AND PROWAG.
6. THE CONTRACTOR(S) SHALL VERIFY WITH THE ENGINEER THAT THE RAMP, SIDEWALK, AND PARKING AREAS ARE CONSTRUCTED PROPERLY TO MEET STANDARDS.
7. SHOULD DISCREPANCIES OCCUR ON THE PLAN OR WHAT IS REQUIRED BY THE INSPECTOR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
8. PERFORMING THE WORK THE WAY THE CONTRACTOR HAS FOR THE LAST XX YEARS ON OTHER APPROVED PROJECTS WILL NOT BE AN EXCUSE FOR NON–COMPLIANCE WITH THESE REQUIREMENTS.
9. THE TRAIL/PATH INSTALLATION IS REQUIRED THROUGH THE ADJOINING OPEN SPACE AS IDENTIFIED BY THE PLANS, AND SIDEWALK SHALL BE INSTALLED ADJACENT TO OUTLOTS.

UTILITIES, GENERAL:

1. WORK SHALL INCLUDE CONNECTION TO EXISTING PUBLIC UTILITIES AND ANY AND ALL FITTINGS, CLEANOUTS, AND APPURTENANCES REQUIRED BY CODES.
2. ALL UTILITY STATIONS IN PLAN VIEW ARE TIED TO CENTERLINE STREET STATIONS, UNLESS OTHERWISE NOTED.
3. STORM AND SANITARY SEWER LENGTHS AND LINEWORK ARE SHOWN FROM THE SUDAS REFERENCE POINT LOCATIONS. CONTRACTOR SHALL MODIFY THE PIPE LENGTHS DUE TO OPEN AREA INSIDE OF STRUCTURE AND CONNECTION LOCATIONS.
4. ALL TRENCHES SHALL BE COMPACTED TO AT LEAST 95 PERCENT STANDARD PROCTOR.
5. TRACER WIRE SHALL BE ADDED TO ALL NON–METALLIC WATERMAIN. A GROUNDING ROD SHALL BE PLACED AS PER SUDAS.
6. ALL TERMINI OF MAINS AND SERVICES SHOULD BE MARKED WITH A PAINTED STEEL POST. (PER CITY OF WAUKEE STANDARDS WITH WATER = BLUE, STORM = GREEN, SANITARY = RED). POSTS SHOULD BE AT LEAST SIX (6) FOOT STEEL IN LENGTH WITH FOUR (4) FEET EXPOSED ABOVE GROUND.
7. MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET BETWEEN SANITARY AND STORM SEWERS WITH WATERMAINS.
8. MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES BETWEEN SANITARY SEWER AND WATERMAIN, AND STORM SEWER AND WATERMAIN. O–RING GASKET JOINTS ARE TO BE INSTALLED IN SITUATIONS LESS THAN 18 INCHES OR ANY TIME SANITARY SEWER OR STORM SEWER CROSSES OVER ANY WATERMAIN.
9. FULL DEPTH COMPACTION REQUIRED AT ALL STREET CROSSINGS. NOTE THAT DENSITY TEST REPORTS FROM TESTING LAB WILL BE PROVIDED BY THE CONTRACTOR(S).
10. THE UTILITY CONTRACTOR(S) SHALL PROVIDE TO THE DEVELOPER THE MEASUREMENTS OF ALL SANITARY AND STORM SEWER, WATER, AND FOOTING DRAIN SERVICES FROM LOT CORNERS.
11. ALL UTILITY CONTRACTOR(S) AND/OR OWNERS SHALL BE RESPONSIBLE TO PROVIDE THE CITY WITH "AS–BUILT" DRAWINGS OF ALL IMPROVEMENTS.
12. ALL SERVICES LINES TO THE BUILDING AND ALL UTILITY LINES IN THE ADJOINING RIGHT–OF–WAY SHALL BE LOCATED UNDERGROUND. THE UTILITY CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ENSURING REQUIRED SEPARATIONS OF SERVICES TO MAINS; AVOID CONFLICTS; AND/OR ENSURE POSITIVE DRAINAGE (GRAVITY FLOW SERVICES) WHEN CROSSING OTHER ITEMS.
13. ALL CASTING(S) ARE PER THE RESPECTIVE SUDAS DETAIL, UNLESS OTHERWISE NOTED.
14. THE CONTRACTOR(S) SHALL COORDINATE ALL UTILITY TIE–INS WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
15. ALL NOTED UTILITIES SHALL BE TESTED TO CITY OF WAUKEE STANDARDS AND THE CITY SHALL WITNESS ALL TESTING.
16. PER CITY OF WAUKEE REQUIREMENTS, ALL MANHOLES OUTSIDE OF THE ROADWAY PAVEMENT AND WITHIN ROW SHALL HAVE A MINIMUM OF ONE (1) FOUR (4") INCH ADJUSTING RING TO ALLOW FOR FUTURE ADJUSTMENT SHOULD THE MANHOLE BE LOCATED IN A DRIVEWAY.
17. SEE SHEET 4 FOR MIDAMERICAN ENERGY ELECTRICAL CONDUIT NOTES.
18. SEE OTHER PLAN SHEETS; RELATED IDNR AND/OR CITY PERMIT APPLICATION AND PERMIT; SUDAS DESIGN MANUAL AND SPECIFICATIONS; RELATED SPECIFICATIONS ON FILE WITH THE IDNR; AND CITY STANDARD SPECIFICATIONS FOR WORK REQUIREMENTS; ANY ADDITIONAL REQUIREMENTS; AND ANY COORDINATION ITEMS.

WATERMAINS:

1. THE CONTRACTOR(S) SHALL ARRANGE AND PAY FOR THE REQUIRED TAPS TO THE PUBLIC WATERMAIN; AND SHALL SCHEDULE WITH THE CITY TO OBSERVE TAPPING AND TESTING.
2. ALL PROPOSED WATERMAINS SHALL BE EIGHT (8") INCHES, UNLESS OTHERWISE NOTED.
3. ALL WATERMAINS SHALL HAVE A MINIMUM OF FIVE AND ONE–HALF (5.5) FEET COVER OVER THE TOP OF THE PIPE.
4. ALL WATERMAINS SHALL BE CONSTRUCTED AND TESTED AS SPECIFIED ON IDNR PERMIT APPLICATION.
5. ALL PROPOSED HYDRANTS SHALL HAVE STORZ FITTINGS.
6. ANY RELOCATED HYDRANTS SHALL BE RETROFITTED WITH STORZ FITTINGS.
7. THE CONTRACTOR(S) SHALL VERIFY BEFORE PLACING FIRE HYDRANT'S THAT NO PART OF THE FIRE HYDRANT SHALL BE CLOSER THAN 24 INCHES TO A PROPOSED SIDEWALK OR TRAIL (OR 12 INCHES WITH SUDAS WM–201 ALTERNATE PLAN). FIRE HYDRANTS SHALL ALSO BE PLACED ON THE EXTENSION OF LOT LINES AS SHOWN ON THE PLANS. ADDITIONAL STAKES FOR LOT CORNERS, TRAILS AND SIDEWALKS SHALL BE SET AS REQUESTED.
8. THE CONTRACTOR(S) SHALL PROVIDE AND INSTALL NECESSARY CONNECTIONS, FITTINGS, BENDS, TEES, BLOCKING, SUPPORTS, ETC. NOTED PIPE LENGTHS DO NOT INCLUDE VERTICAL AND/OR FITTING ADJUSTMENTS.
9. SITE WATERMAIN PIPING SHALL BE PVC, C900 DR14, UNLESS OTHERWISE LABELED.
10. SITE WATER SERVICE PIPING SHALL BE TYPE K COPPER, UNLESS OTHERWISE LABELED.
11. ALL VALVES SHALL BE LOCATED OUTSIDE OF STREET PAVEMENT AND SIDEWALK RAMPS.
12. ALL SHOWN TEES, CROSSES, VALVES, FIRE HYDRANTS, ETC. STATIONING AND OFFSETS ARE LOCATIONS BASED ON AN ENLARGED CAD SYMBOL TO SEEN ON THESE CONSTRUCTION PLANS. THE CONTRACTOR(S) MAY SHIFT THE LOCATION(S) IN RELATION THE THE SHOWN ROADWAY CENTERLINE OF THESE TEES, CROSSES, VALVES, FIRE HYDRANTS, ETC. – PROVIDE REVISED STATIONING ON AS–BUILT DRAWINGS. NOTED OFFSETS MAY ONLY BE ADJUSTED WITH THE APPROVAL OF THE CITY.

SANITARY SEWERS:

1. THE SANITARY SEWER PIPE BEDDING SHALL BE GRANULAR ENCASEMENT.
2. ALL PROPOSED SANITARY SEWER LINES SHALL BE EITHER EIGHT (8") INCHES OR TEN (10") INCHES, UNLESS OTHERWISE NOTED.
3. ALL PIPE SHALL BE PVC, TRUSS.
4. ALL SANITARY SEWER SHALL BE CLEANED AND TELEVISED WITH COPIES OF THE VIDEO INSPECTION PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. IN ADDITION, ALL PROPOSED SANITARY MANHOLES SHALL BE VACUUM TESTED.
5. ALL SANITARY SEWER SHALL BE CONSTRUCTED AND TESTED AS SPECIFIED ON IDNR PERMIT APPLICATION; AND IN THE CITY OF WAUKEE STANDARD SPECIFICATIONS.
6. THE ADJUSTMENT OF EXISTING MANHOLE RIM SHALL INCLUDE NEW BARREL SECTION(S), NEW RISER(S), AND VACUUM TESTING.
7. ALL CONNECTIONS TO EXISTING SANITARY MANHOLES SHALL BE CORE DRILLED AND USE A LINK SEAL.

STORM SEWER:

1. THE CONTRACTOR(S) SHALL PLACE SILT FENCE AROUND ALL STORM SEWER INLET LOCATIONS, STEEP SLOPES, OR AS DIRECTED BY THE CITY. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE SET UP PRIOR TO CONSTRUCTION.
2. ANY STORM PIPE LOCATED UNDER PAVEMENT WITH LESS THAN TWO (2) FEET OF COVER SHALL PROVIDE 24"X24" REINFORCEMENT ABOVE AND USE CLASS V RCP.
3. ALL INTAKE CASTINGS SHALL BE BICYCLE SAFE.
4. ALL PROPOSED STORM SEWER LINES SHALL BE AS NOTED FOR SIZE.
5. RCP STORM SEWER TO BE 2000D (MINIMUM), USE STRENGTH REQUIRED BY SUDAS.
4. ALL STORM SEWER AND CULVERTS OVER 15 INCHES IN SIZE SHALL BE RCP. ALL OTHERS SHALL BE PVC, SDR35 (MINIMUM).
5. ALL STORM SEWERS ARE TO BE CLEANED AND TELEVISED WITH COPIES OF THE VIDEO INSPECTION PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
6. ANY FIELD TILE DISCOVERED OR DAMAGED DURING CONSTRUCTION SHALL BE TIED INTO THE STORM SEWER SYSTEM OR REPAIRED/REPLACED; WITH THE ENGINEER NOTIFIED; AND THE LOCATION SHALL BE NOTED ON THE AS–BUILTS.
7. THE LAST THREE (3) PIPE SECTIONS AND THE FLARED END SECTION ON ALL CULVERTS SHALL BE TIED. ALL STORM SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC.
8. THE CONTRACTOR(S) WILL LAY SEWER PIPE AS SHOWN WITHIN THE PLAN SET.
9. ALL PIPE SLOPES EQUAL TO OR GREATER THAN TEN (10%) PERCENT SHALL REQUIRE RESTRAINED JOINTS.
10. ALL STORM SEWER RUNS HAVE BEEN DESIGNED TO CARRY THE 100–YEAR STORM EVENT HGL (HYDRAULIC GRADE LINE) BELOW THE ADJOINING STRUCTURE RIMS.
11. ALL RIPRAP SHALL BE PLACED OVER ENGINEERING FABRIC.

CITY OF WAUKEE UTILITY GENERAL NOTES:

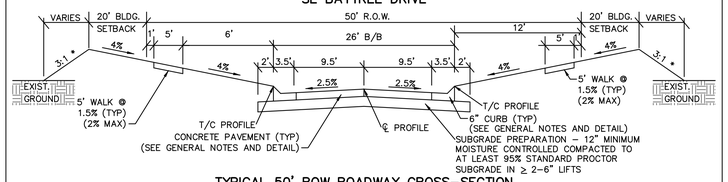
1. ROW WIDTH VARIES.
2. WHEN UTILITIES ARE IN THE ROW, THE FOLLOWING SHOULD BE ADHERED TO, UNLESS OTHERWISE PROVIDED/APPROVED:
    2.1. ALL UTILITIES SHOULD BE BURIED. WHEN OVERHEAD UTILITIES ARE ALLOWED TO CROSS THE ROADWAY, THEN MINIMUM VERTICAL CLEARANCES ARE 20 FEET FOR THE MAIN CABLE, AND 18 FEET FOR SERVICES.
    2.2. TELEPHONE, CABLE TV, AND WATER: INSTALL ON THE EAST AND SOUTH SIDE OF THE ROAD, UNLESS OTHERWISE NOTED/SHOWN.
    2.3. GAS AND ELECTRIC: INSTALL ON THE WEST AND NORTH SIDE OF THE ROAD, UNLESS OTHERWISE NOTED/SHOWN.
        2.3.1. STREET LIGHTING: INSTALL FOOTINGS/FOUNDATIONS CENTERED THREE AND ONE–HALF (3.5) FEET FROM THE BACK OF CURB, UNLESS OTHERWISE NOTED/SHOWN. WITH RAISED MEDIANS, THE FOOTINGS/FOUNDATIONS ARE CENTERED ON ROADWAY CENTERLINE.
    2.4. SANITARY SEWER: INSTALL ON THE WEST AND NORTH SIDE OF THE ROAD, UNLESS OTHERWISE NOTED/SHOWN.
    2.5. STORM SEWERS: THE NORMAL LOCATION FOR A STORM SEWER IS ONE AND ONE–HALF (1.5) FEET FROM THE BACK OF CURB, UNLESS OTHERWISE NOTED/SHOWN. WHEN COMBINATION MANHOLES AND INTAKES ARE USED, THE LOCATION INCREASES TO FIVE (5) FEET.
    2.6. WATERMAINS, VALVES, AND HYDRANTS:
        2.6.1. THE NORMAL WATERMAIN LOCATION IS FOUR (4) FEET BEHIND THE BACK OF CURB. IN AREAS OF COMBINATION MANHOLES AND INTAKES, THIS DISTANCE IS INCREASED TO A MINIMUM OF SIX (6) FEET.
        2.6.2. FOR LOCAL STREETS AND MINOR COLLECTORS WITH LIMITED ROW, USE A 90 DEGREES ANCHORING ELBOW BETWEEN THE HYDRANT TEE AND THE VALVE. FOR MAINTENANCE PURPOSE, THE MINIMUM DISTANCE BETWEEN THE CENTERLINE OF THE VALVE BOX AND THE FACE OF THE HYDRANT IS 18 INCHES.
3. UTILITY EASEMENT: TELEPHONE, FIBER OPTIC, CABLE TV, ELECTRIC, AND GAS LINES SHOULD BE LOCATED IN FRONT OR REAR YARD EASEMENTS. NORMALLY TELEPHONE AND CABLE TV LINES ARE PLACED IN REAR YARD EASEMENTS AND FIBER OPTIC, ELECTRIC, AND GAS LINES IN FRONT YARD EASEMENTS. UPON APPROVAL OF THE JURISDICTION, THESE UTILITIES MAY BE PLACED IN THE ROW AT THE ALTERNATIVE LOCATION WHEN EASEMENTS DO NOT EXIST.
4. DEPTH OF BURY:
    4.1. CABLE TV (CATV): THREE (3) FEET MINIMUM.
    4.2. ELECTRIC (ELEC.): THE RECOMMENDED DEPTH OF BURY FOR ELECTRIC CABLE IS 4 FEET. THE MINIMUM DEPTH OF BURY FOR ELECTRIC LINES AS PER THE NATIONAL ELECTRIC SAFETY CODE IS:
        4.1.1. 8KV TO 5KV CABLE – 30 INCHES MINIMUM.
        4.1.2. UP TO 600–VOLT CABLE – 24 INCHES MINIMUM.
        4.1.3. STREET LIGHT CABLE – 18 INCHES MINIMUM.
    4.2. GAS: THREE (3) FEET MINIMUM.
    4.3. WATER: VARIES
    4.4. SANITARY SEWER: VARIES
    4.5. STORM SEWER: VARIES. APPROXIMATELY FOUR (4) FEET.
    4.6. TELEPHONE (TELE.)/FIBER OPTIC (F.O.): THREE (3) FEET MINIMUM.

ESTIMATED QUANTITIES

THE BELOW ARE NOT BID QUANTITIES. ALL QUANTITIES SHALL BE VERIFIED BY THE RESPECTIVE CONTRACTOR(S).

1. WATER SERVICE	140 EACH
2. WATERMAIN, 12"	2,625 LIN. FT.
3. WATER VALVE, 12"	3 EACH
4. WATERMAIN, 8"	7,753 LIN. FT.
5. WATER VALVE, 8"	23 EACH
6. WATER LINE/SERVICE, 4"	903 LIN. FT.
7. WATER VALVE, 4"	4 EACH
8. FIRE HYDRANT ASSEMBLY	36 EACH
9. CONNECTION TO EXISTING WATERMAIN/LINE	8 EACH
10. SANITARY SERVICE	140 EACH
11. SANITARY, 8"	4,226 LIN. FT.
12. SANITARY, 10"	3,902 LIN. FT.
13. SANITARY MANHOLE, SW–301, 48" DIA.	38 EACH
14. SANITARY MANHOLE, DROP CONNECTION	3 EACH
15. CONNECTION TO EXISTING SANITARY	1 EACH
16. SANITARY STRUCTURE ADJUSTMENT	7 EACH
17. STORM (SUMP) SERVICE	26 EACH
18. STORM, 15"	3,271 LIN. FT.
19. STORM, 15" SLOTTED CMP	260 LIN. FT.
20. STORM, 18"	522 LIN. FT.
21. STORM, 24"	1,776 LIN. FT.
22. STORM, 30"	1,193 LIN. FT.
23. STORM, 36"	783 LIN. FT.
24. STORM, 42"	150 LIN. FT.
25. STORM, 42" CMP CULVERT	40 LIN. FT.
26. STORM, 60"	541 LIN. FT.
27. STORM, 9' ARCHED CMP	36 LIN. FT
28. STORM, 15", ELBOW	6 EACH
29. STORM, 18", ELBOW	1 EACH
30. STORM FES, 15" (W/ CLAY WATERSTOP)	9 EACH
31. STORM FES, 18" (W/ CLAY WATERSTOP)	3 EACH
32. STORM FES, 24" (W/ CLAY WATERSTOP)	5 EACH
33. STORM FES, 30" (W/ CLAY WATERSTOP)	4 EACH
34. STORM FES, 36" (W/ CLAY WATERSTOP)	2 EACH
33. STORM FES, 36" CMP	2 EACH
34. STORM FES, 42" (W/ CLAY WATERSTOP)	2 EACH
35. STORM FES, 42" CMP	2 EACH
36. STORM FES, 60

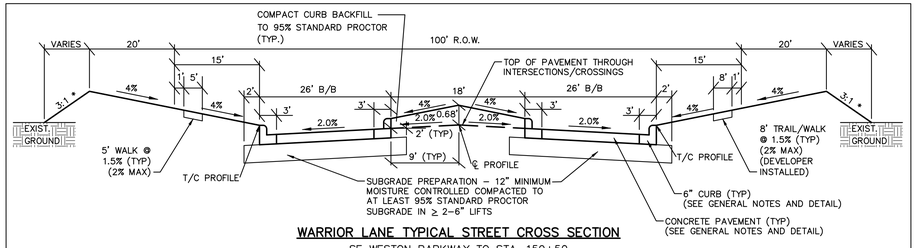
BAILEY CIRCLE
SE WADDELL WAY
SE PEMBROOKE DRIVE
SE BAYTREE DRIVE



TYPICAL 50' ROW ROADWAY CROSS-SECTION
NOT TO SCALE

* 3:1 OR FLATTER; WITH MINIMUM TWO (2%) PERCENT MAINTAINED ACROSS LOTS.

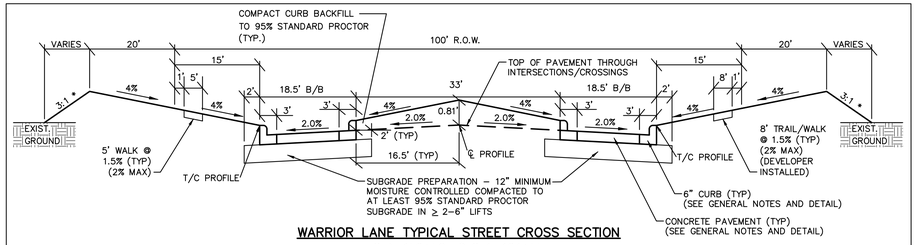
NOTES:
1. CENTERLINE 0.1875' BELOW TOP OF CURB (6").
2. TOP OF CURB ELEVATIONS SHOWN ON PROFILE VIEW.



WARRIOR LANE TYPICAL STREET CROSS SECTION
SE WESTON PARKWAY TO STA. 159+50
NOT TO SCALE

* 3:1 OR FLATTER; WITH MINIMUM TWO (2%) PERCENT MAINTAINED ACROSS LOTS.

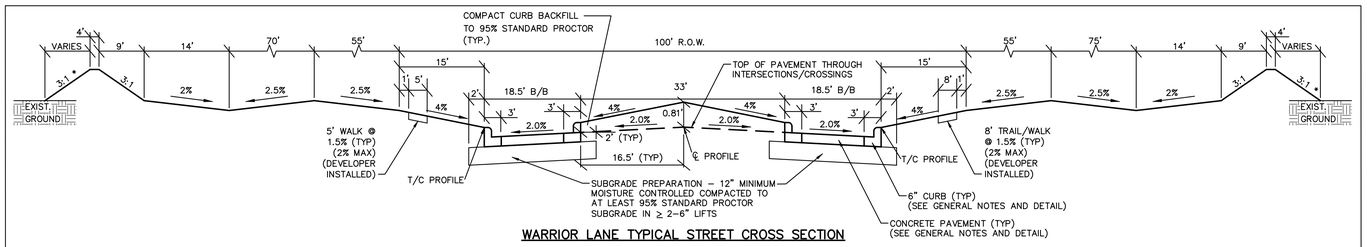
NOTES:
1. CENTERLINE 0.18' ABOVE TOP OF CURB (6").
2. TOP OF CURB ELEVATIONS SHOWN ON PROFILE VIEW.
3. 30 FOOT FRONT YARD BUILDING SETBACK.



WARRIOR LANE TYPICAL STREET CROSS SECTION
STA. 159+50 TO STA. 164+55
NOT TO SCALE

* 3:1 OR FLATTER; WITH MINIMUM TWO (2%) PERCENT MAINTAINED ACROSS LOTS.

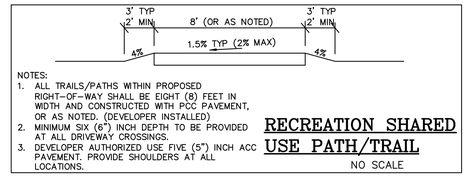
NOTES:
1. CENTERLINE 0.18' ABOVE TOP OF CURB (6").
2. TOP OF CURB ELEVATIONS SHOWN ON PROFILE VIEW.
3. 30 FOOT FRONT YARD BUILDING SETBACK.



WARRIOR LANE TYPICAL STREET CROSS SECTION
STA. 164+55 TO EXISTING PAVEMENT
NOT TO SCALE

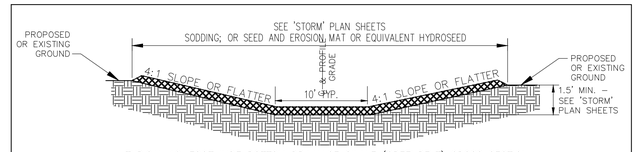
* 3:1 OR FLATTER; WITH MINIMUM TWO (2%) PERCENT MAINTAINED ACROSS LOTS.

NOTES:
1. CENTERLINE 0.18' ABOVE TOP OF CURB (6").
2. TOP OF CURB ELEVATIONS SHOWN ON PROFILE VIEW.
3. 30 FOOT FRONT YARD BUILDING SETBACK.

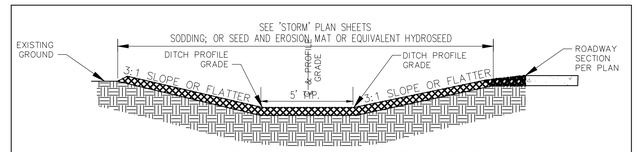


NOTES:
1. ALL TRAILS/PATHS WITHIN PROPOSED RIGHT-OF-WAY SHALL BE EIGHT (8) FEET IN WIDTH AND CONSTRUCTED WITH PCC PAVEMENT, OR AS NOTED. (DEVELOPER INSTALLED)
2. MINIMUM SIX (6") INCH DEPTH TO BE PROVIDED AT ALL DRIVEWAY CROSSINGS.
3. DEVELOPER AUTHORIZED USE FIVE (5") INCH ACC PAVEMENT. PROVIDE SHOULDERS AT ALL LOCATIONS.

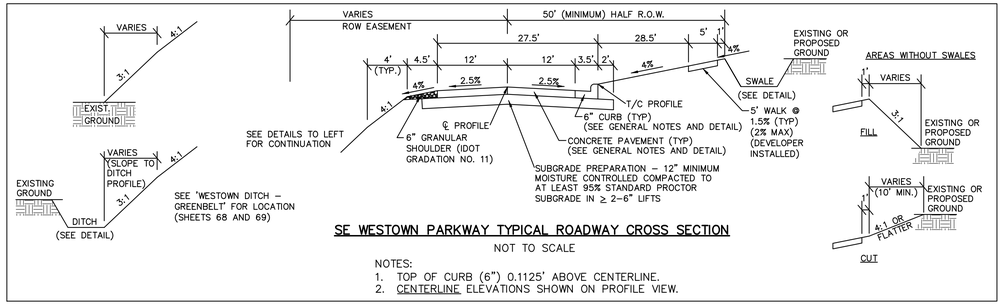
RECREATION SHARED USE PATH/TRAIL
NO SCALE



TYPICAL 10-FOOT WIDE BOTTOM DRAINAGE SWALE (GREENBELT) CROSS SECTION
N.T.S.



TYPICAL 5-FOOT WIDE BOTTOM DRAINAGE DITCH CROSS SECTION – SE WESTOWN PARKWAY
N.T.S.



SE WESTOWN PARKWAY TYPICAL ROADWAY CROSS SECTION
NOT TO SCALE

NOTES:
1. TOP OF CURB (6") 0.1125' ABOVE CENTERLINE.
2. CENTERLINE ELEVATIONS SHOWN ON PROFILE VIEW.

RECORD DRAWING 3

PLAT 10 - TYPICAL SECTIONS

GLYNN VILLAGE PLAT 10

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: AS NOTED
DWG: 15-013-PRJ.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 3 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PRJ.dwg, 10/19/2017 10:35:20 AM, PJV

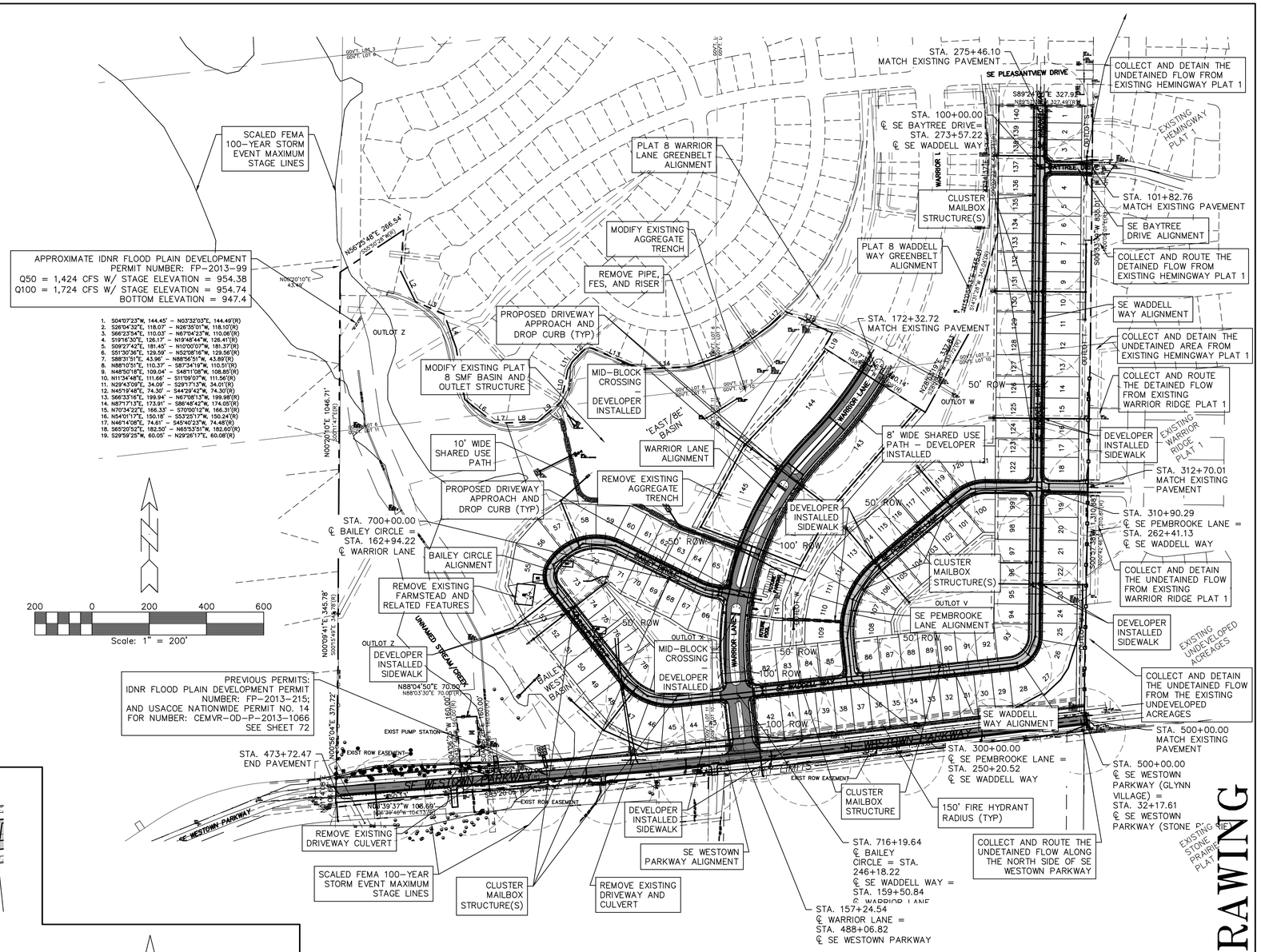
NOTE:

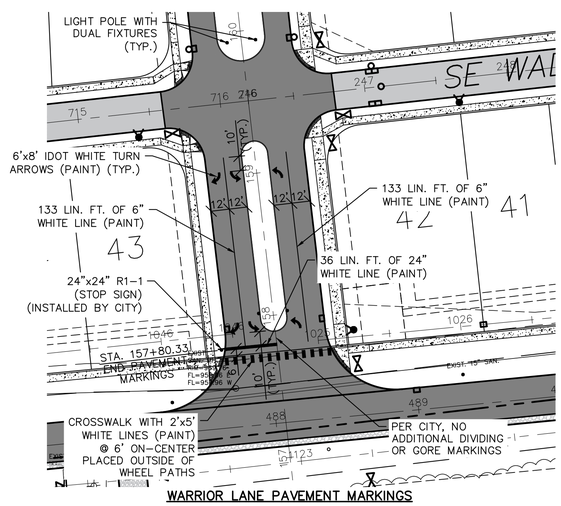
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR(S) TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

LOWEST LOT ELEVATION TABLE

LOT NO.	ELEVATION	LOT NO.	ELEVATION	LOT NO.	ELEVATION
1	1010.89	51	950.10	101	993.81
2	1010.21	52	950.10	102	991.19
3	1008.67	53	950.28	103	989.15
4	1006.36	54	952.00	104	987.91
5	1005.48	55	956.00	105	987.23
6	1003.94	56	961.00	106	987.23
7	1002.52	57	965.00	107	988.11
8	1001.61	58	964.33	108	989.09
9	1001.10	59	964.94	109	978.00
10	1001.10	60	965.13	110	977.01
11	1001.63	61	964.50	111	977.01
12	1002.70	62	967.00	112	977.99
13	1003.96	63	970.00	113	979.25
14	1005.23	64	972.00	114	980.50
15	1005.29	65	976.00	115	980.50
16	1005.29	66	978.00	116	981.50
17	1008.89	67	977.65	117	982.86
18	1009.99	68	977.00	118	983.10
19	1010.95	69	976.92	119	985.58
20	1010.34	70	975.87	120	987.00
21	1009.10	71	973.62	121	996.00
22	1008.32	72	971.80	122	1002.03
23	1008.32	73	966.95	123	996.98
24	1009.07	74	966.95	124	995.13
25	1010.38	75	967.50	125	994.99
26	1010.38	76	968.43	126	994.99
27	1012.00	77	969.44	127	996.00
28	1013.65	78	970.45	128	996.00
29	1013.00	79	972.72	129	995.50
30	1010.00	80	974.46	130	995.07
31	1006.90	81	975.55	131	995.07
32	1003.81	82	976.75	132	998.60
33	1000.79	83	977.25	133	999.00
34	997.61	84	977.25	134	999.28
35	994.50	85	983.50	135	1000.00
36	991.62	86	990.04	136	1000.05
37	988.51	87	990.00	137	1000.11
38	985.70	88	990.00	138	1000.55
39	982.69	89	993.00	139	1001.00
40	979.92	90	995.50	140	1003.54
41	977.00	91	998.00	141	**
42	971.00	92	999.00	142	**
43	966.24	93	1000.00	143	**
44	963.55	94	999.00	144	**
45	960.20	95	999.00	145	**
46	959.50	96	997.00		
47	956.54	97	997.00		
48	952.00	98	1000.70		
49	950.10	99	1003.77		
50	950.10	100	995.67		

** ELEVATIONS SHALL BE DETERMINED WHEN PLANS SUBMITTED SEPARATELY AND LATER.





WARRIOR LANE PAVEMENT MARKINGS

PAVEMENT MARKING NOTES:

1. SHOWN PAVEMENT MARKINGS ARE ONLY ONES TO BE INSTALLED ON THE PROJECT.
2. CITY OF WAUKEE SHALL INSTALL ANY AND ALL OTHER PAVEMENT MARKINGS AND SIGNAGE WHEN STOP/YIELD CONTROL SIGNS ARE INSTALLED BY THE CITY.

MIDAMERICAN ELECTRICAL CONDUIT NOTES:

1. SEE 'GENERAL NOTES' ON SHEET 2 FOR ADDITIONAL INFORMATION.
2. COORDINATE CONSTRUCTION ACTIVITIES WITH MIDAMERICAN ENERGY.
   - 2.1. INSTALL SIDEWALK AND/OR TRAIL, AND MAILBOX CLUSTERS AFTER UTILITY INSTALLATION(S); OR PROVIDE ADDITIONAL CONDUIT.
   - 2.2. ROADWAY PAVEMENT TYPICALLY INSTALLED PRIOR TO UTILITY; OR PROVIDE ADDITIONAL CONDUIT.
3. AS NECESSARY, CONTRACTOR(S) SHALL COORDINATE TO PROVIDE AN UNOBSTRUCTED CLEAR PATH FOR THE ELECTRICAL TRENCHER, OR CLEAR PAD FOR ELECTRICAL BORER, AND RELATED EQUIPMENT.
4. DEVELOPER AND/OR CONTRACTOR(S) IS RESPONSIBLE FOR THE NEEDS ASSESSMENT AND IMPLEMENTATION OF THE SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) AND OIL CONTAINMENT PLANS. REFERENCE APPENDIX B-1, PAGE 89 OF THE 2014 ELECTRIC SERVICE MANUAL.
5. ALL CONDUIT SHALL BE SCHEDULE 40 RIGID PVC PER NEMA TC-2; OR SCHEDULE 40 HDPE COILABLE CONDUIT.
   - 5.1. SIZE: FOUR (4") INCH DIAMETER, UNLESS OTHERWISE NOTED.
   - 5.2. APPROVED COLOR: GRAY OR BLACK, WITH RED STRIPE.
   - 5.3. INSTALL A SYNTHETIC, ONE-QUARTER (1/4") INCH DIAMETER PULL LINE OF MINIMUM 200 POUND TEST WITHIN EACH CONDUIT. PROVIDE A MINIMUM OF FIVE (5') FEET EXTRA PULL LINE PER CONDUIT END.
6. ALL CONDUIT SHALL EXTEND AT LEAST:
   - 6.1. TWO (2') FEET BEYOND THE EXTERIOR PIPE DIAMETER OF SANITARY SEWER, STORM SEWER, WATERMAIN, ETC.
   - 6.2. SIX (6") INCHES (12 INCHES PREFERRED) BEYOND THE GREATER OF ANY PAVEMENT EDGE OR ROW LINE.
7. ALL CONDUIT ENDS SHALL BE CAPPED; AND MARKED WITH A PAINTED STEEL POST (ELECTRICAL=RED). ALL POSTS SHOULD BE AT LEAST SIX (6) FOOT IN LENGTH WITH FOUR (4) FEET EXPOSED ABOVE GROUND. AS NECESSARY, PLACE A MINIMUM EIGHT (8') FOOT LONG 2X4 BOARD, IN ADDITION TO THE STEEL POST FOR BURY DEPTH.
8. ALL PRIMARY CONDUIT SHALL HAVE A MINIMUM COVER DEPTH OF 42 INCHES, AND A MAXIMUM DEPTH OF 48 INCHES. MAINTAIN NECESSARY SEPARATIONS.
9. ALL SECONDARY CONDUIT SHALL HAVE A MINIMUM COVER DEPTH OF 30 INCHES AND A MAXIMUM DEPTH OF 36 INCHES. MAINTAIN NECESSARY SEPARATIONS.
10. NO CONDUIT SHALL HAVE MORE THAN 270° (DEGREES) OF BENDS IN A PULL.
11. ALL SWEEPS FOUR (4") INCHES OR LESS IN DIAMETER, INCLUDING RISER POLE ELBOWS, ARE TO BE FIBERGLASS, STANDARD WALL PER NEMA TC14A, WITH FACTORY ASSEMBLED PLASTIC COUPLINGS ON EACH END TO MATE WITH DB SCHEDULE 40, OR HDPE SCHEDULE 40 COILABLE CONDUIT.
12. ALL SWEEPS GREATER THAN FOUR (4") INCHES IN DIAMETER, INCLUDING RISER POLE ELBOWS, ARE TO BE METAL. ALL EXPOSED METAL SWEEP ENDS WILL REQUIRE GROUNDING BUSHINGS.

RECORD DRAWING

GLYNN VILLAGE PLAT 10 - PROJECT MAP

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: AS NOTED | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-PRJ.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 4 OF 100 | FILE NO.: 15-013

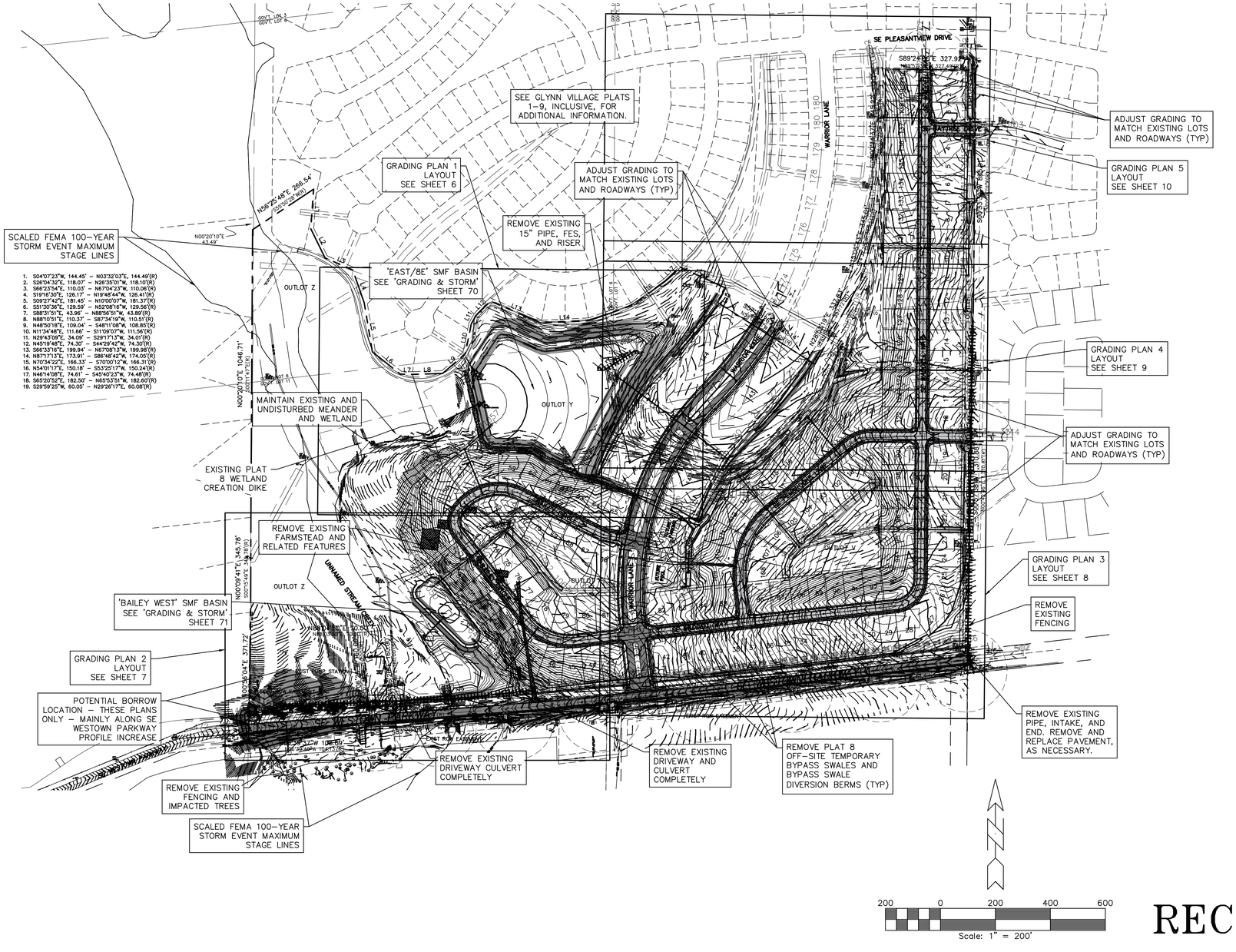
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PRJ.dwg, 10/19/2017 10:35:28 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



GRADING NOTES (ALL SHEETS):

1. CITY OF WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IF DISCREPANCIES WITH NOTES.
2. THE CONTRACTOR SHALL CARRY OUT ALL OF THE TERMS AND CONDITIONS OF NPDES GENERAL PERMIT NO. 2; AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) WHICH IS PART OF THESE CONTRACT DOCUMENTS.
3. REMOVE AN ADEQUATE AMOUNT OF TOPSOIL FROM THE UPPER 12 INCHES OF THE EXISTING ONSITE ORGANIC MATERIAL TO ALLOW FOR A FINISHED GRADE OF A MINIMUM TOPSOIL DEPTH OF SIX (6") INCHES THROUGHOUT.
4. PROOF ROLL THE EXPOSED SUBGRADE AND REPLACE WITH COMPACTED FILL TO BOTTOM OF PAVEMENT, CONCRETE DRIVES, CURBS, WALKS, AND BUILDING FLOOR ELEVATIONS.
5. NATIVE OR EXISTING ON–SITE SOILS MAY BE REUSED FOR COMMON FILL AFTER THEY ARE SORTED TO REMOVE ALL DELETERIOUS MATERIALS SUCH AS CONCRETE, BRICKS, AND OTHER RUBBLE. DELETERIOUS MATERIALS SHALL BE REMOVED FROM THE PROJECT SITE. ALL EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR(S). SEE DEMOLITION PLAN NOTES FOR DETAILS ON REMOVAL AND LEGAL DISPOSAL OF MATERIALS.
6. ANY SOFT SPOTS DISCOVERED DURING PROOF ROLLING SHALL BE UNDERCUT AND RECOMPACTED.
7. ALL PAVEMENTS SHALL HAVE A MINIMUM OF 12 INCHES OF MOISTURE–CONTROLLED, SELECT, AND COMPACTED MATERIAL OF CL OR ML ON THE UNIFIED SOIL CLASSIFICATION SYSTEM DIRECTLY BELOW THE BOTTOM OF SLAB, AND IN AT LEAST TWO (2) SIX (6") INCH LIFTS COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR (ASTM D–698) MAXIMUM DRY DENSITY; OR OTHER ACCEPTED MATERIAL BY THE ENGINEER. PROOF ROLL PRIOR TO PLACEMENT.
8. FILL SHALL BE PLACED IN UNIFORM LIFTS HAVING A MAXIMUM LOOSE THICKNESS OF NINE (9") INCHES. COMPACTION BELOW SLABS AND PAVING AND WALKS SHALL BE AT LEAST 95 PERCENT OF STANDARD PROCTOR (ASTM D–698) MAXIMUM DRY DENSITY. COMPACT TO AT LEAST 90 PERCENT AT ALL OTHER LOCATIONS. MAINTAIN MOISTURE CONTENT OF CONTROLLED FILL ABOVE OPTIMUM DURING PLACEMENT AND COMPACTION.
9. THE ENTIRE SITE SHALL BE FINE GRADED WITH ELEVATION TOLERANCE OF ONE–TENTH (0.10) FOOT; OR FIVE–HUNDREDTHS (0.05) FEET UNDER PAVED AREAS.
10. OBSERVATION AND TESTING OF FILL AND OVER–EXCAVATION OPERATIONS SHALL BE BY THE SOILS ENGINEER HIRED BY THE OWNER.
11. ALL CONTRACTORS SHALL ADHERE TO ALL RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEERING REPORT AS NOTED IN THE 'GENERAL NOTES'; AND INCLUDED THE THE STORMWATER CALCULATIONS, AND IN THE SWPPP PACKET.
12. EXISTING ONSITE FILL SHALL BE FREE OF CONCRETE, GRAVEL, BRICK, CINDERS, GLASS, ORGANICS, AND OTHER LOW DENSITY/DEGRADABLE OR FROZEN MATERIAL.
13. TOP OF WALL (T/WALL) AND BOTTOM OF WALL (B/WALL) LABELS ONLY REFERENCE EXPOSED FACE. RETAINING WALL SHALL BE DESIGNED BY A IOWA LICENSED PROFESSIONAL STRUCTURAL ENGINEER.
14. ALL SPOT ELEVATIONS ARE TO THE TOP OF THE FINISHED SURFACE, UNLESS OTHERWISE SPECIFIED.
    - 14.1. SPOT ELEVATIONS SHOWN IN THE PAVED AREAS ARE AT THE BOTTOM OF THE CURB. ADD SIX (6") INCHES TO COMPUTE THE TOP OF CURB ELEVATIONS.
    - 14.2. SPOT ELEVATIONS ARE TO TOP OF PAVEMENT OR TOP OF GROUND (INCLUDING SOD) UNLESS OTHERWISE NOTED.
    - 14.3. SPOT ELEVATIONS GOVERN OVER CONTOURS.
15. STRIP AND STOCKPILE ALL TOPSOIL FOR REUSE ON SITE. ALL AREAS NOT COVERED BY POND, PAVEMENT, OR BUILDINGS SHALL BE GRASS. SEEDED AREAS SHALL BE PREPARED AS SPECIFIED IN SUDAS, AND NO LESS THAN SIX (6) INCHES OF TOPSOIL SHALL BE IN PLACE BEFORE PERMANENT (FINAL STABILIZATION) SEEDING OPERATIONS COMMENCE. IF LESS THAN SIX (6) INCHES OF TOPSOIL IS LOCATED ON SITE AS DOCUMENTED BY SOILS REPORT, THEN RETAIN AND RESPREAD ALL AVAILABLE MATERIAL AT AN EQUAL DEPTH.
16. PROVIDE POSITIVE DRAINAGE FOR ALL LOCATIONS.
17. ADJUST TRAIL, SIDEWALK, AND SHARED USE PATH ELEVATIONS TO PROVIDE LABELED STORMWATER BASIN EMERGENCY OVERFLOW ROUTE AND WEIR ELEVATIONS.
18. PERMANENT SMF'S SHALL BE USED AS TEMPORARY SILTATION BASINS. SEE SWPPP AND DETAIL SHEETS FOR MORE INFORMATION.
19. PROVIDE A CERTIFIED GRADING PLAN TO THE CITY PRIOR TO PLAT 10 FINAL ACCEPTANCE.
20. ALL RIPRAP SHALL BE PLACED OVER ENGINEERING FABRIC. AS HATCHED IN CONSTRUCTION PLANS. ALL AREAS OF THE EXISTING DITCH BOTTOM AROUND END SECTIONS, AND EXISTING END SECTIONS DISCHARGING INTO DITCH SHALL BE COVERED WITH RIPRAP.
21. CITY OF WAUKEE STANDARD SPECIFICATIONS SHALL APPLY TO GRADING, EROSION CONTROL, AND ASSOCIATED WORK FOR THE PROJECT. THE CONTRACTOR(S) SHALL ESPECIALLY OBSERVE THE REQUIREMENTS OF THE SPECIFICATIONS (ALONG WITH THE EROSION CONTROL PLAN PREPARED FOR THE PROJECT) IN CONDUCTING GRADING AND SURFACE RESTORATION WORK.
    - 21.1. THE STORMWATER POLLUTION PREVENTION PLAN IS THE RESPONSIBILITY OF THE OWNER WHOM SHALL MAKE ALL CONSTRUCTION WORKERS AWARE OF THE MAJOR PROVISIONS OF SAID PLAN.
    - 21.2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH SIGNIFICANT STORM, TO LOCATE DAMAGE AND CONDUCT MAINTENANCE OPERATIONS.
    - 21.3. EXCEPT AS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED ON ALL DISTURBED AREAS NO LATER THAN THE 14TH DAY AFTER NO CONSTRUCTION ACTIVITY HAS OCCURRED ON AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR A PERIOD OF ANOTHER 21 CALENDAR DAYS.
22. ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. SEE 'GENERAL NOTES' ON SHEET 2.
23. SEE SHEET 4 FOR LOWEST LOT ELEVATIONS TABLE – LOT ELEVATIONS ARE SUBJECT TO CHANGE WHERE BUILDING AND LOT GRADING DEVIATE FROM DESIGN.
24. SEE OTHER PLAN SHEETS FOR ADDITIONAL UTILITY INFORMATION.
25. SEE PLAN SHEETS 26 TO 52, INCLUSIVE, FOR ROADWAY PROFILES.
26. SEE PLAN SHEETS 55 TO 71, INCLUSIVE, FOR ADDITIONAL GRADING INFORMATION.
27. SEE PLAN SHEET 74 FOR WARRIOR LANE – MEDIAN GROUND COVER PLAN.
28. SEE PLAN SHEETS 77 TO 78, INCLUSIVE, FOR INTERSECTION GRADING AND DETAILS.
29. SEE PLAN SHEETS 80 TO 83, INCLUSIVE, FOR CURB RAMP GRADING AND DETAILS.
30. SEE PLAN SHEETS 84 TO 85, INCLUSIVE, FOR EMERGENCY OVERFLOW LOCATION DETAILS ACROSS ROADWAYS.
31. SEE 'DETAIL' SHEET 100 FOR ADDITIONAL SCOURSTOP INFORMATION. ALTHOUGH SCOURSTOP IS LABELED AND SHOWN, ALTERNATE EQUIVALENT PRODUCTS (I.E., SHOREMAX, ETC.) MAY BE USED WHEN APPROVED BY THE CITY AND INSTALLED BY A CERTIFIED INSTALLER ON THIS PROJECT. ALL PRODUCTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.
32. SEE 'SWPPP' SHEET(S) FOR ADDITIONAL GROUND COVER INFORMATION; SEDIMENTATION BASIN LOCATIONS; AND QUANTITIES.
33. INSTALL AND MAINTAIN TREE/BUSH PROTECTION (FENCING) ALONG THE EASTERLY PROPERTY LINE TO PREVENT CROSSING INTO ADJACENT PROPERTIES – AS SHOWN ON THE SWPPP SHEETS. ANY TEMPORARY EASEMENTS WILL NEED TO BE OBTAINED BY THE CONTRACTOR AND/OR DEVELOPER IF ANY OFF–SITE WORK IS REQUIRED.

RECORD DRAWING 5

GLYNN VILLAGE PLAT 10 - GRADING PLAN OVERALL AND NOTES

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 200'
DWG: 15-013-GRD.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 5 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

FRG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD.dwg, 10/19/2017 10:35:50 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

50 0 50 100 150

Scale: 1" = 50'

NOTE:

1. SEE PLAN SHEET 5 – 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

MAP/SHEET INDEX

N.T.S.

10' TRAIL EASEMENT (BOOK 2014 PAGE 12461)

SANITARY EASEMENT

20' SANITARY SEWER EASEMENT

20' STORM SEWER EASEMENT (BOOK 2014 PAGE 12467)

15' STORM SEWER & SURFACE WATER FLOWAGE EASEMENT (BOOK 2014 PAGE 12466)

5' STORM SEWER & SURFACE WATER FLOWAGE EASEMENT (BOOK 2014 PAGE 12466)

10' STORM SEWER EASEMENT (BOOK 2014 PAGE 12467)

10' STORM SEWER & SURFACE WATER FLOWAGE EASEMENT (BOOK 2014 PAGE 12466)

10' STORM SEWER & SURFACE WATER FLOWAGE EASEMENT (BOOK 2014 PAGE 12466)

SEE GLYNN VILLAGE PLATS 1–9, INCLUSIVE, FOR ADDITIONAL INFORMATION.

MATCH GRADING ALONG EXISTING SHARED USE PATH

MODIFY EXISTING AGGREGATE TRENCH TO EDGE OF DETENTION BASIN

PROTECT AND MAINTAIN EXISTING TRAIL (TYP.)

PLAT 10 BOUNDARY

EXISTING PLAT 8 EMERGENCY OVERFLOW ROUTE (TYP.)

PROTECT & MAINTAIN EXISTING RISERS & INTAKE

PROTECT AND MAINTAIN PLAT 8 WARRIOR LANE GREENBELT ALIGNMENT

AREA TO REMAIN UNDISTURBED

REMOVE TEMPORARY EMBANKMENT FROM PLAT 8 FOR TEMPORARY SILTATION BASIN WEIR – SEE 'DETAIL' SHEET 88 FOR STAGING.

REMOVE AND REUSE PIPE (PARTIAL) AND FES FOR REROUTING

12' FLAT TOP OF BERM @ 963.00

REMOVE EXISTING FES, PIPE, AND RISER

INSTALL SCOURSTOP OR RIPRAP SEE 'STORM SECTION' PLAN SHEETS (TYP.)

LANDSCAPING BERM – SEE 'TYPICAL SECTION' SHEET 3

25' LANDSCAPE BUFFER EASEMENT

20' SANITARY SEWER EASEMENT

SEE SHEET 9

ST16–2

ST16–1

ST8–1

ST8–9

ST8–4

ST8–3

ST8–2

ST14–1

ST14–2

ST14–2A

ST14–2B

ST14–3

ST12–1

ST12–2

ST12–3

ST12–4

ST9–1

ST9–2

ST9–3

ST9–18

ST9–11

ST9–12

STORM SEWER, SURFACE WATER FLOWAGE, & STORMWATER DETENTION BASIN EASEMENT (BOOK 2014 PAGE 12463) (BOOK 2014 PAGE 12459) (TO BE ENTIRELY VACATED)

TEMPORARY SILTATION BASIN EASEMENT (BOOK 2014 PAGE 12466)

STORM SEWER, SURFACE WATER FLOWAGE, AND STORMWATER DETENTION BASIN EASEMENT (ALL OF OUTLOT Y)

OUTLOT Y

SCALED FEMA 100–YEAR STORM EVENT MAXIMUM STAGE LINES

EXPAND EXISTING PLUNGE BASIN RIPRAP ON ENGINEERING FABRIC FOR PROPOSED OUTLET. SEE DETAIL ON SHEET 99. SWALE BOTTOM WIDTH SHALL BE 6–FOOT MINIMUM FOR EACH OUTLET AT 2–FOOT DEPTH AND SHALL PROVIDE 1.5:1 MAXIMUM SIDE SLOPES. REMOVE IMPACTED TREES ONLY, AS REQUIRED.

REMOVE EXISTING PIPE (PARTIAL) AND FES FOR PROPOSED STRUCTURES

MAINTAIN EXISTING PLAT 8 WETLAND CREATION DIKE

MAINTAIN EXISTING AND UNDISTURBED MEANDER AND WETLAND

PROTECT AND MAINATIN PLAT 8 WARRIOR LANE GREENBELT ALIGNMENT

'EAST/8E' STORMWATER MANAGEMENT FACILITY – SEE SHEET 70

12' FLAT TOP OF BERM SEE SHEET 70

EMERGENCY OVERFLOW ROUTE (TYP.) SEE SHEET 70

12' FLAT TOP OF BERM @ 963.00

PROPOSED GROUND ELEVATIONS ALONG LOT LINES, TYP.

16' RECREATIONAL TRAIL EASEMENT

EMERGENCY OVERFLOW ROUTE (TYP.)

EXISTING EMERGENCY OVERFLOW ROUTE (TYP.)

12' OFF OF SWALE ALIGNMENT

VARIABLE SURFACE WATER FLOWAGE EASEMENT

20' STORM SEWER EASEMENT

BAILEY CIRCLE ALIGNMENT SEE SHEET 26

BAILEY WEST GREENBELT ALIGNMENT SEE SHEET 55

5' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS (EACH SIDE)

20' SANITARY SEWER EASEMENT

PLAT 8 WADDELL WAY GREENBELT ALIGNMENT

REMOVE EXISTING AGGREGATE TRENCH

WARRIOR LANE ALIGNMENT SEE SHEETS 31 AND 32

INSTALL "V" SWALE ACROSS SWFE FROM ROW TO STRUCTURE – ENSURE POSITIVE DRAINAGE

REMOVE EXISTING FARMSTEAD AND RELATED FEATURES.

EMERGENCY OVERFLOW ROUTE SEE SHEET 84

SEE SHEET 7

SEE SHEET 8

RECORD DRAWING

GLYNN VILLAGE PLAT 10 - GRADING PLAN I

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-GRD-1.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 6 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resources Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

6

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-1.dwg, 10/19/2017 10:36:14 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

50 0 50 100 150

Scale: 1" = 50'

NOTE:

1. SEE PLAN SHEET 5 – 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

64 DENOTES AS–BUILT ELEVATION FROM HOUSE SITE PLANS

MAP/SHEET INDEX

N.T.S.

GLYNN VILLAGE HOMEOWNERS ASSOC

MEADOWBROOK BUILDERS, LLC

NEIGHBORHOOD BUILDERS, LLC

HUBBELL METROPOLITAN DEVELOPMENT

HUBBELL HOMES, LC

MICHAEL & HANNAH INNMAN

OUTLOT Y

GOVT LOT 6

GOVT LOT 7

BAILEY CIRCLE

RECORD DRAWING

GLYNN VILLAGE PLAT 10 - GRADING PLAN I

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-GRD-1A.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 6A OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY

FOR:

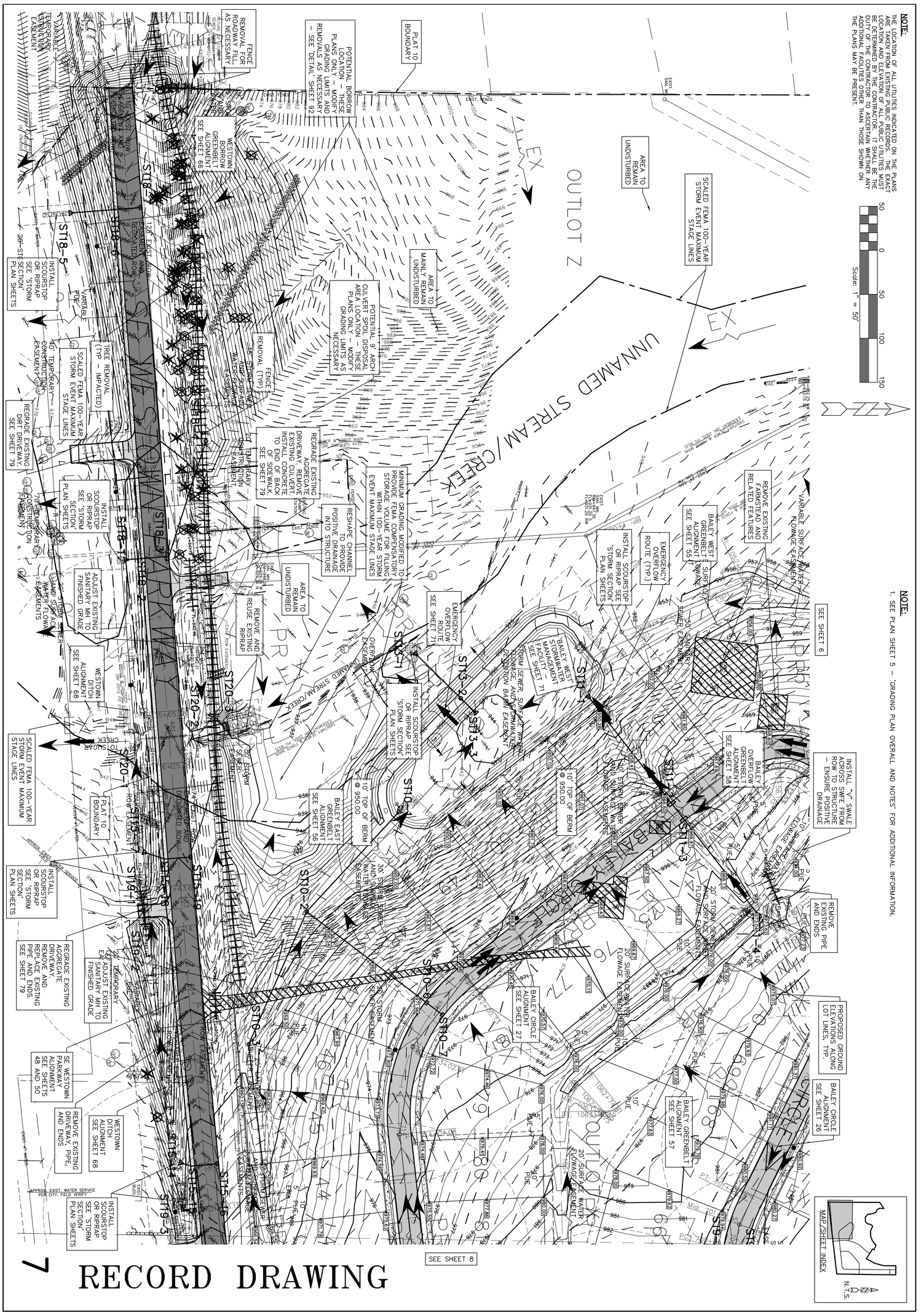
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

6A

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-1A.dwg, 10/19/2017 10:36:33 AM, PJV

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-2.dwg, 10/19/2017 10:36:54 AM, PJV



ERG Engineering Resource Group, Inc. Engineers and Surveyors 2413 GRAND AVENUE DES MOINES, IOWA 50312 (515) 288-4823	GLYNN VILLAGE PLAT 10 - GRADING PLAN 2	15-013

NO.	REVISION	DATE	BY	FOR:	LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
						DWG: 15-013-GRD-2.dwg	CHECKED BY: DJS	DATE: 02/24/2016
						FIELD BOOK:	SHEET 7 OF 100	FILE NO.: 15-013

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

50 0 50 100 150

Scale: 1" = 50'

NOTE:

1. SEE PLAN SHEET 5 – 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

(44) DENOTES AS-BUILT ELEVATION FROM HOUSE SITE PLANS

N.T.S.

MAP/SHEET INDEX

OUTLOT Z

ROSEWOOD HOMES LLC

UNNAMED STREAM/CREEK

SE WESTOWN PARKWAY

BAILEY CREEK CIRCLE

OUTLOT X

CITY OF WAUKEE (WARRANTY DEED (BK 2005, PG 454))

EXISTING AMP STATION

DEAN R. III & PALMA C. GREWELL
PARCEL C OF GOV'T. LOTS 13 AND 14

STEWART M. & MARILYN ALDRICH
N 175' OF E 175' OF GOV'T. LOT 14

RECORD DRAWING

7A

GLYNN VILLAGE PLAT 10 - GRADING PLAN 2

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-GRD-2A.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	7A OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-2A.dwg, 10/19/2017 10:37:18 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

NOTE:

1. SEE PLAN SHEET 5 – 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

50 0 50 100 150

Scale: 1" = 50'

N.T.S.

MAP/SHEET INDEX

LANDSCAPING BERM – SEE 'TYPICAL SECTION' SHEET 3

PROTECT AND MAINTAIN PLAT 8 WADDELL WAY GREENBELT ALIGNMENT

INSTALL SCOURSTOP OR RIPRAP – SEE 'STORM SECTION' PLAN SHEETS

SE PEMBROOKE LANE ALIGNMENT SEE SHEET 43

PEMBROOKE OUTLOT GREENBELT ALIGNMENT SEE SHEET 65

SEE SHEET 9

PROPOSED GROUND ELEVATIONS ALONG LOT LINES, TYP.

SURFACE WATER FLOWAGE EASEMENTS (EACH SIDE)

20' SANITARY SEWER EASEMENT

SEE SHEET 6

10' WATERMAIN EASEMENT & PUE

EMERGENCY OVERFLOW ROUTE (TYP.)

25' LANDSCAPE BUFFER EASEMENT

30' SANITARY SEWER EASEMENT

10' PUE

25' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

100-YEAR HGL LIMIT

10' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

SEE SHEET 77 FOR PARKING AND POOL GRADING

WATERMAIN EASEMENT & PUE

100' ROW

FUTURE PARKING

FUTURE POOL

STORM SEWER EASEMENT

56' ROW

PEMBROOKE WEST GREENBELT ALIGNMENT SEE SHEET 59

5' SANITARY SEWER EASEMENT

5' PUE

20' SURFACE WATER FLOWAGE EASEMENT

25' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

PEMBROOKE EAST GREENBELT ALIGNMENT SEE SHEET 64

INSTALL SCOURSTOP OR RIPRAP SEE 'STORM SECTION' PLAN SHEETS

EMERGENCY OVERFLOW ROUTE (TYP.)

VARIABLE STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

REMOVE EXISTING WOVEN WIRE FENCING (TYP)

5' PUE (BK 2012, PG 10376)

10' PUE (BK 2012, PG 10376)

30' SANITARY SEWER EASEMENT (BK 2012, PG 10376)

25' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

ADJUST EXISTING SANITARY MH TO FINISHED GRADE

EAST OUTLOT GREENBELT ALIGNMENT SEE SHEET 62

SE WADDELL WAY ALIGNMENT SEE SHEET 36

SEE SHEET 77 FOR INTERSECTION GRADING

20' STORM SEWER AND SURFACE FLOWAGE EASEMENTS

10' ACCESS (SIDEWALK) EASEMENT

100-YEAR HGL LIMIT

WARRIOR LANE ALIGNMENT SEE SHEET 31

MODIFY SWALE TO COLLECT AND ROUTE OFF-SITE UNDETAINED FLOW (TYP)

PLAT 10 BOUNDARY

VARIABLE STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

ADJUST GRADING TO MATCH EXISTING LOTS (TYP)

SE WADDELL WAY ALIGNMENT SEE SHEET 36

ADJUST EXISTING SANITARY MH TO FINISHED GRADE

RESHAPE DITCH TO COLLECT STORMWATER FROM EAST

SEE SHEET 78 FOR INTERSECTION GRADING

WADDELL AND WESTOWN GREENBELT ALIGNMENT SEE SHEET 67

25' LANDSCAPE BUFFER EASEMENT

10' TEMPORARY CONSTRUCTION EASEMENT

50' DEDICATED ROW

33' EXIST. ROW EASEMENT

ADJUST EXISTING SANITARY MH TO FINISHED GRADE

MATCH EXISTING PAVEMENT GRADING

REMOVE EXISTING PIPE, INTAKE, AND END. REMOVE AND REPLACE CONCRETE PAVEMENT TO NEAREST JOINT AS NECESSARY – MINIMUM SINGLE PANEL.

REGRADE EXISTING AGGREGATE DRIVEWAY. PROTECT, CLEAN, AND MAINTAIN EXISTING CULVERT. SEE SHEET 79

VARIABLE PUE

20' TEMPORARY CONSTRUCTION EASEMENT

INSTALL SCOURSTOP OR RIPRAP SEE 'STORM SECTION' PLAN SHEETS

ADJUST EXISTING SANITARY MH TO FINISHED GRADE

INSTALL SCOURSTOP OR RIPRAP SEE 'STORM SECTION' PLAN SHEETS

PLAT 10 BOUNDARY

SE WESTOWN PARKWAY ALIGNMENT SEE SHEET 52

WESTOWN DITCH ALIGNMENT SEE SHEET 69

INSTALL SCOURSTOP OR RIPRAP SEE 'STORM SECTION' PLAN SHEETS

VARIABLE WATER — EASEMENT

20' TEMPORARY CONSTRUCTION EASEMENT

ADJUST EXISTING SANITARY MH TO FINISHED GRADE

INSTALL SCOURSTOP OR RIPRAP SEE 'STORM SECTION' PLAN SHEETS

RECORD DRAWING 8

GLYNN VILLAGE PLAT 10 - GRADING PLAN 3

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-GRD-3.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 8 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-3.dwg, 10/19/2017 10:37:41 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

50 0 50 100 150

Scale: 1" = 50'

NOTE:

1. SEE PLAN SHEET 5 – 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

(34) DENOTES AS-BUILT ELEVATION FROM HOUSE SITE PLANS

N.T.S.

MAP/SHEET INDEX

SE PEMBROOKE LANE

SE WADDELL WAY

SE WESTOWN PARKWAY

WARRIOR LANE

FUTURE PARKING

FUTURE POOL

OUTLOT V

SINION M & ELLEN VJ MERLAGO

JEREMY & KARY BJ SPRAGUE

EXISTING WARRIOR RIDGE PLAT 1

KEVIN R & HEIDI
PART OF GOV'T L(

EXISTING STONE PRAIRIE PLAT 1

WAUKEE COMMUNITY SCHOOL DISTRICT
PARCEL AA OF GOV'T. LOT 15

EXIST. TREELINE

EXIST. P.C.C.

EXIST. P.P./A.P.

EXIST. P.C.C. S/W

EXIST. FIRE HYD.

EXIST. P.P. ANCHOR

LOWEST OPENING

RECORD DRAWING 8A

GLYNN VILLAGE PLAT 10 - GRADING PLAN 3

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-GRD-3A.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 8A OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-3A.dwg, 10/19/2017 10:38:03 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

50 0 50 100 150

Scale: 1" = 50'

NOTE:

1. SEE PLAN SHEET 5 – 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

RECORD DRAWING

N.T.S.

MAP/SHEET INDEX

SEE GLYNN VILLAGE PLATS 1–9, INCLUSIVE, FOR ADDITIONAL INFORMATION.

SEE SHEET 10

INSTALL SCOURSTOP OR RIPRAP SEE 'STORM SECTION' PLAN SHEETS

PROPOSED GROUND ELEVATIONS ALONG LOT LINES, TYP.

PLAT 10 BOUNDARY

EXISTING WARRIOR LANE ALIGNMENT

PROTECT AND MAINTAIN PLAT 8 WARRIOR LANE GREENBELT ALIGNMENT

17± LANDSCAPE BUFFER EASEMENT

PLAT 8 WADDELL WAY GREENBELT ALIGNMENT – PROTECT, MAINTAIN, AND MODIFY/REPAIR AS NECESSARY

MATCH EXISTING PAVEMENT GRADING

LANDSCAPING BERM – SEE 'TYPICAL SECTION' SHEET 3

PLAT 10 BOUNDARY

SE WADDELL WAY ALIGNMENT SEE SHEETS 38 AND 40

MODIFY SWALE TO COLLECT AND ROUTE OFF–SITE UNDETAINED FLOW (TYP)

EAST OUTLOT GREENBELT ALIGNMENT SEE SHEETS 62 AND 63

VARIABLE STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

PROTECT AND MAINTAIN EXISTING SMF OUTFALL

ADJUST GRADING TO MATCH EXISTING LOTS (TYP)

REMOVE EXISTING WOVEN WIRE FENCING (TYP)

MATCH EXISTING PAVEMENT GRADING

REMOVE EXISTING WOVEN WIRE FENCING (TYP)

EAST OUTLOT GREENBELT ALIGNMENT SEE SHEET 62

WARRIOR LANE ALIGNMENT SEE SHEET 32

WADDELL WAY GREENBELT ALIGNMENT SEE SHEET 60

PEMBROOKE WEST GREENBELT ALIGNMENT SEE SHEET 59

SE PEMBROOKE LANE ALIGNMENT SEE SHEET 43

SEE SHEET 78 FOR INTERSECTION GRADING

SEE SHEET 6

SEE SHEET 8

REMOVE EXISTING AGGREGATE TRENCH

5' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS (EACH SIDE)

EMERGENCY OVERFLOW ROUTE (TYP.)

MODIFY SWALE TO COLLECT AND ROUTE OFF–SITE UNDETAINED FLOW (TYP)

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-4.dwg, 10/19/2017 10:38:24 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

50 0 50 100 150

Scale: 1" = 50'

NOTE:

1. SEE PLAN SHEET 5 – 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

RECORD DRAWING

99 DENOTES AS–BUILT ELEVATION FROM HOUSE SITE PLANS

N.T.S.

MAP/SHEET INDEX

HUBBELL METROPOLITAN DEVELOPMENT

GOVT. LOT 6

GOVT. LOT 7

GOVT. LOT 10

GOVT. LOT 11

GOVT. LOT 12

GOVT. LOT 13

GOVT. LOT 14

GOVT. LOT 15

GOVT. LOT 16

GOVT. LOT 17

GOVT. LOT 18

GOVT. LOT 19

GOVT. LOT 20

GOVT. LOT 21

WARRIOR LANE

BROOKE LANE

SE WADDELL'S WAY

THIBAUT CHIROUZES

JAMIE & JENNIFER BOESS

EXISTING HEMINGWAY PLAT 1

EMILY & JASON SPARKS

EXISTING WARRIOR RIDGE PLAT 1

DEAPIKA VERNIA

WARRIOR RIDGE HOMEOWNERS ASSOCIATION

ERIC & ANGELITA J. GUMM

RAYMOND P. & ELIZABETH RIDOUT

FRANCISCO & BETTY J. MANZANO

EXIST. P.C.C.

9A

GLYNN VILLAGE PLAT 10 - GRADING PLAN 4

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-GRD-4A.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET 9A OF 100	

DRAWN BY: PJV

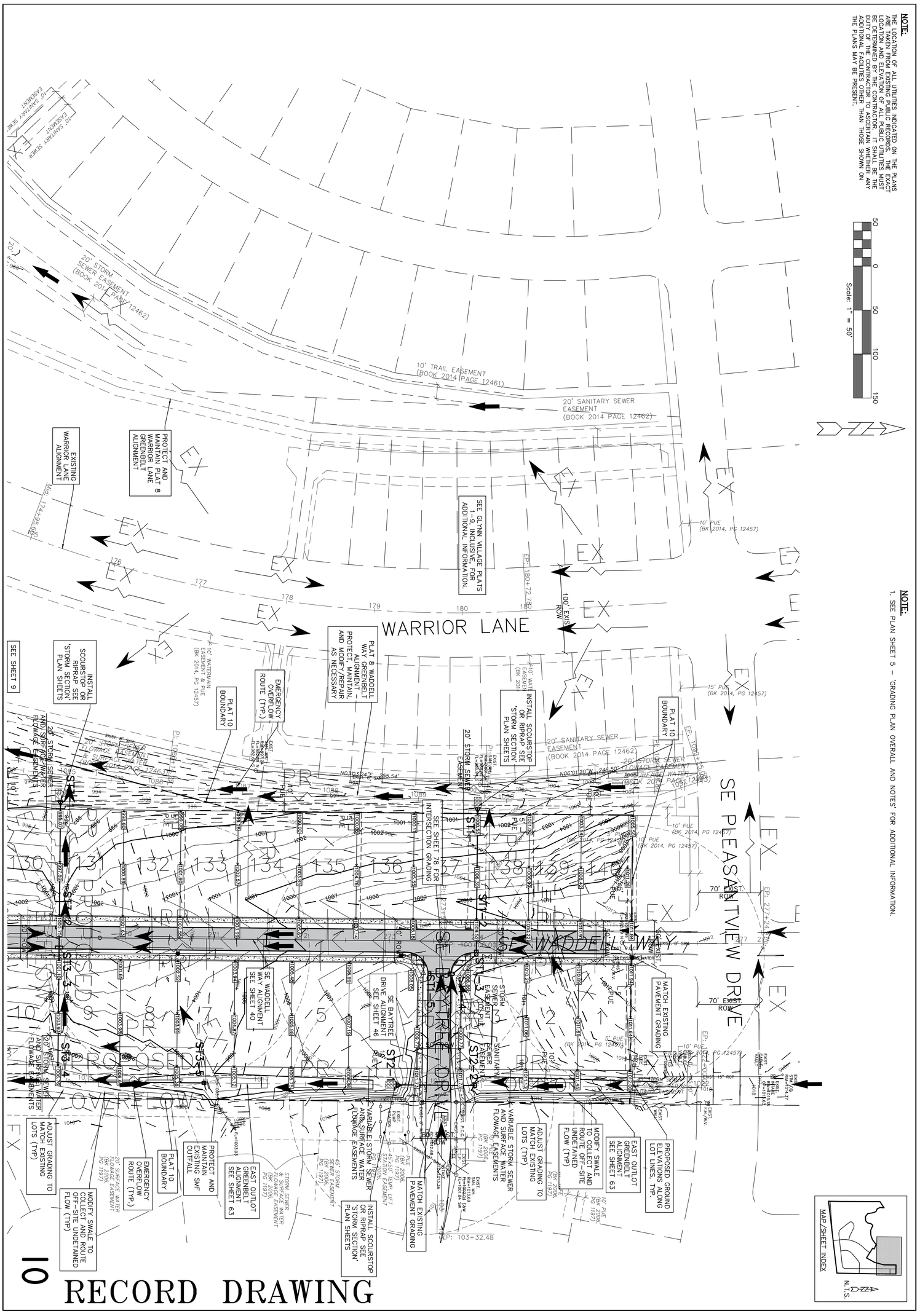
DATE: 02/24/2016

FILE NO.: 15-013

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-4A.dwg, 10/19/2017 10:38:48 AM, PJV



15-013	ERG Engineering Resource Group, Inc. Engineers and Surveyors 2413 GRAND AVENUE DES MOINES, IOWA 50312 (515) 288-4823	GLYNN VILLAGE PLAT 10 - GRADING PLAN 5	

NO.	REVISION	DATE	BY	FOR:	LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
						DWG: 15-013-GRD-5.dwg	CHECKED BY: DJS	DATE: 02/24/2016
						FIELD BOOK:	SHEET 10 OF 100	FILE NO.: 15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-GRD-5A.dwg, 10/19/2017 10:39:28 AM, PJV

NOTE:
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

Scale: 1" = 50'
50 0 50 100 150

NOTE:
1. SEE PLAN SHEET 5 - 'GRADING PLAN OVERALL AND NOTES' FOR ADDITIONAL INFORMATION.

WARRIOR LANE
SE PLEASANTVIEW DRIVE
SE WADDELL WAY
SE BAYTREE DRIVE
OUTLOT S
HUBBELL METROPOLITAN DEVELOPMENT
EXISTING HEMINGWAY PLAT 1
HEMINGWAY HOMEOWNERS ASSOCIATION
THIBAUT CHIROUZES
MELISSA K GORGENSON
MARY D & TRINA RUDICE
CHARLES & DANIELLE GOKSI
HILLIAN SIEGERT & TERBACK
MCFARLAND

10 DENOTES AS-BUILT ELEVATION FROM HOUSE SITE PLANS

MAP/SHEET INDEX
N.T.S.

10A RECORD DRAWING

15-013

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

GLYNN VILLAGE PLAT 10 - GRADING PLAN 5

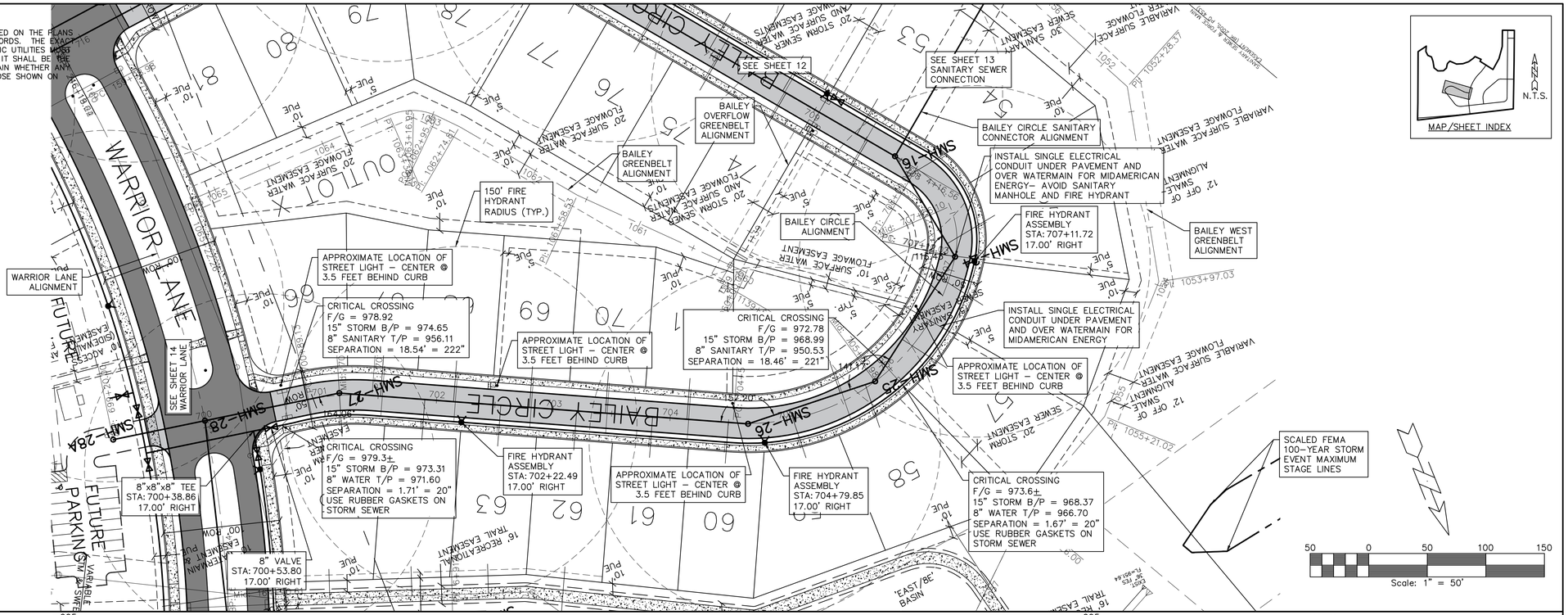
NO.	REVISION	DATE	BY

FOR:
LOCATION:

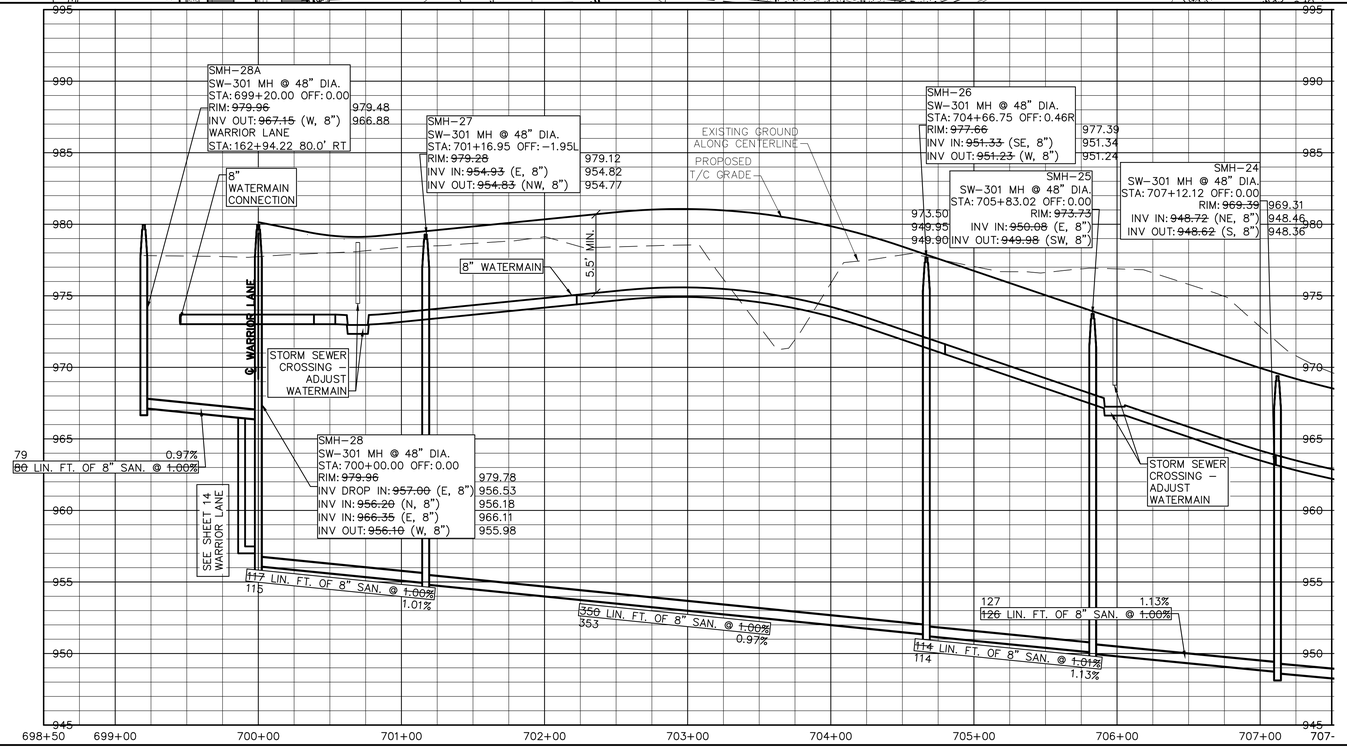
SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV	
DWG: 15-013-GRD-5A.dwg	CHECKED BY: DJS	DATE: 02/24/2016	
FIELD BOOK:	SHEET 10A OF 100	FILE NO.: 15-013	

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 26 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

GLYNN VILLAGE PLAT 10 - BAILEY CIRCLE - SANITARY & WATER I

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-PP3.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	11 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

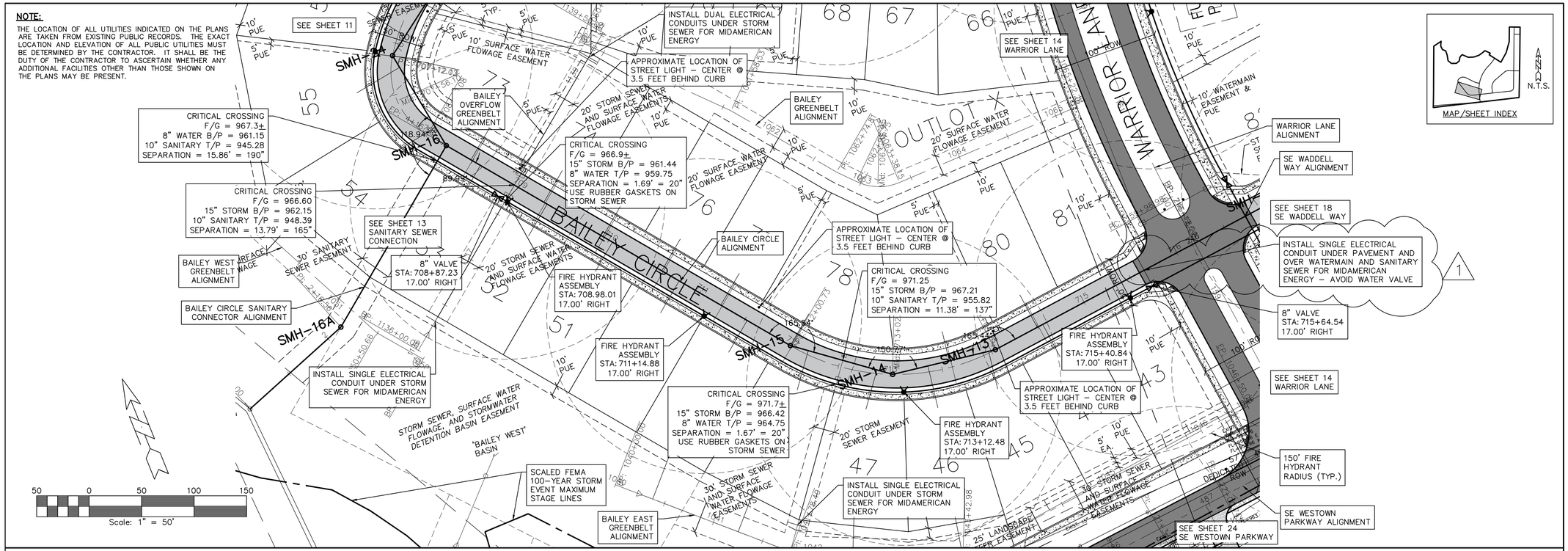
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

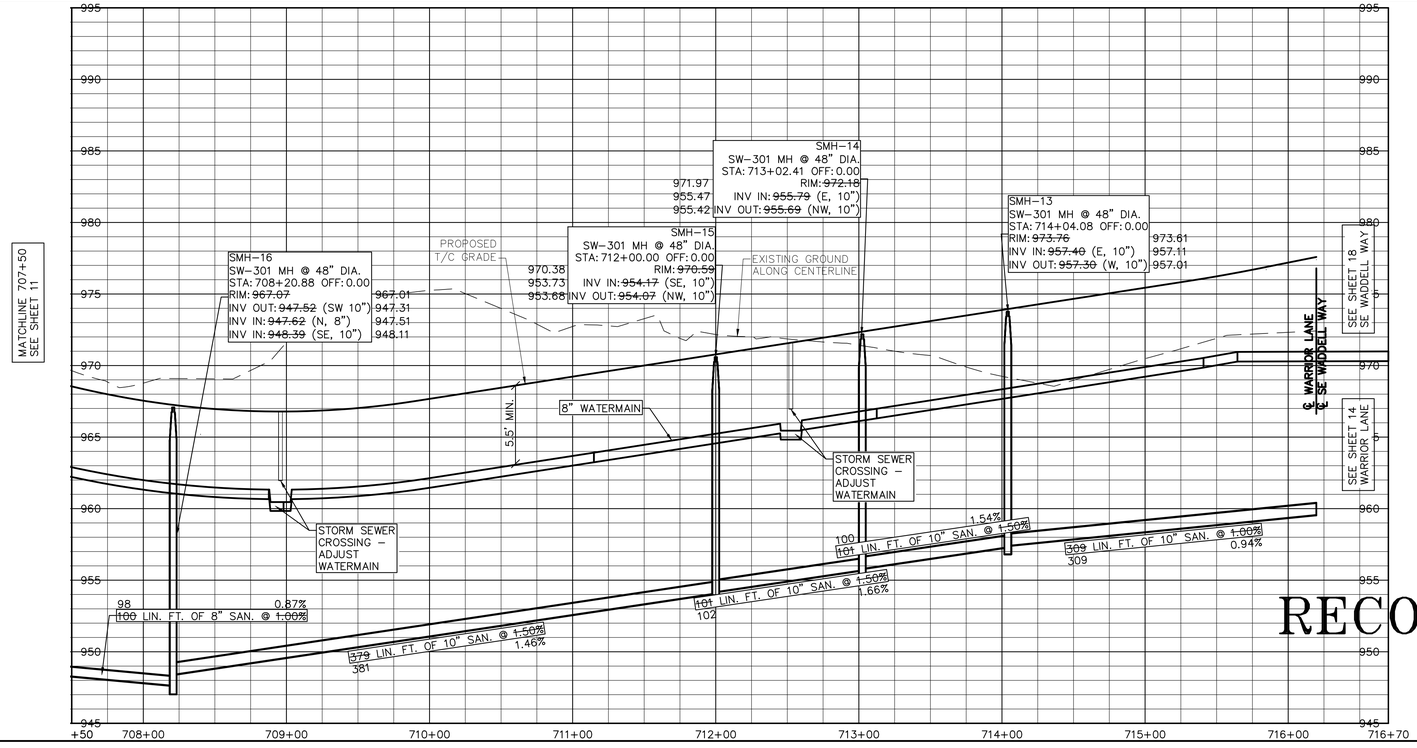
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP3.dwg, 10/19/2017 10:39:48 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 27 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

12

GLYNN VILLAGE PLAT 10 - BAILEY CIRCLE - SANITARY & WATER 2

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-PP2.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	12 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY
1	MIDAM REQUESTED DESIGN REVISION	04/08/16	JRK

FOR:

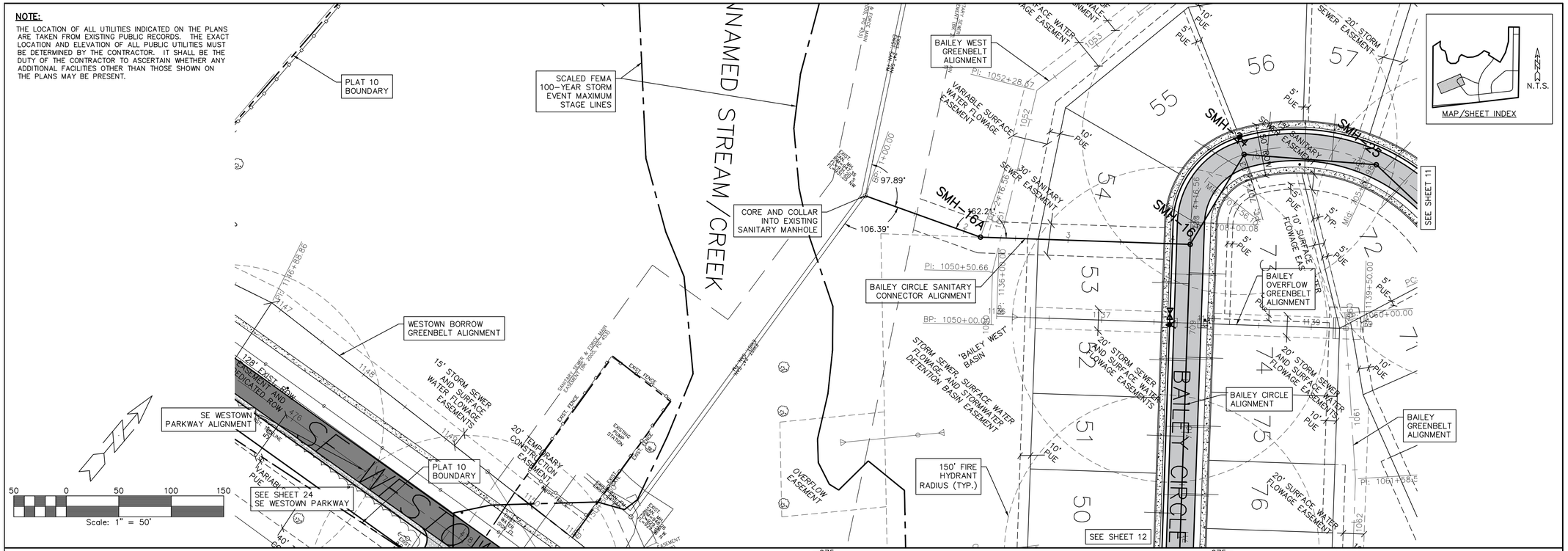
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

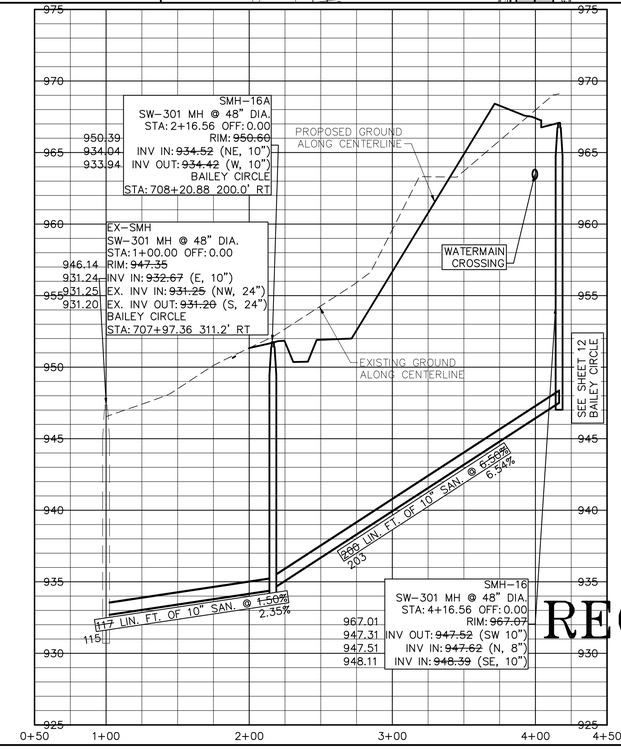
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP2.dwg, 10/19/2017 10:40:09 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 27 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

13

GLYNN VILLAGE PLAT 10 - BAILEY CIRCLE - SANITARY SEWER EXTENSION

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET 13 OF 100	
DRAWN BY:	PJV		
DATE:	02/24/2016		
FILE NO.:	15-013		

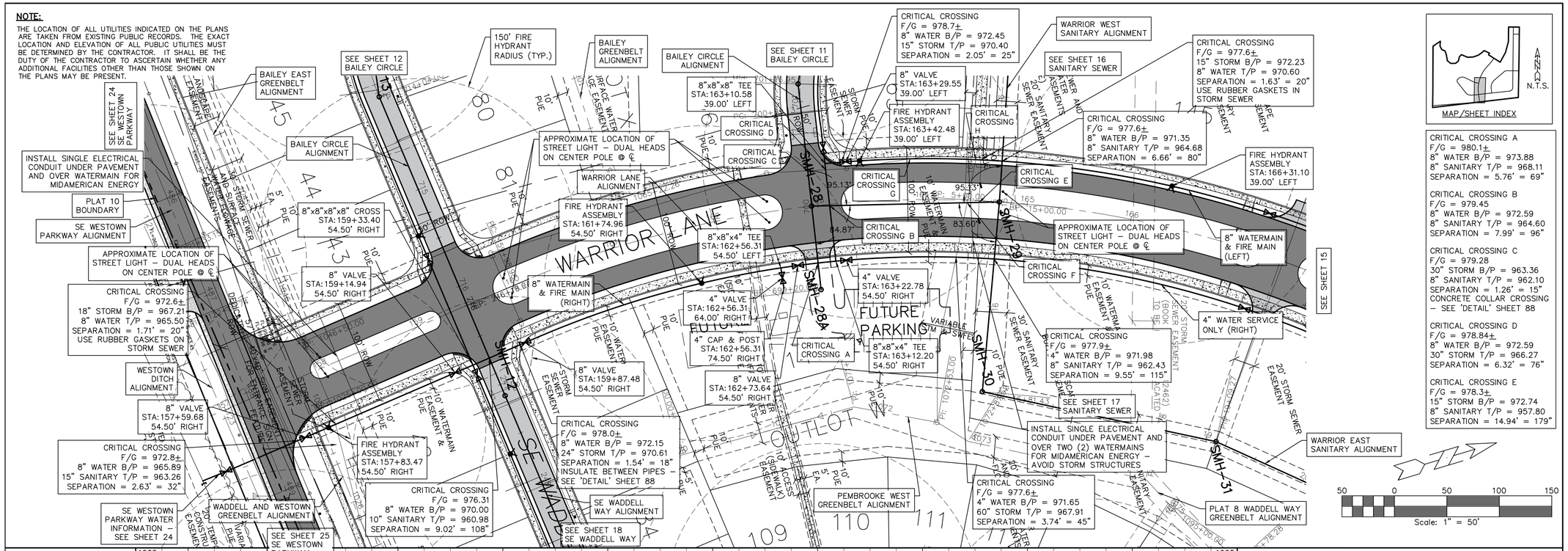
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP1.dwg, 10/19/2017 10:40:28 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



CRITICAL CROSSING A
F/G = 980.1±
8" WATER B/P = 973.88
8" SANITARY T/P = 968.11
SEPARATION = 5.76' = 69"

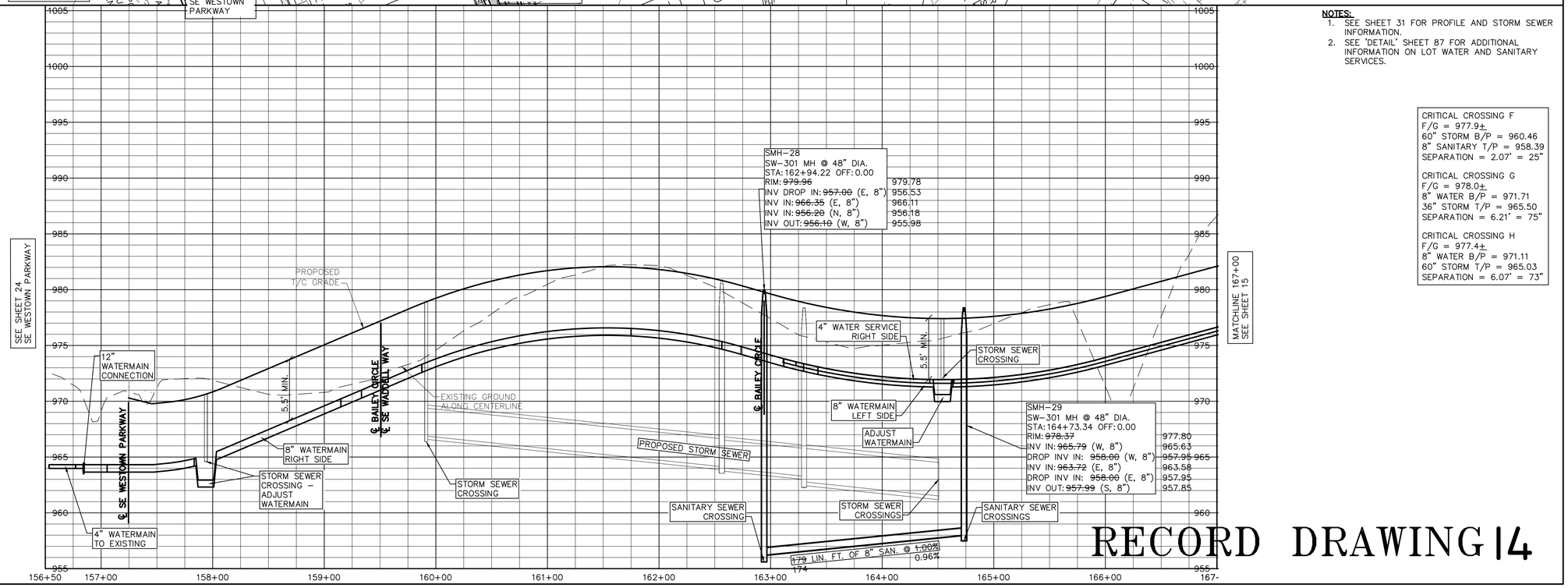
CRITICAL CROSSING B
F/G = 979.45
8" WATER B/P = 972.59
8" SANITARY T/P = 964.60
SEPARATION = 7.99' = 96"

CRITICAL CROSSING C
F/G = 979.28
30" STORM B/P = 963.36
8" SANITARY T/P = 962.10
SEPARATION = 1.26' = 15"
CONCRETE COLLAR CROSSING – SEE 'DETAIL' SHEET 88

CRITICAL CROSSING D
F/G = 978.84±
8" WATER B/P = 972.59
30" STORM T/P = 966.27
SEPARATION = 6.32' = 76"

CRITICAL CROSSING E
F/G = 978.3±
15" STORM B/P = 972.74
8" SANITARY T/P = 957.80
SEPARATION = 14.94' = 179"

SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 31 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

CRITICAL CROSSING F
F/G = 977.9±
60" STORM B/P = 960.46
8" SANITARY T/P = 958.39
SEPARATION = 2.07' = 25"

CRITICAL CROSSING G
F/G = 978.0±
8" WATER B/P = 971.71
36" STORM T/P = 965.50
SEPARATION = 6.21' = 75"

CRITICAL CROSSING H
F/G = 977.4±
8" WATER B/P = 971.11
60" STORM T/P = 965.03
SEPARATION = 6.07' = 73"

RECORD DRAWING 14

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - SANITARY & WATER I

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-PP4.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	14 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

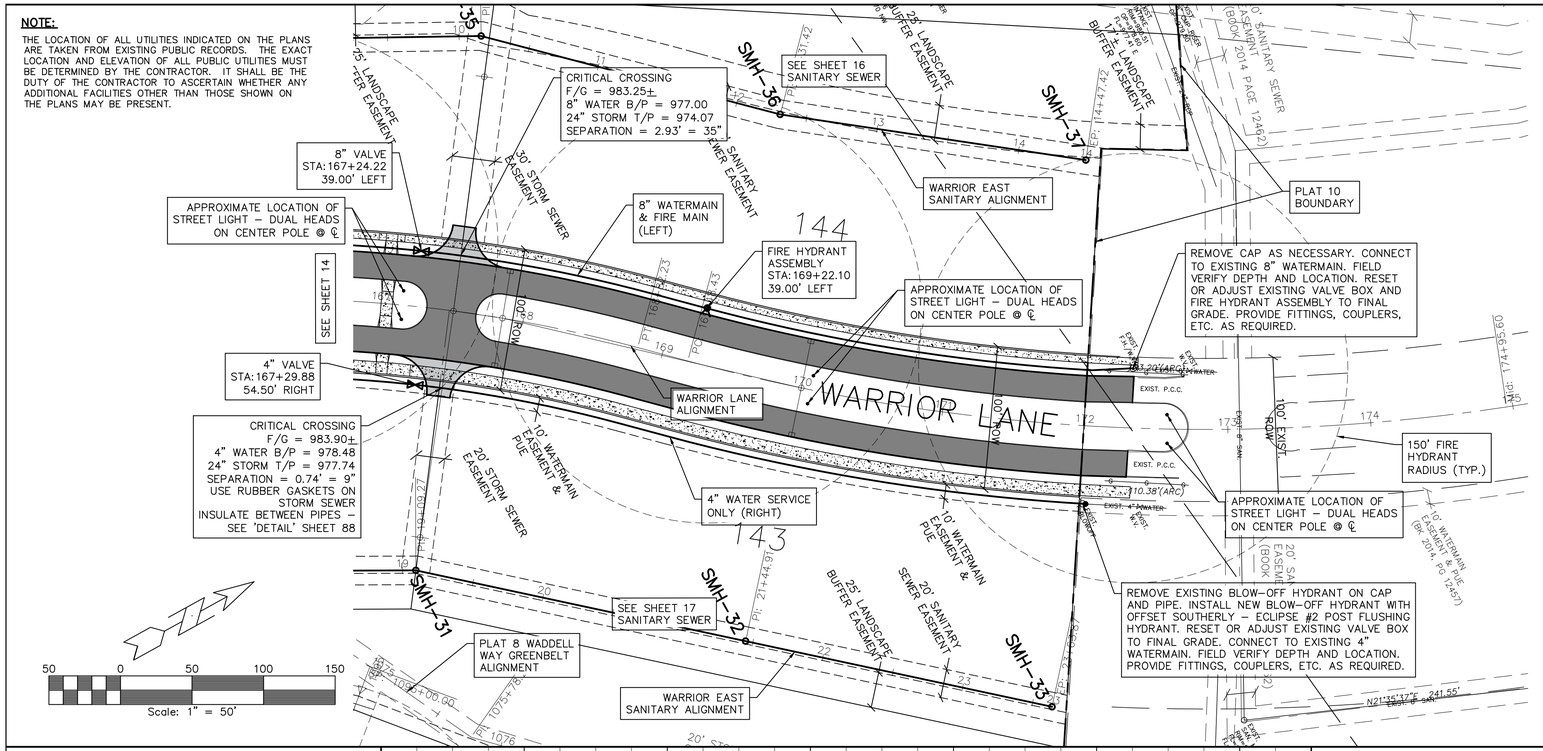
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

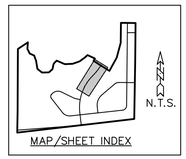
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP4.dwg, 10/19/2017 10:40:48 AM, PJV

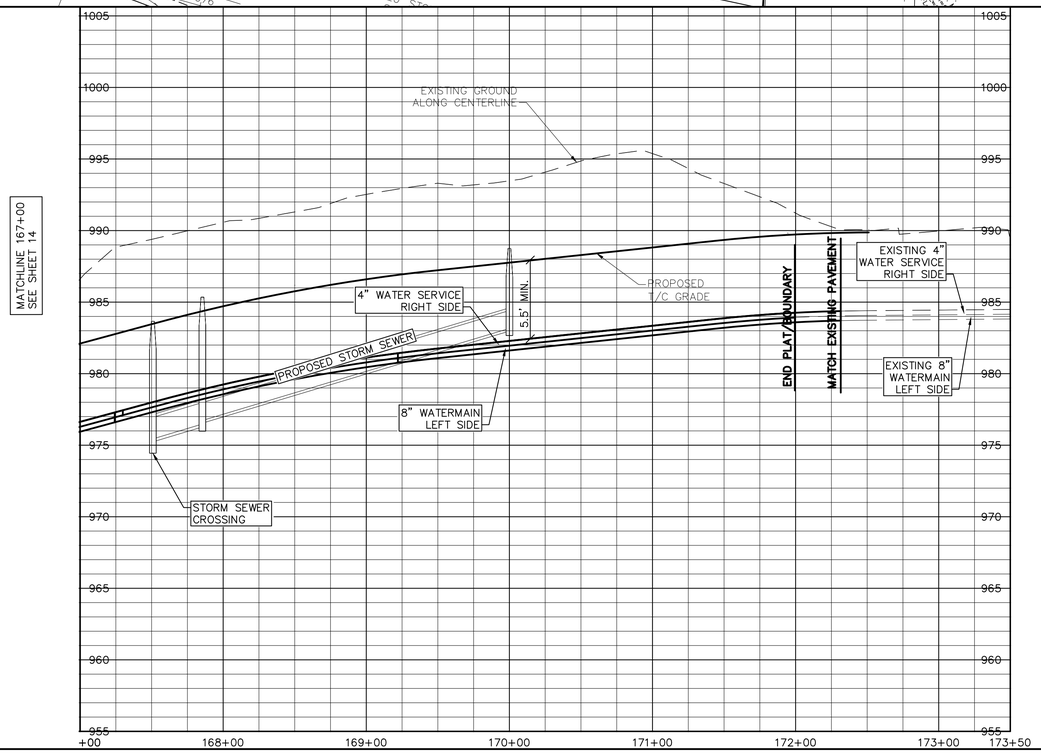
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 35 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

15

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - SANITARY & WATER 2

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP5.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET 15 OF 100	
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

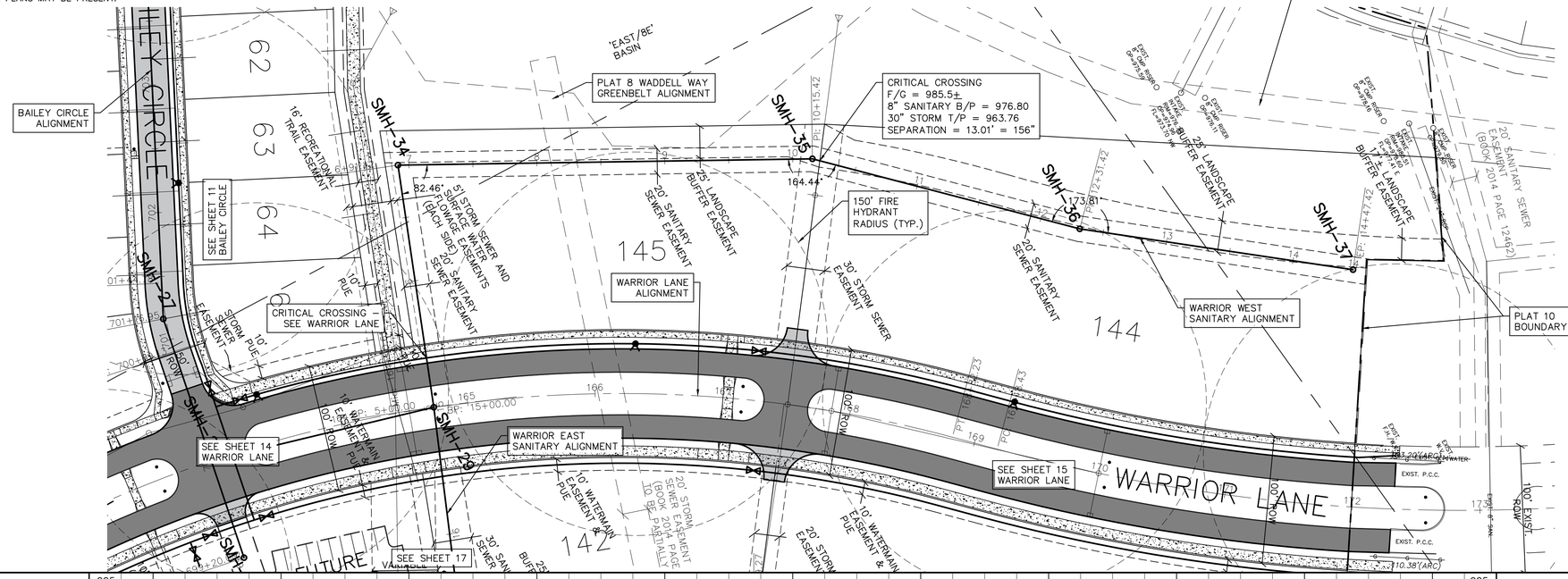
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP5.dwg, 10/19/2017 10:41:09 AM, PJV

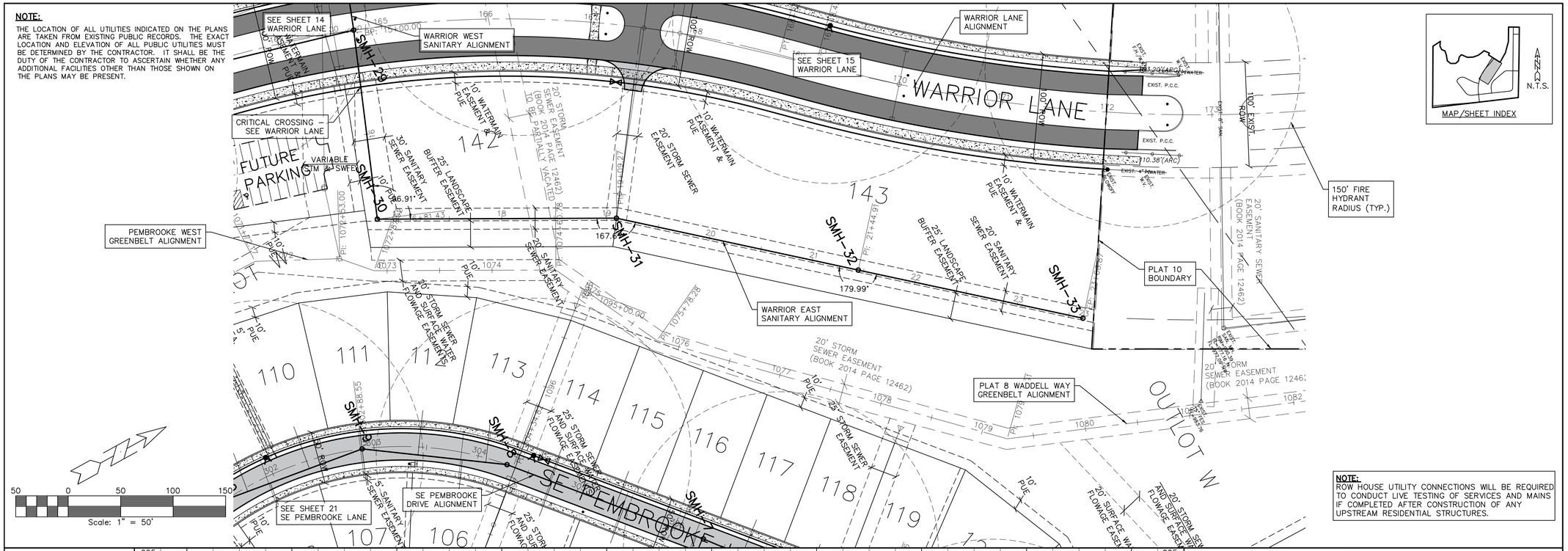
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.


BAILEY CIRCLE ALIGNMENT
HEY CIRCLE
SEE SHEET 11 BAILEY CIRCLE
SMH-21
SMH-34
SMH-35
SMH-36
SMH-37
SMH-29
'EAST/BE' BASIN
PLAT 8 WADDELL WAY GREENBELT ALIGNMENT
PLAT 8 WARRIOR LANE GREENBELT ALIGNMENT
CRITICAL CROSSING F/G = 985.5± 8" SANITARY B/P = 976.80 30" STORM T/P = 963.76 SEPARATION = 13.01' = 156"
150' FIRE HYDRANT RADIUS (TYP.)
WARRIOR LANE ALIGNMENT
WARRIOR WEST SANITARY ALIGNMENT
WARRIOR EAST SANITARY ALIGNMENT
CRITICAL CROSSING - SEE WARRIOR LANE
PLAT 10 BOUNDARY
SEE SHEET 14 WARRIOR LANE
SEE SHEET 15 WARRIOR LANE
SEE SHEET 17
WARRIOR LANE
FUTURE
16' RECREATIONAL TRAIL EASEMENT
20' SANITARY SEWER EASEMENT
25' LANDSCAPE BUFFER EASEMENT
30' STORM SEWER EASEMENT
10' WATERMAIN & PUE EASEMENT
20' STORM SEWER EASEMENT (BOOK 2014 PAGE 12462) TO BE PARTIALLY VACATED
20' SANITARY SEWER EASEMENT (BOOK 2014 PAGE 12462)
51' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS (EACH SIDE) 20' SANITARY SEWER EASEMENT
10' PUE
60' ROW
100' EXIST. ROW
82.46'
164.44'
173.81'
10.38'(ARC)
EXIST. P.C.C.
EXIST. TOP OF BANK
EXIST. 8" WATER
EXIST. 12" STORM
EXIST. 8" SAN.
EXIST. 6" SAN.
EXIST. 24" STORM
EXIST. 18" STORM
EXIST. 15" STORM
EXIST. 10" STORM
EXIST. 8" STORM
EXIST. 6" STORM
EXIST. 4" STORM
EXIST. 3" STORM
EXIST. 2" STORM
EXIST. 1" STORM
EXIST. 0" STORM
EXIST. 1" STORM
EXIST. 2" STORM
EXIST. 3" STORM
EXIST. 4" STORM
EXIST. 5" STORM
EXIST. 6" STORM
EXIST. 7" STORM
EXIST. 8" STORM
EXIST. 9" STORM
EXIST. 10" STORM
EXIST. 11" STORM
EXIST. 12" STORM
EXIST.

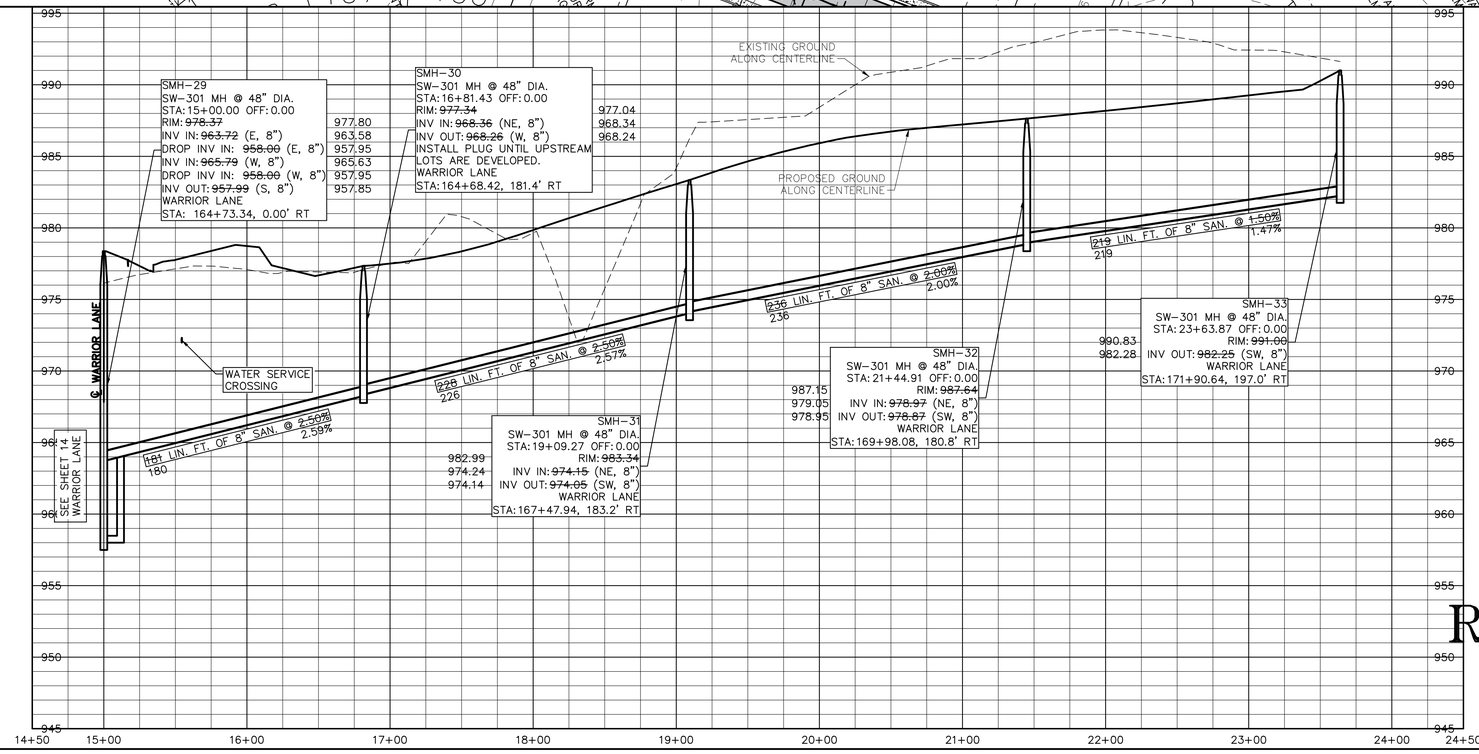
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



NOTE:
ROW HOUSE UTILITY CONNECTIONS WILL BE REQUIRED TO CONDUCT LIVE TESTING OF SERVICES AND MAINS IF COMPLETED AFTER CONSTRUCTION OF ANY UPSTREAM RESIDENTIAL STRUCTURES.

SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:
1. SEE SHEETS 31 AND 35 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

17

GLYNN VILLAGE PLAT 10 - WARRIOR EAST - SANITARY

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP7.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 17 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

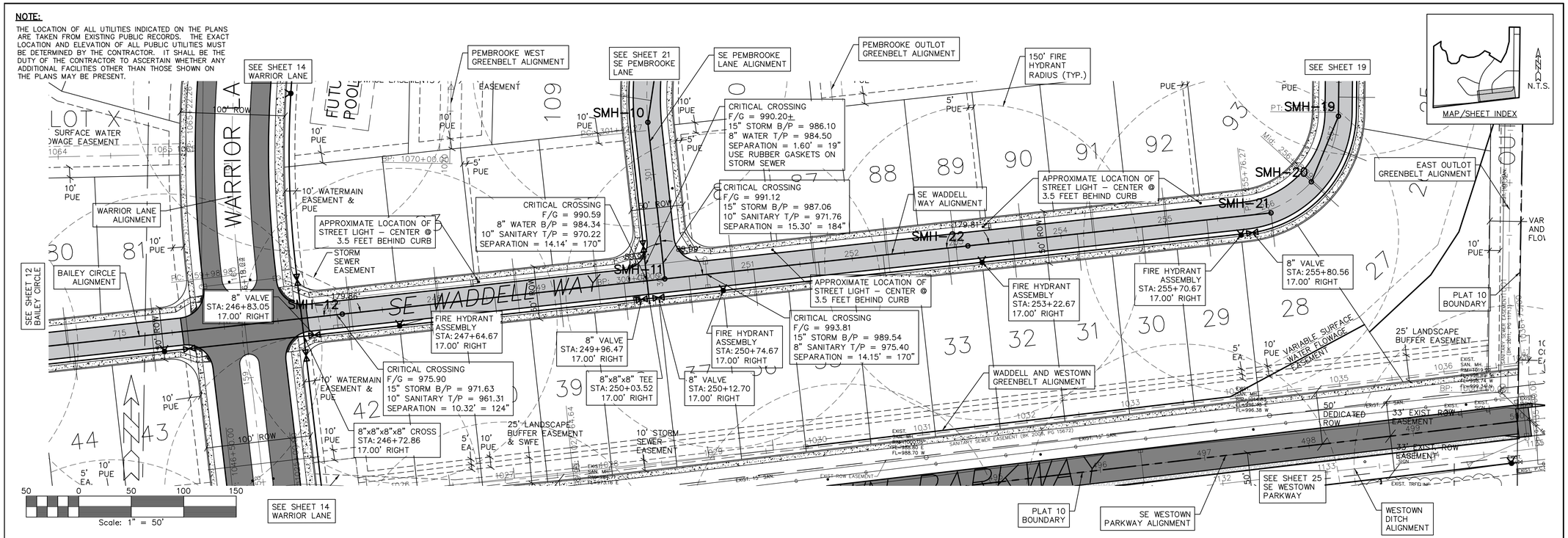
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

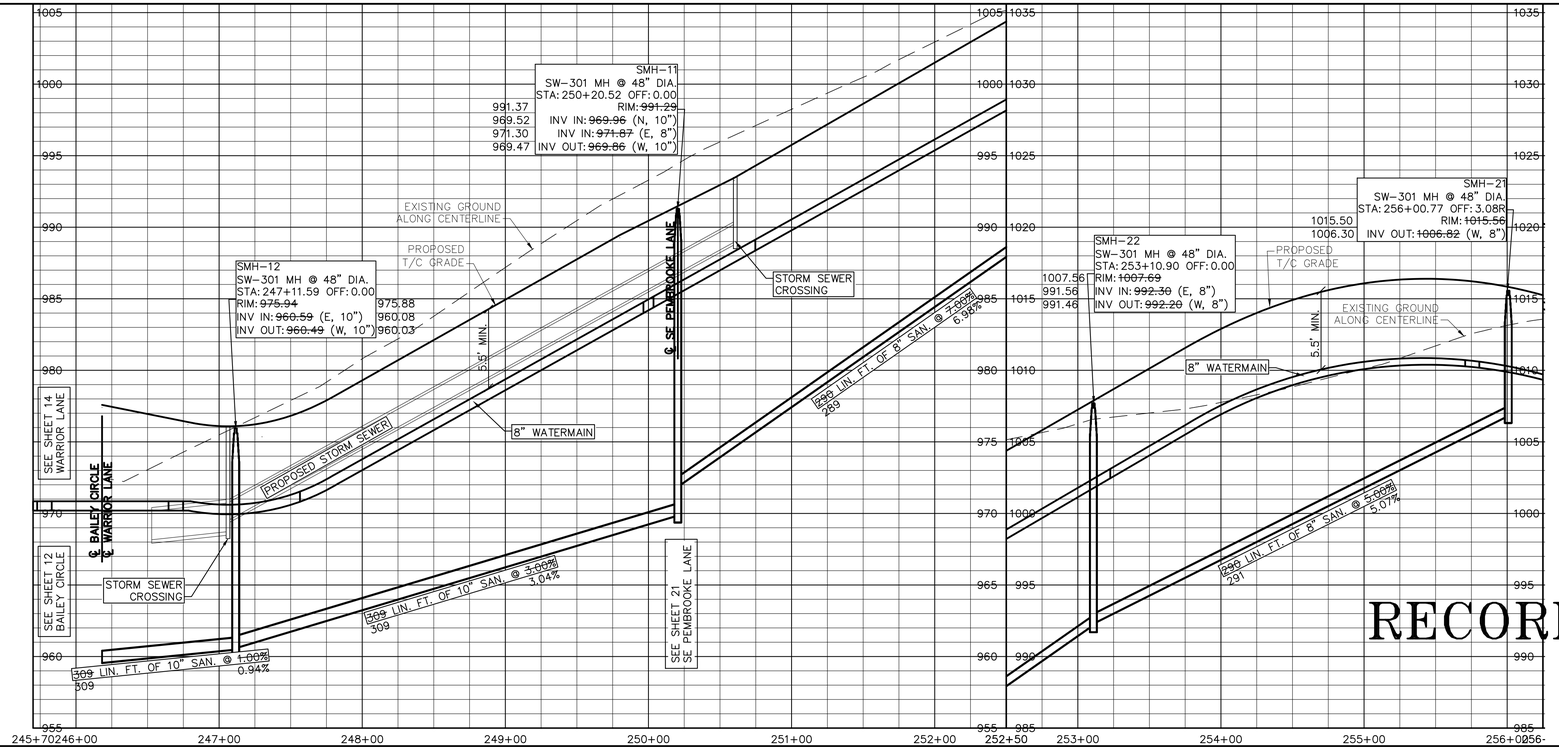
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP7.dwg, 10/19/2017 10:41:54 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 36 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

18

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - SANITARY & WATER I

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP8.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 18 OF 100	FILE NO.: 15-013

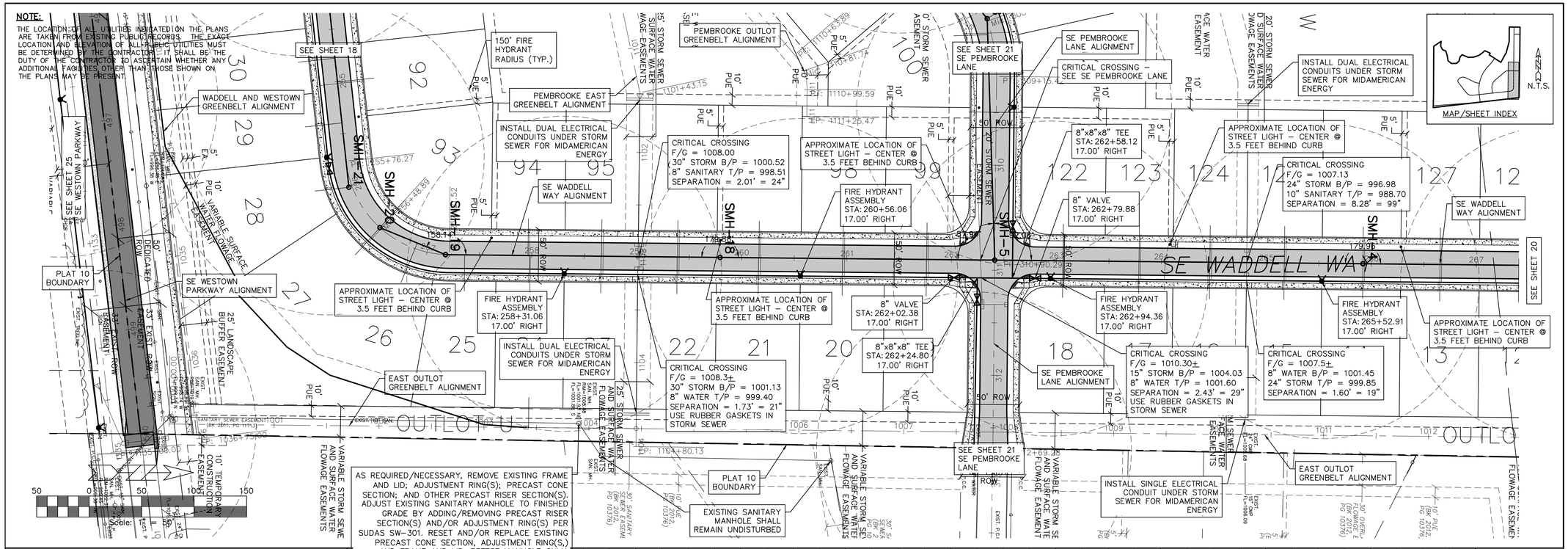
NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

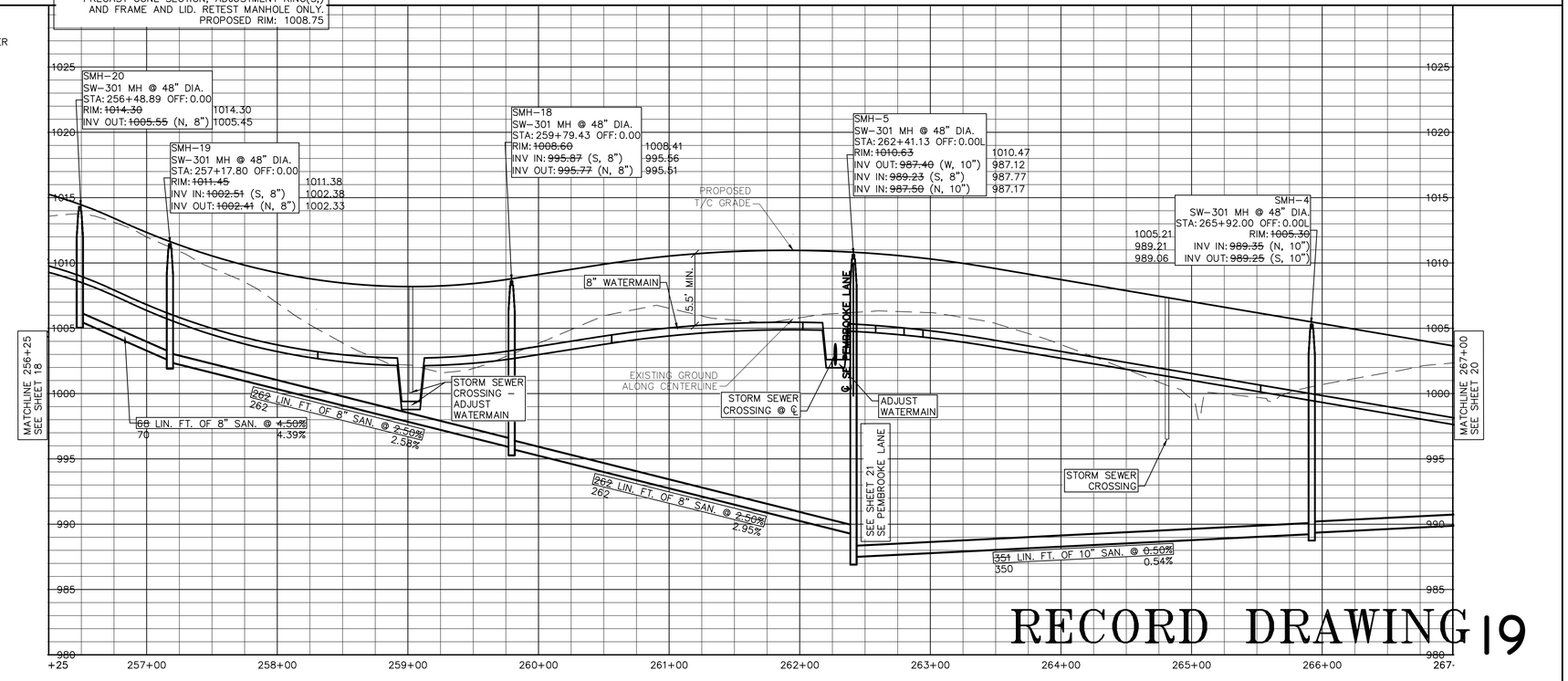
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP8.dwg, 10/19/2017 10:42:19 AM, PJV

NOTE:
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR - IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES, OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:
1. SEE SHEET 38 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.



RECORD DRAWING 19

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - SANITARY & WATER 2

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP9.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 19 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY

FOR:

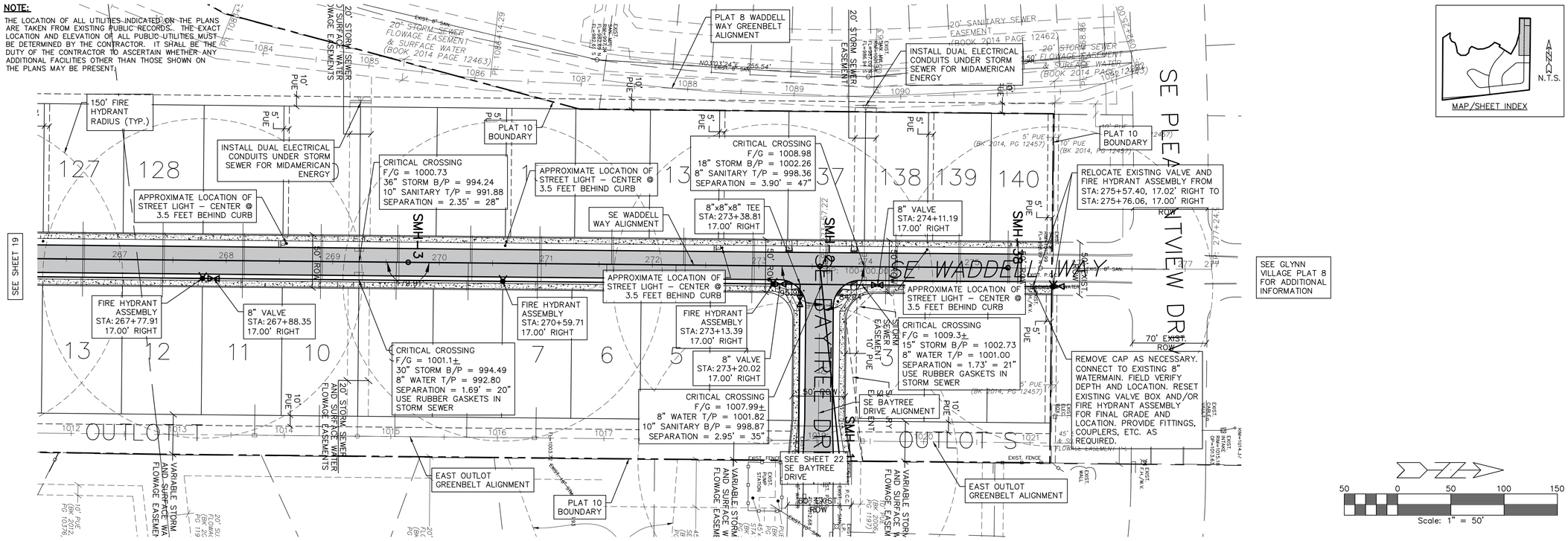
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

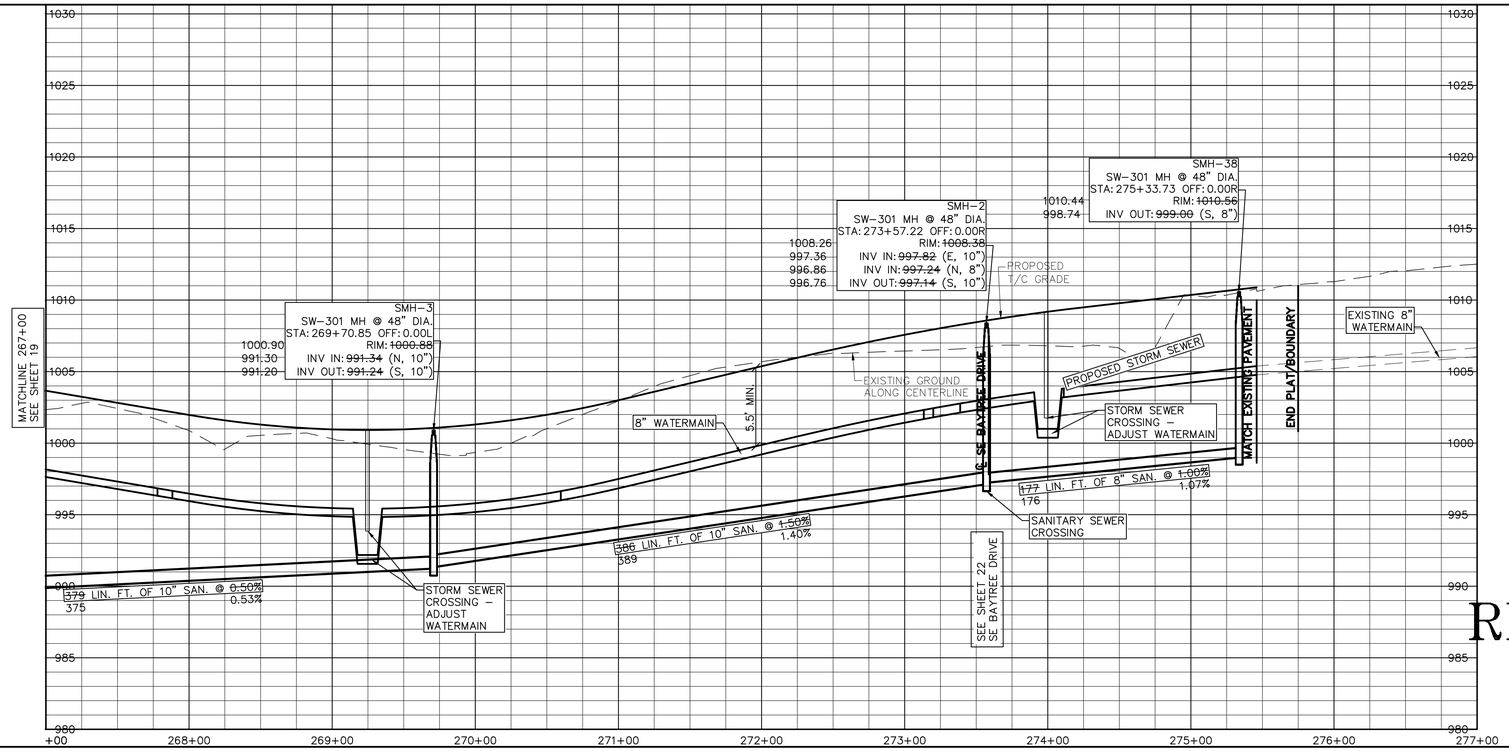
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP9.dwg, 10/19/2017 10:42:44 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 40 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

20

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - SANITARY & WATER 3

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK	DRAWN BY:	PJV
DWG:	15-013-PP10.dwg	CHECKED BY:	DJS	DATE:	02/24/2016
FIELD BOOK:		SHEET	20 OF 100	FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

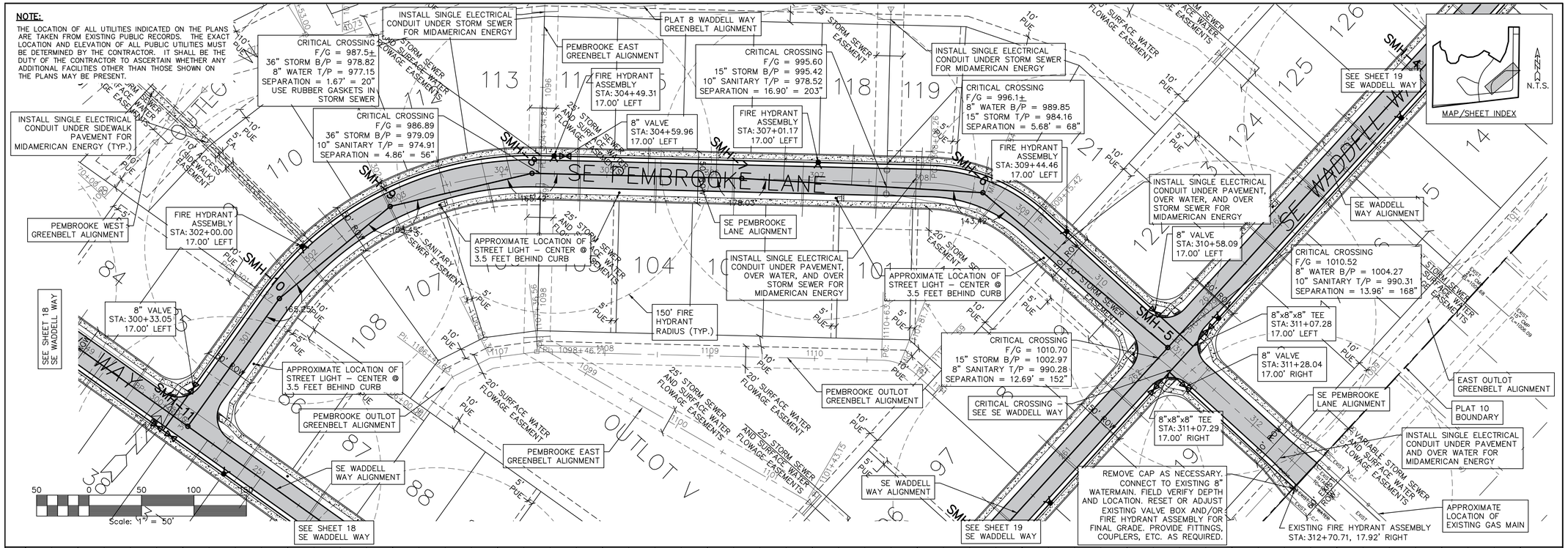
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

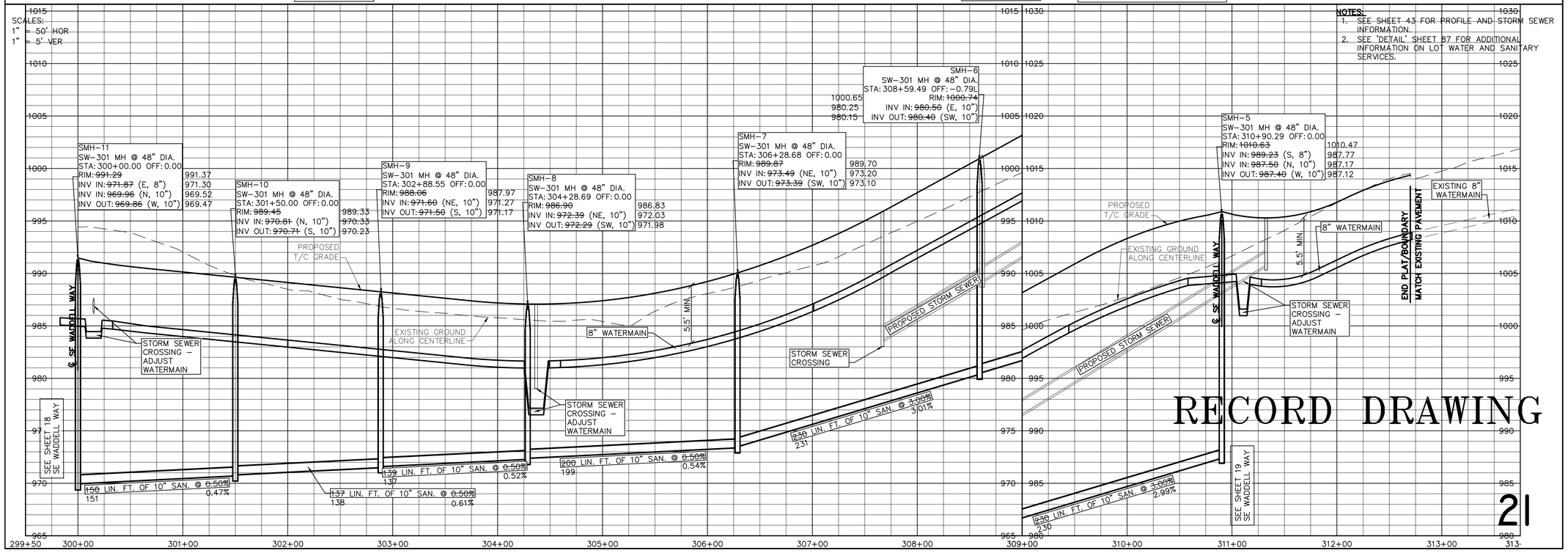
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP10.dwg, 10/19/2017 10:43:03 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





NOTES:

1. SEE SHEET 43 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

RECORD DRAWING

21

GLYNN VILLAGE PLAT 10 - SE PEMBROOKE LANE - SANITARY & WATER

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP11.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 21 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY

FOR:

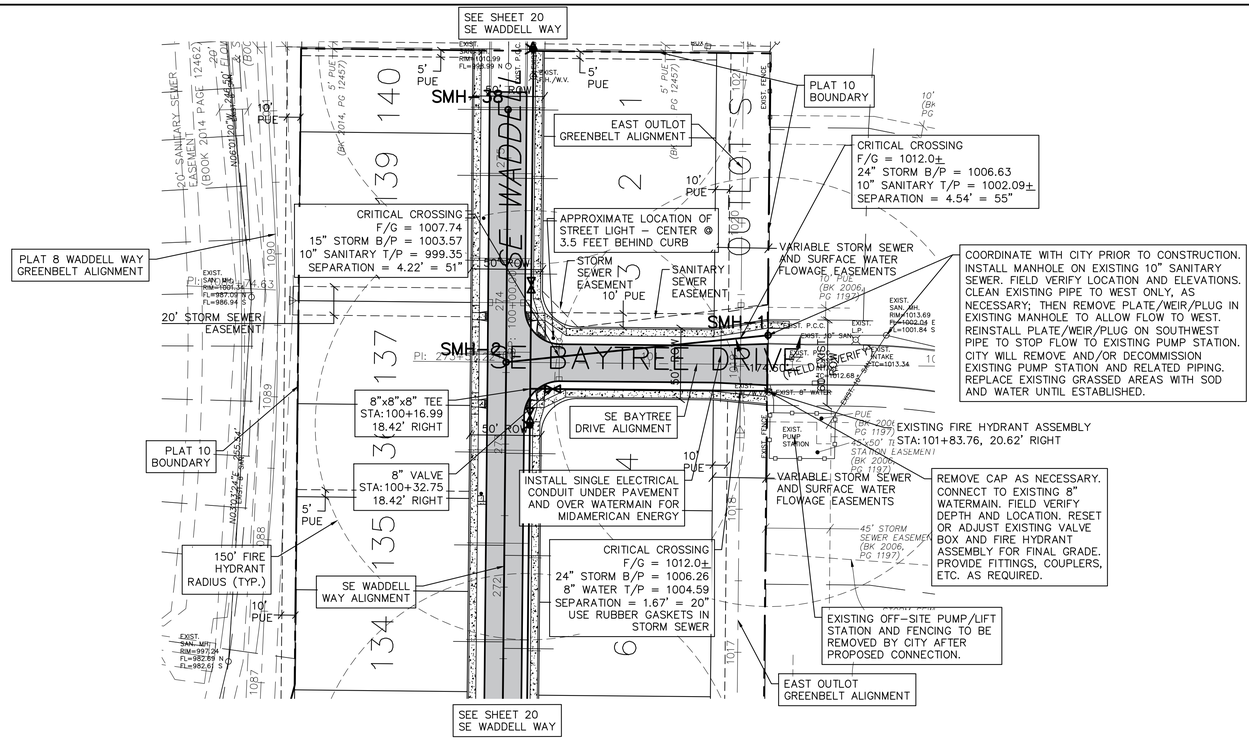
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

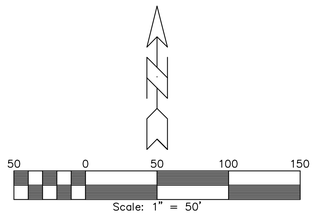
15-013

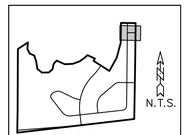
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP11.dwg, 10/19/2017 10:43:23 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





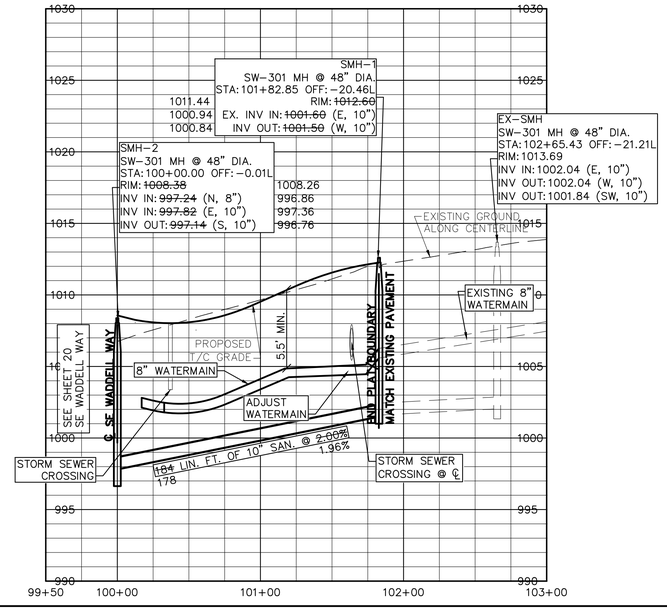


MAP/SHEET INDEX

SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:

1. SEE SHEET 46 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.



RECORD DRAWING

22

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP12.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 22 OF 100	FILE NO.: 15-013

GLYNN VILLAGE PLAT 10 - SE BAYTREE DRIVE - SANITARY & WATER

FOR:

NO.	REVISION	DATE	BY

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

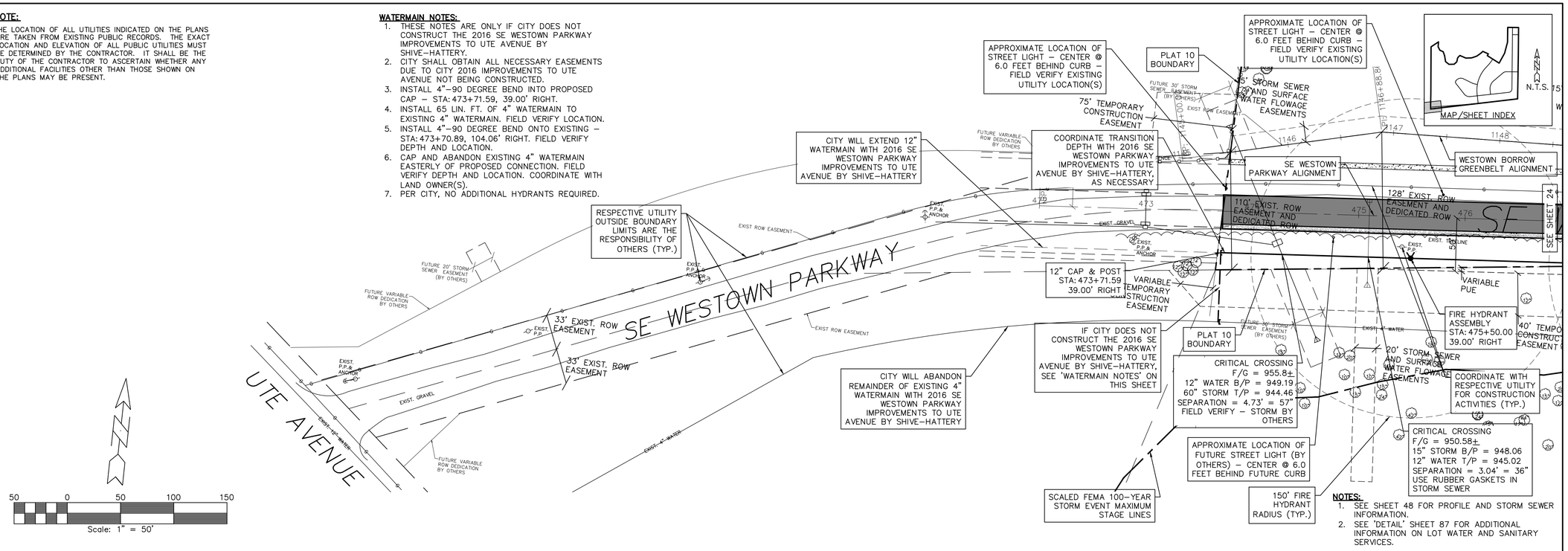
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP12.dwg, 10/19/2017 10:43:43 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

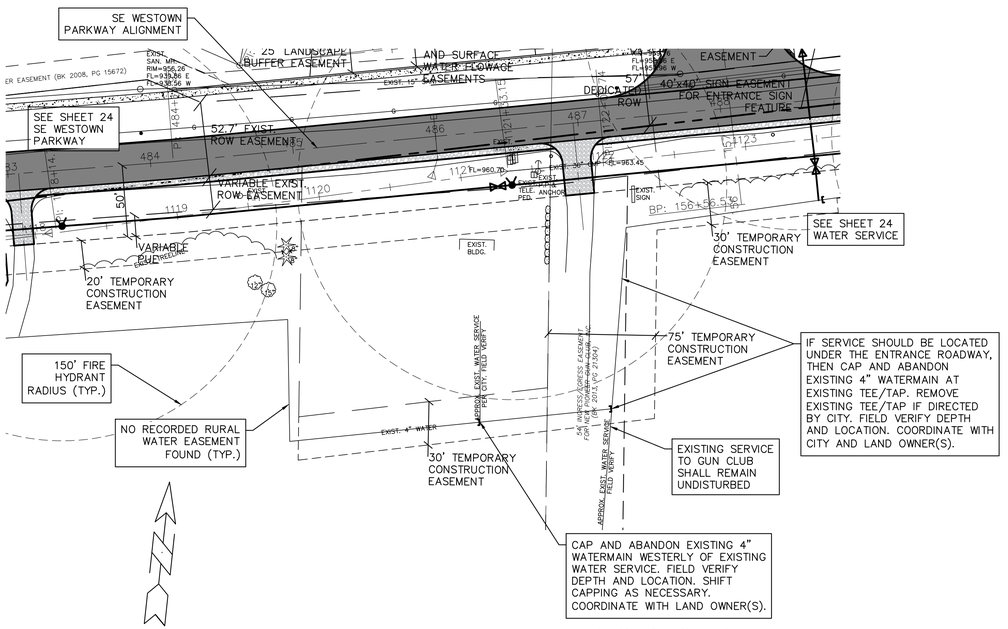
WATERMAIN NOTES:

1. THESE NOTES ARE ONLY IF CITY DOES NOT CONSTRUCT THE 2016 SE WESTOWN PARKWAY IMPROVEMENTS TO UTE AVENUE BY SHIVE–HATTERY.
2. CITY SHALL OBTAIN ALL NECESSARY EASEMENTS DUE TO CITY 2016 IMPROVEMENTS TO UTE AVENUE NOT BEING CONSTRUCTED.
3. INSTALL 4"–90 DEGREE BEND INTO PROPOSED CAP – STA: 473+71.59, 39.00' RIGHT.
4. INSTALL 65 LIN. FT. OF 4" WATERMAIN TO EXISTING 4" WATERMAIN. FIELD VERIFY LOCATION.
5. INSTALL 4"–90 DEGREE BEND ONTO EXISTING – STA: 473+70.89, 104.06' RIGHT. FIELD VERIFY DEPTH AND LOCATION.
6. CAP AND ABANDON EXISTING 4" WATERMAIN EASTERLY OF PROPOSED CONNECTION. FIELD VERIFY DEPTH AND LOCATION. COORDINATE WITH LAND OWNER(S).
7. PER CITY, NO ADDITIONAL HYDRANTS REQUIRED.



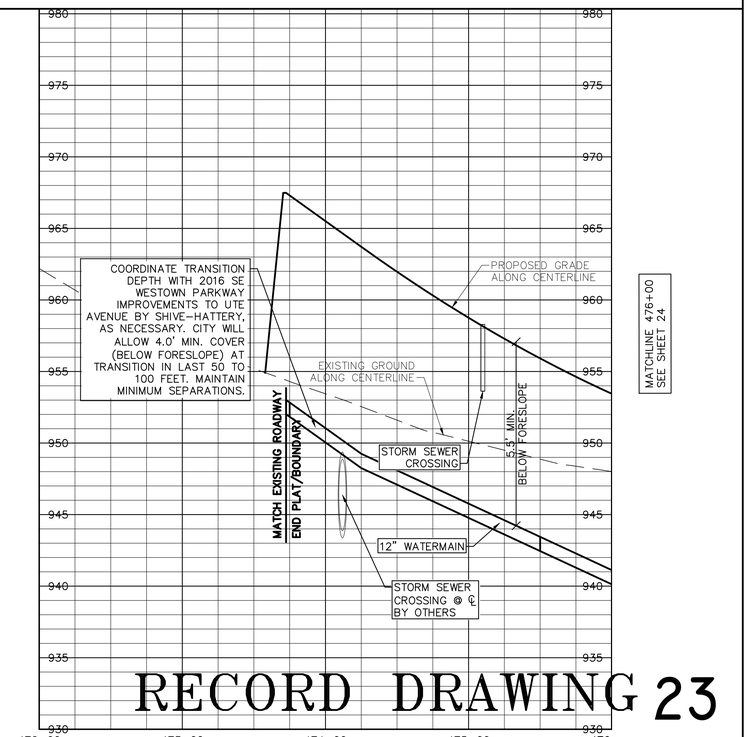
NOTES:

1. SEE SHEET 48 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.



WATER SERVICE DETAIL
SE WESTOWN PARKWAY STA. 486+12± RT.

SCALES:
1" = 50' HOR
1" = 5' VER



RECORD DRAWING 23

GLYNN VILLAGE PLAT 10 – SE WESTOWN PARKWAY – SANITARY & WATER I

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP21A.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 23 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15–013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP21A.dwg, 10/19/2017 10:44:06 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

SCALED FEMA 100-YEAR STORM EVENT MAXIMUM STAGE LINES

EXISTING PUMP STATION SHALL REMAIN UNDISTURBED

'BAILEY' WEST BASIN

OVERFLOW EASEMENT

SCALED FEMA 100-YEAR STORM EVENT MAXIMUM STAGE LINES

150' FIRE HYDRANT RADIUS (TYP.)

SEE SHEET 12 BAILEY CIRCLE

BAILEY CIRCLE ALIGNMENT

MAP/SHEET INDEX

N.T.S.

AS REQUIRED/NECESSARY, REMOVE EXISTING FRAME AND LID; ADJUSTMENT RING(S); PRECAST CONE SECTION; AND OTHER PRECAST RISER SECTION(S). ADJUST EXISTING SANITARY MANHOLE TO FINISHED GRADE BY ADDING/REMOVING PRECAST RISER SECTION(S) AND/OR ADJUSTMENT RING(S) PER SUDAS SW-301. RESET AND/OR REPLACE EXISTING PRECAST CONE SECTION, ADJUSTMENT RING(S), AND FRAME AND LID. RETEST MANHOLE ONLY. PROPOSED RIM: ~~947.70~~ 941.97

CRITICAL CROSSING F/G = 948.4± 9' ARCH STORM B/P = 936.27 15" SANITARY T/P = 933.90 SEPARATION = 2.36' = 28" FIELD VERIFY

AS REQUIRED/NECESSARY, REMOVE EXISTING FRAME AND LID; ADJUSTMENT RING(S); PRECAST CONE SECTION; AND OTHER PRECAST RISER SECTION(S). ADJUST EXISTING SANITARY MANHOLE TO FINISHED GRADE BY ADDING/REMOVING PRECAST RISER SECTION(S) AND/OR ADJUSTMENT RING(S) PER SUDAS SW-301. RESET AND/OR REPLACE EXISTING PRECAST CONE SECTION, ADJUSTMENT RING(S), AND FRAME AND LID. RETEST MANHOLE ONLY. PROPOSED RIM: ~~955.25~~ 955.29

30' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENT

20' STORM SEWER EASEMENT

AS REQUIRED/NECESSARY, REMOVE EXISTING FRAME AND LID; ADJUSTMENT RING(S); PRECAST CONE SECTION; AND OTHER PRECAST RISER SECTION(S). ADJUST EXISTING SANITARY MANHOLE TO FINISHED GRADE BY ADDING/REMOVING PRECAST RISER SECTION(S) AND/OR ADJUSTMENT RING(S) PER SUDAS SW-301. RESET AND/OR REPLACE EXISTING PRECAST CONE SECTION, ADJUSTMENT RING(S), AND FRAME AND LID. RETEST MANHOLE ONLY. PROPOSED RIM: ~~969.43~~± 968.14

WARRIOR LANE ALIGNMENT

10' WATERMAIN EASEMENT & PUE

SEE SHEET 14 WARRIOR LANE

WESTOWN BORROW GREENBELT ALIGNMENT

CRITICAL CROSSING F/G = 947.7± 18" STORM B/P = 940.77 WATER SERVICE T/P = 937.55 SEPARATION = 3.22' = 39" FIELD VERIFY WATER SERVICE USE RUBBER GASKETS IN STORM SEWER.

APPROXIMATE LOCATION OF STREET LIGHT – CENTER @ 6.0 FEET BEHIND CURB – FIELD VERIFY EXISTING UTILITY LOCATION(S)

APPROXIMATE LOCATION OF FUTURE STREET LIGHT (BY OTHERS) – CENTER @ 6.0 FEET BEHIND FUTURE CURB

MIDAMERICAN ENERGY SHALL INSTALL SINGLE ELECTRICAL CONDUIT UNDER PAVEMENT. COORDINATE WITH CITY.

EXISTING SANITARY MANHOLE SHALL REMAIN UNDISTURBED

APPROXIMATE LOCATION OF STREET LIGHT – CENTER @ 6.0 FEET BEHIND CURB – FIELD VERIFY EXISTING UTILITY LOCATION(S)

UNNAMED STREAM/CREEK

50' STORM SEWER EASEMENT

BAILEY EAST GREENBELT ALIGNMENT

10' PUE

MIDAMERICAN ENERGY SHALL INSTALL SINGLE ELECTRICAL CONDUIT UNDER PAVEMENT TO AVOID PROPOSED STORM SEWER. EXISTING SANITARY SEWER, EXISTING GAS, PROPOSED DITCH, AND PROPOSED WATERMAIN

100' ROW

10' PUE

CRITICAL CROSSING SEE WARRIOR LANE SHEET 14

STORM SEWER EASEMENT

SEE SHEET 23

128' EXIST. ROW EASEMENT AND DEDICATED ROW

SE WESTOWN PARKWAY

SE WESTOWN PARKWAY ALIGNMENT

12" VALVE STA: 478+20.00 39.00' RIGHT

CRITICAL CROSSING (PROJECTED) F/G = 939.7± 18" STORM B/P = 939.57 12" WATER T/P = 934.00 SEPARATION = 5.57' = 67"

74' EXIST. ROW EASEMENT AND DEDICATED ROW

FIRE HYDRANT ASSEMBLY STA: 483+35.00 39.00' RIGHT

COORDINATE WITH RESPECTIVE UTILITY FOR CONSTRUCTION ACTIVITIES (TYP.)

APPROXIMATE LOCATION OF STREET LIGHT – CENTER @ 6.0 FEET BEHIND CURB – FIELD VERIFY EXISTING UTILITY LOCATION(S)

52.7' EXIST. ROW EASEMENT

DEDICATED ROW

40' SIGN EASEMENT FOR ENTRANCE SIGN FEATURE

SEE SHEET 25

APPROXIMATE LOCATION OF STREET LIGHT – CENTER @ 6.0 FEET BEHIND CURB – FIELD VERIFY EXISTING UTILITY LOCATION(S)

APPROXIMATE LOCATION OF FUTURE STREET LIGHT (BY OTHERS) – CENTER @ 6.0 FEET BEHIND FUTURE CURB

SCALED FEMA 100-YEAR STORM EVENT MAXIMUM STAGE LINES

VARIABLE WIDTH PUE

40' TEMPORARY CONSTRUCTION EASEMENT

FIRE HYDRANT ASSEMBLY STA: 478+30.00 39.00' RIGHT

PLAT 10 BOUNDARY

FIRE HYDRANT ASSEMBLY STA: 480+50.00 39.00' RIGHT

VARIABLE EXIST. ROW EASEMENT

CRITICAL CROSSING F/G = 942.0± 15" STORM B/P = 941.80 12" WATER T/P = 936.49 SEPARATION = 5.31' = 64"

APPROXIMATE LOCATION OF FUTURE STREET LIGHT (BY OTHERS) – CENTER @ 6.0 FEET BEHIND FUTURE CURB EASEMENT

WESTOWN DITCH ALIGNMENT

CRITICAL CROSSING F/G = 959.0± (PROJECTED) 15" STORM B/P = 957.40 12" WATER T/P = 952.09 SEPARATION = 5.31' = 64"

FIRE HYDRANT ASSEMBLY STA: 486+50.00 39.00' RIGHT

4"-90 DEGREE BEND ONTO EXISTING. STA: 488+62.14 70.15' RIGHT. FIELD VERIFY DEPTH AND LOCATION. COORDINATE WITH LAND OWNER(S).

12"x8"x12"x8" CROSS STA: 488+62.14 39.00' RIGHT (OR ANOTHER TEE WITH REDUCER(S) AS NEEDED)

CAP AND ABANDON EXISTING WATER SERVICE AND MAIN AT CONNECTION. FIELD VERIFY DEPTH AND LOCATION. COORDINATE WITH LAND OWNER(S).

20' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

70' TEMPORARY CONSTRUCTION EASEMENT

20' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS

CAP AND ABANDON EXISTING WATER SERVICE AT MAIN. FIELD VERIFY DEPTH AND LOCATION. COORDINATE WITH LAND OWNER(S).

CRITICAL CROSSING F/G = 949.0± (PROJECTED) 42" STORM B/P = 944.49 WATER SERVICE T/P = 939.50 SEPARATION = 4.99' = 60"

12" VALVE STA: 486+40.00 39.00' RIGHT

CAP AND ABANDON EXISTING 4" WATERMAIN EASTERLY OF PROPOSED CONNECTION. FIELD VERIFY DEPTH AND LOCATION. COORDINATE WITH LAND OWNER(S).

4" VALVE STA: 488+62.14 46.30' RIGHT

CONNECT EXISTING SERVICE WITH MINIMUM 1" WATER SERVICE TO PROPOSED 12" WATERMAIN. CAP AND ABANDON EXISTING WATER SERVICE SOUTHERLY. FIELD VERIFY SIZE, DEPTH, AND LOCATION. COORDINATE WITH LAND OWNER(S).

APPROXIMATE LOCATION OF FUTURE STREET LIGHT (BY OTHERS) – CENTER @ 6.0 FEET BEHIND FUTURE CURB

SCALED FEMA 100-YEAR STORM EVENT MAXIMUM STAGE LINES

CRITICAL CROSSING F/G = 935.32 (PROJECTED) 9' ARCH STORM B/P = 935.07 12" WATER T/P = 931.00 SEPARATION = 4.07' = 49"

EXTEND EXISTING SERVICE WITH MINIMUM 1" WATER SERVICE TO PROPOSED 12" WATERMAIN. FIELD VERIFY SIZE, DEPTH, AND LOCATION. COORDINATE WITH LAND OWNER(S).

SEE SHEET 23 WATER SERVICE

EXISTING SERVICE TO GUN CLUB SHALL REMAIN UNDISTURBED

Scale: 1" = 50'

NOTES:

1. SEE SHEET 50 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.

SCALES:
1" = 50' HOR
1" = 5' VER

MATCHLINE 476+00 SEE SHEET 23

MATCHLINE 489+00 SEE SHEET 25

ADJUST EXISTING SANITARY MANHOLE TO FINISHED GRADE

STORM SEWER CROSSING

EXISTING GROUND ALONG CENTERLINE

PROPOSED GRADE ALONG CENTERLINE

℄ ENTRANCE RIGHT

℄ WARRIOR LANE

EXISTING SANITARY SEWER

EXISTING SANITARY MANHOLE SHALL REMAIN UNDISTURBED

℄ ENTRANCE LEFT

5.5' MIN. BELOW FORESLOPE

ADJUST EXISTING SANITARY MANHOLE TO FINISHED GRADE

STORM SEWER CROSSING

12" WATERMAIN

EXISTING 9' ARCH CMP

5.5' MIN. BELOW DITCH

12" WATERMAIN

STORM SEWER CROSSING

EX. SAN. SEWER

4' MIN.

EXISTING SANITARY SEWER

975 970 965 960 955 950 945 940 935 930 925

+00 477+00 478+00 479+00 480+00 481+00 482+00 483+00 484+00 485+00 486+00 487+00 488+00 489

RECORD DRAWING

24

GLYNN VILLAGE PLAT 10 - SE WESTOWN PARKWAY - SANITARY & WATER 2

NO.	REVISION	DATE	BY
1	MIDAM REQUESTED DESIGN REVISION	04/08/16	JRK

FOR:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP22A.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	24 OF 100
LOCATION:		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

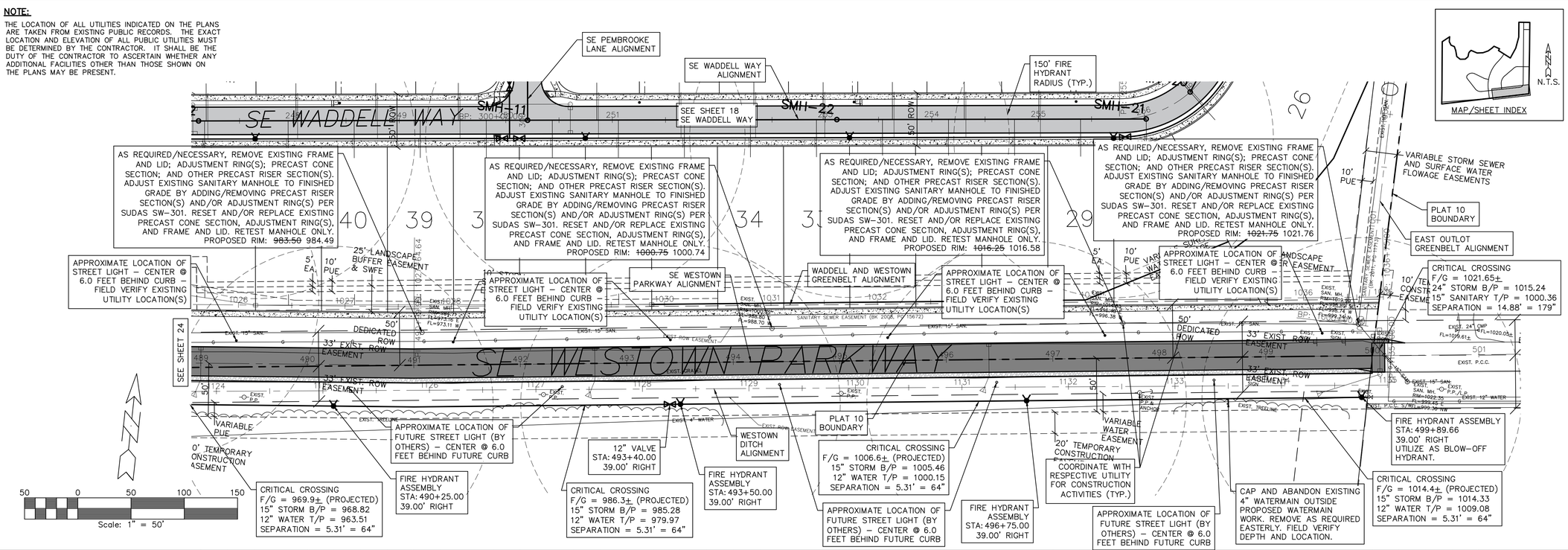
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP22A.dwg, 10/19/2017 10:44:35 AM, PJV

NOTE:

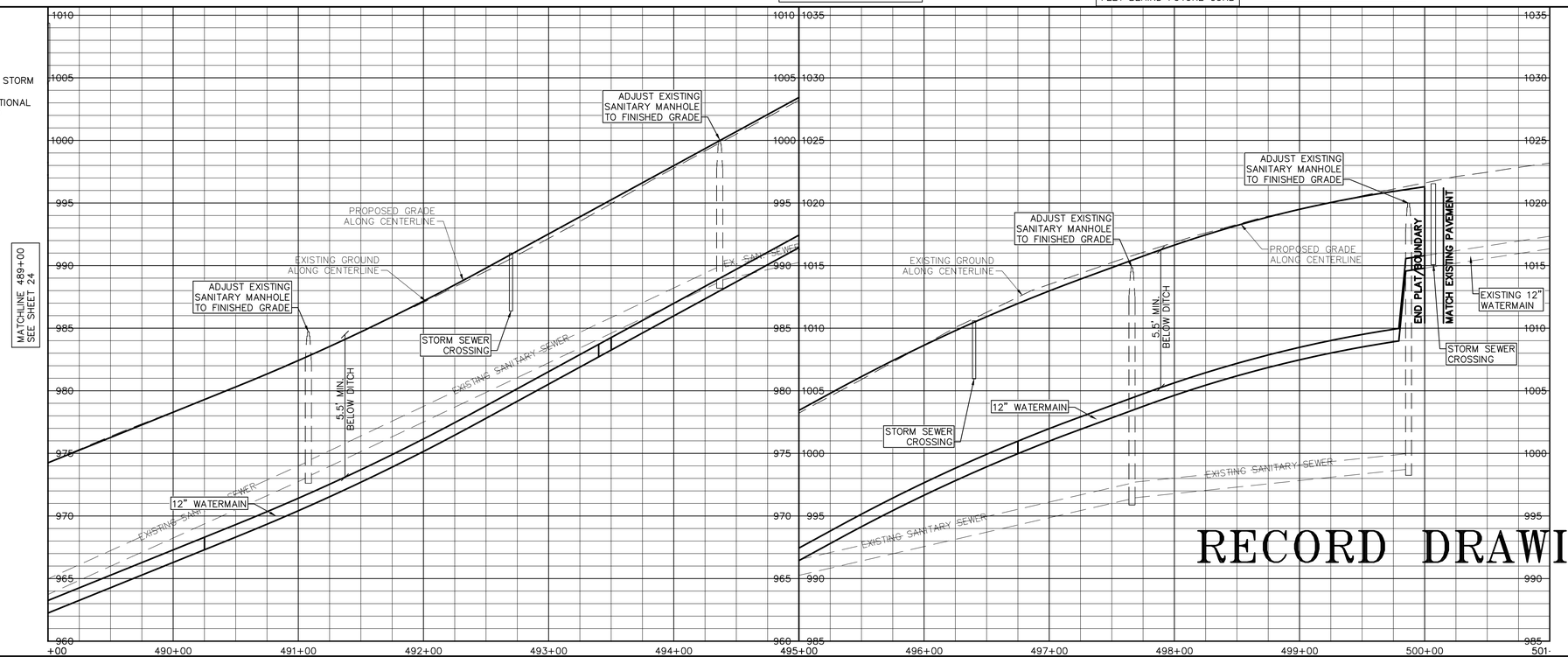
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:

1. SEE SHEET 52 FOR PROFILE AND STORM SEWER INFORMATION.
2. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT WATER AND SANITARY SERVICES.



RECORD DRAWING

25

GLYNN VILLAGE PLAT 10 - SE WESTOWN PARKWAY - SANITARY & WATER 3

NO.	REVISION	DATE	BY

FOR:

DESIGNED BY: JRK
DRAWN BY: PJV
CHECKED BY: DJS
DATE: 02/24/2016
SHEET 25 OF 100
FILE NO.: 15-013
SCALE: 1" = 50'
DWG: 15-013-PP23A.dwg
FIELD BOOK:
LOCATION:

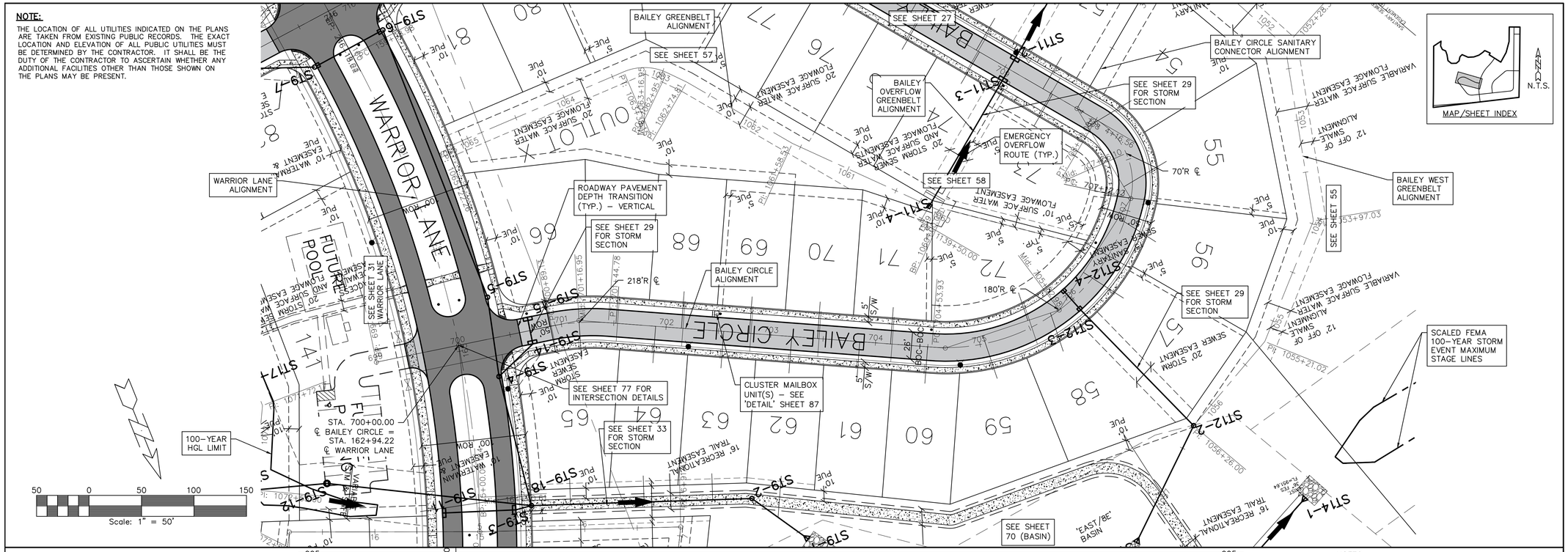
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

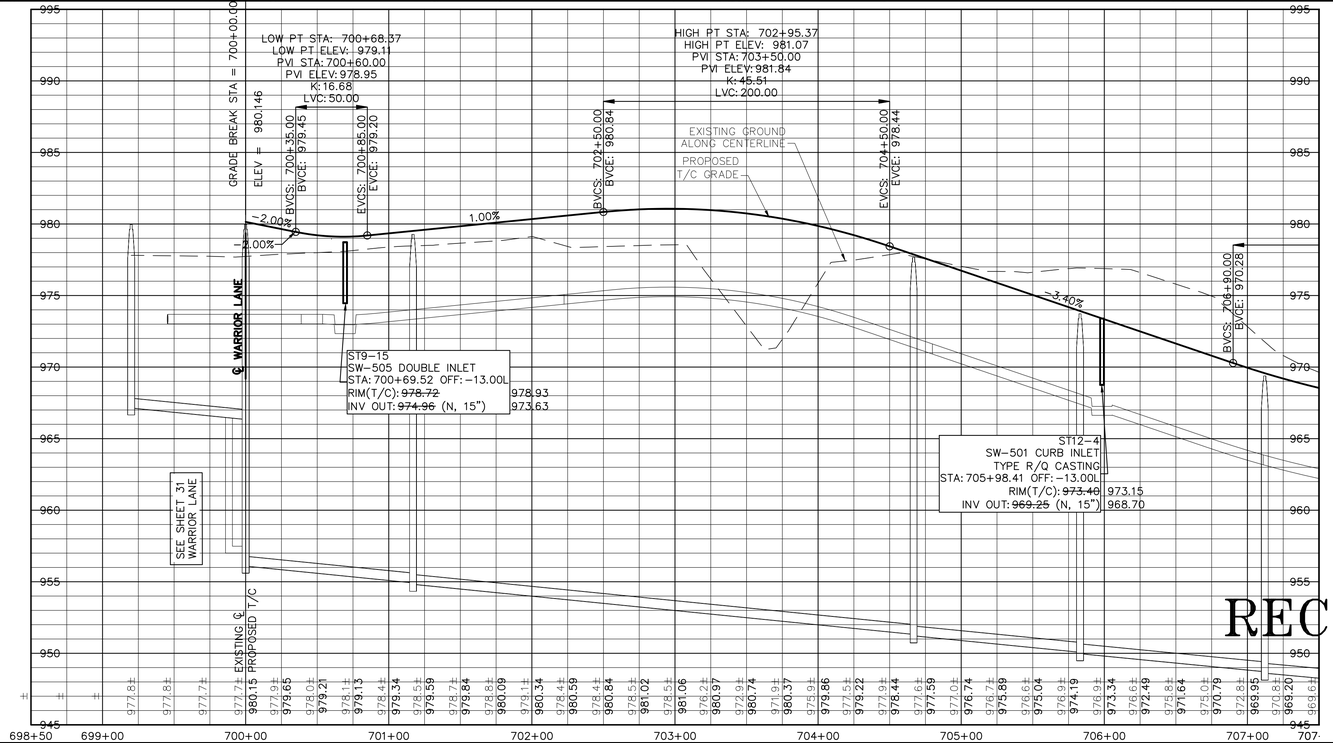
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP23A.dwg, 10/19/2017 10:44:59 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 11 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

26

GLYNN VILLAGE PLAT 10 - BAILEY CIRCLE - PAVEMENT & STORM I

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP20.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 26 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

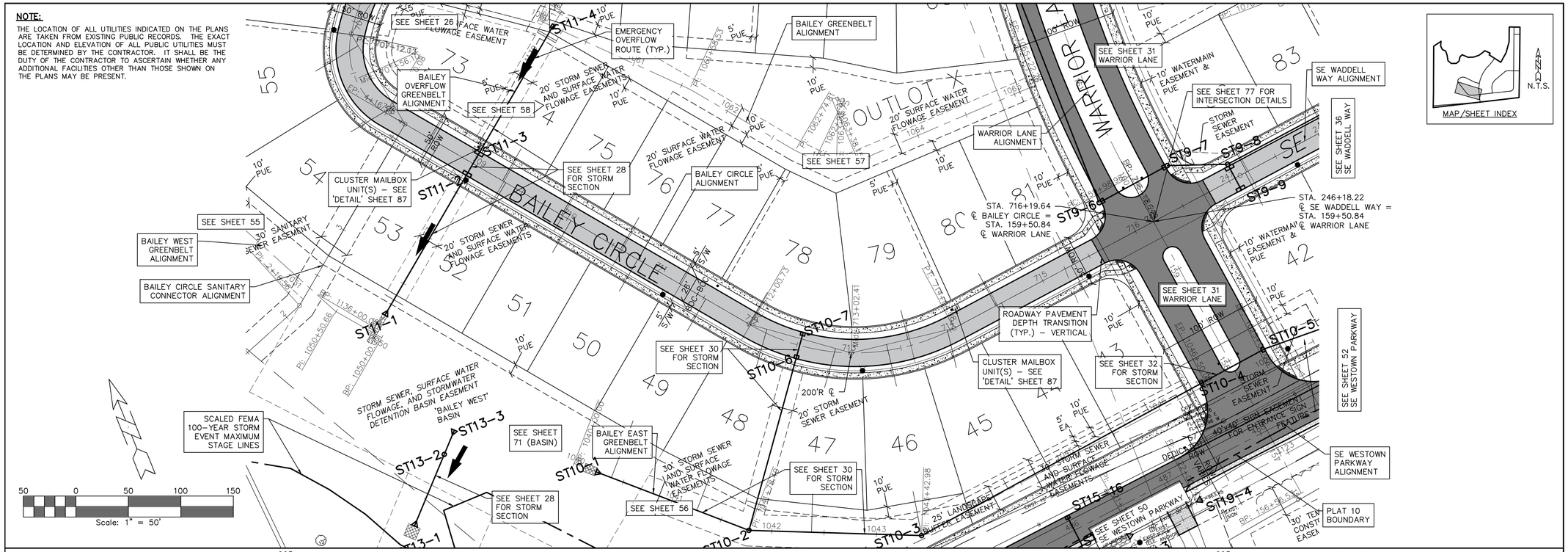
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

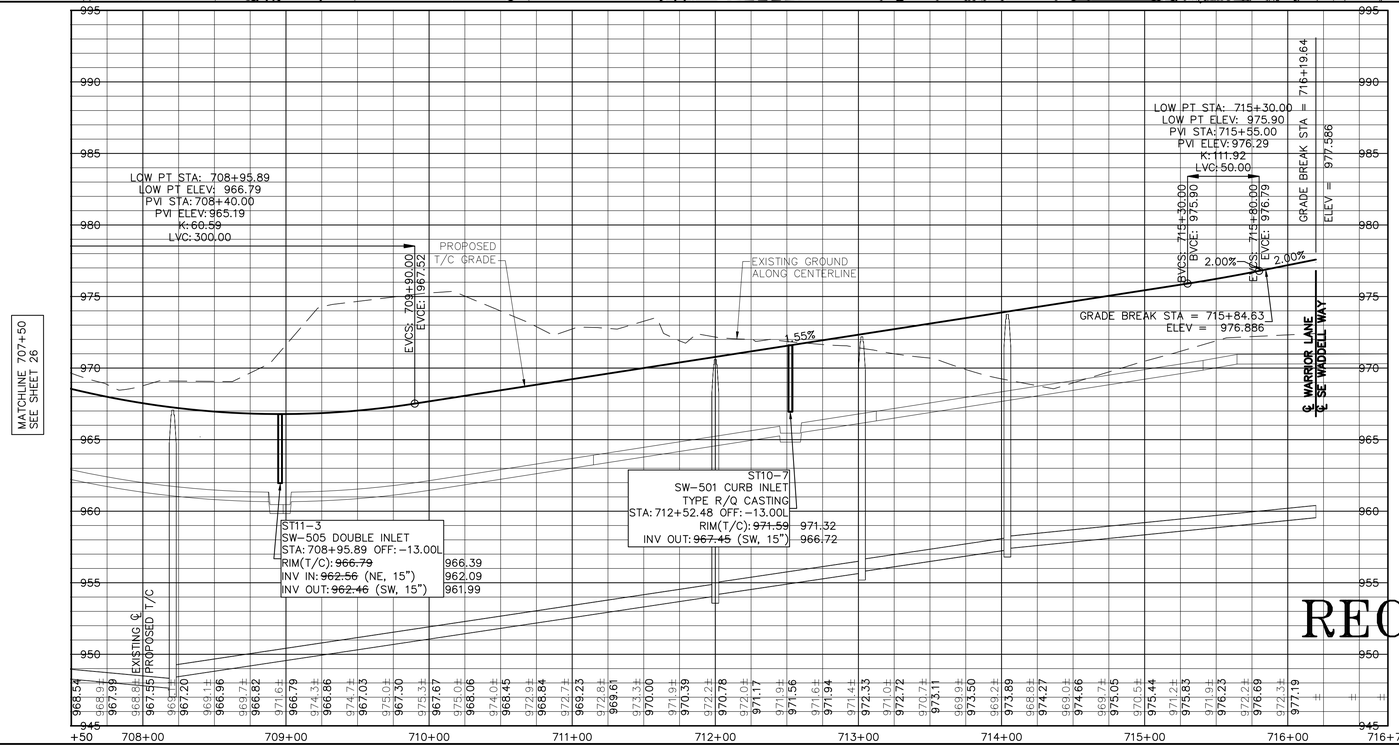
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP20.dwg, 10/19/2017 10:45:27 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 12 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

27

GLYNN VILLAGE PLAT 10 - BAILEY CIRCLE - PAVEMENT & STORM 2

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP32.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 27 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

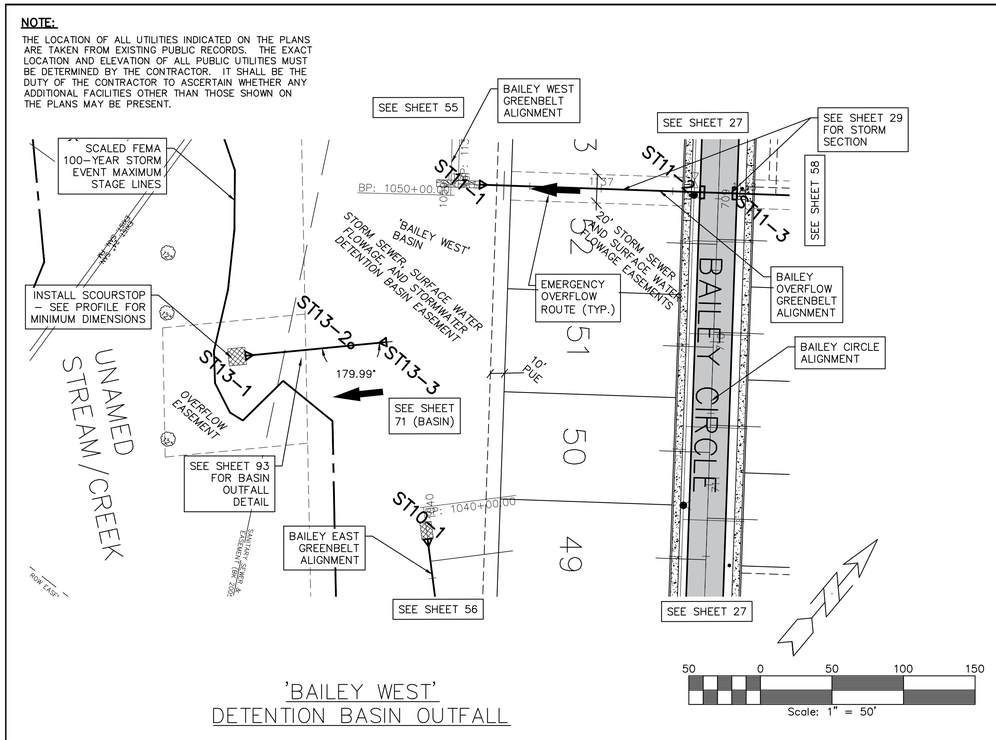
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

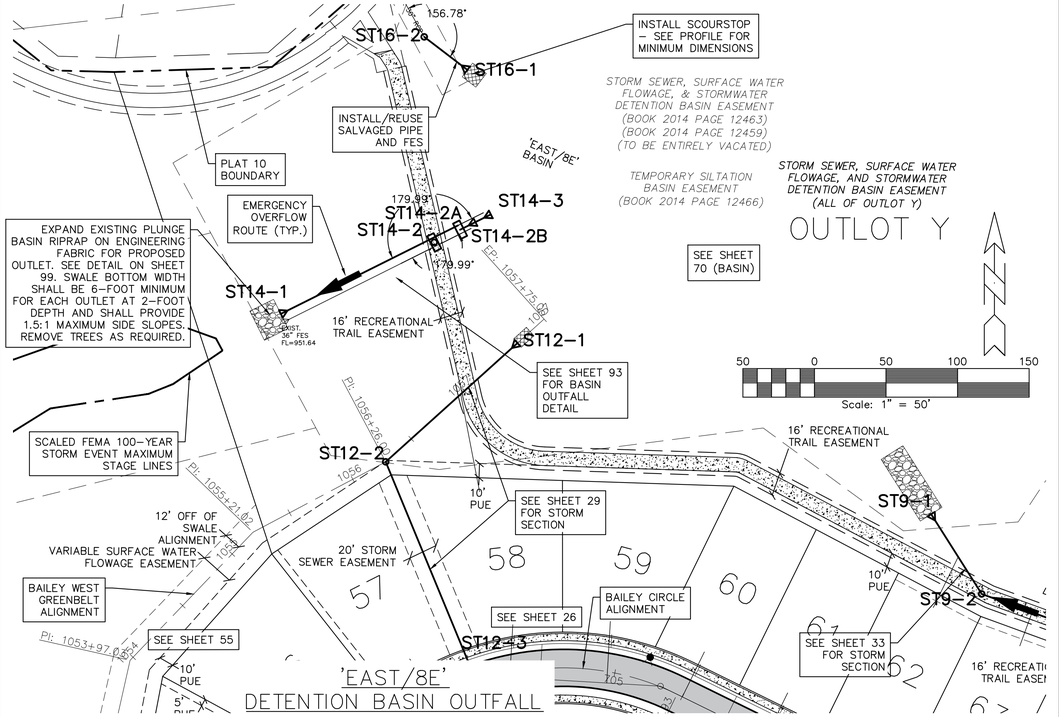
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP32.dwg, 10/19/2017 10:45:52 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

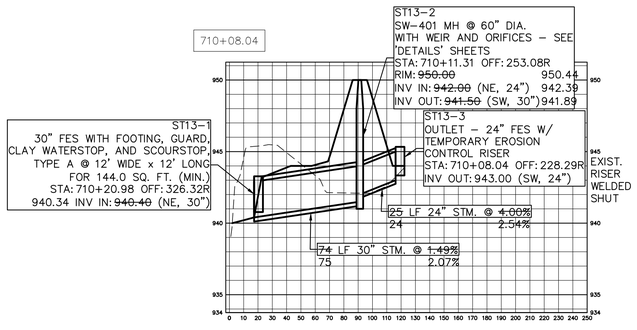


'BAILEY WEST'
DETENTION BASIN OUTFALL



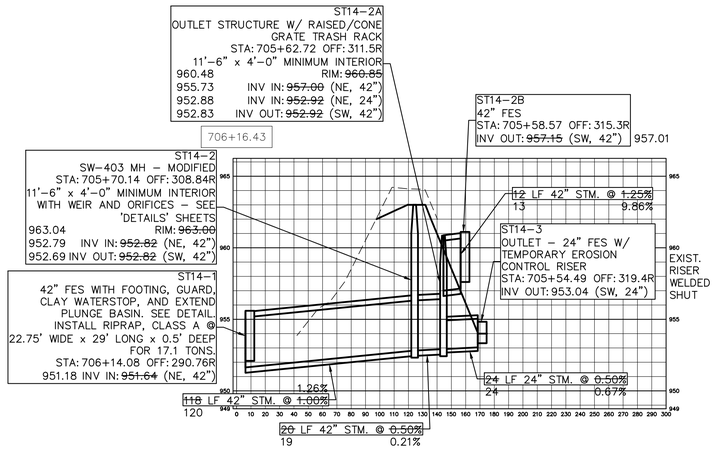
'EAST/8E'
DETENTION BASIN OUTFALL

SCALES:
1" = 50' HOR
1" = 5' VER



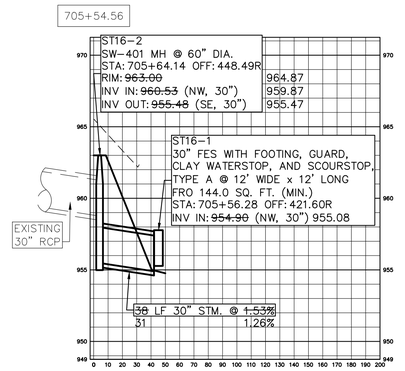
'BAILEY WEST'
DETENTION BASIN OUTFALL

SCALES:
1" = 50' HOR
1" = 5' VER



'EAST/8E'
DETENTION BASIN OUTFALL

SCALES:
1" = 50' HOR
1" = 5' VER



DETENTION BASIN
STORM MODIFICATION

RECORD DRAWING 28

GLYNN VILLAGE PLAT 10 - BASINS' OUTFALLS - STORM SEWER

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP24.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 28 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY

FOR:

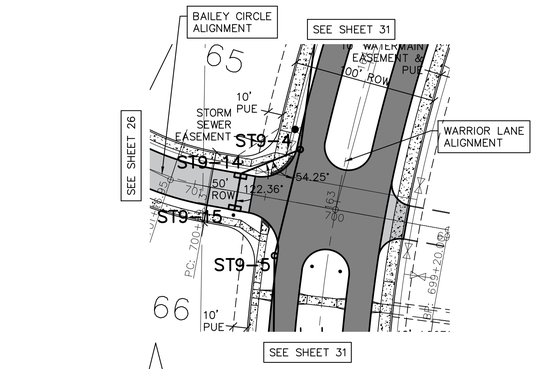
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

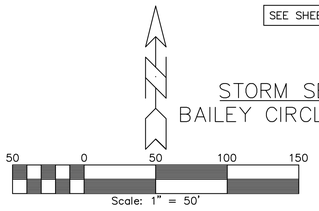
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP24.dwg, 10/19/2017 10:46:35 AM, PJV

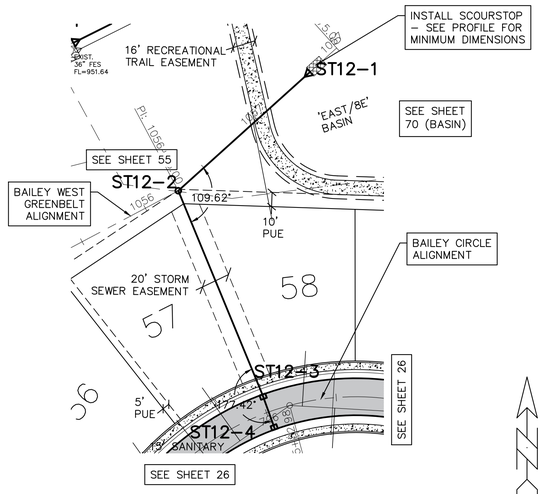
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

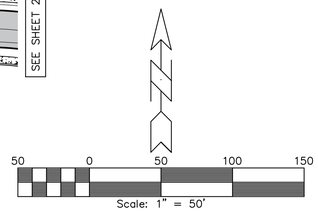


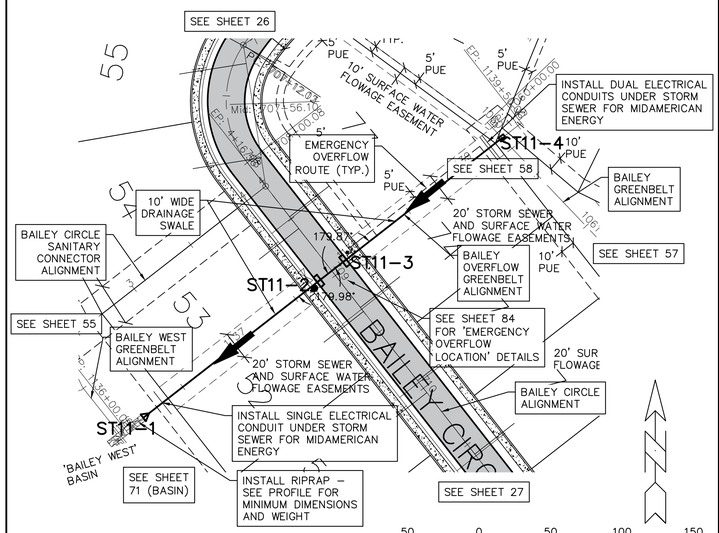
STORM SEWER CROSSING
BAILEY CIRCLE STA. 700+69.52



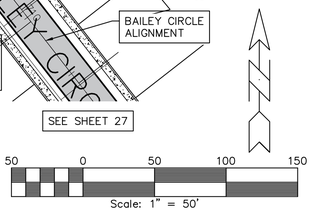


STORM SEWER CROSSING
BAILEY CIRCLE STA. 705+98.41

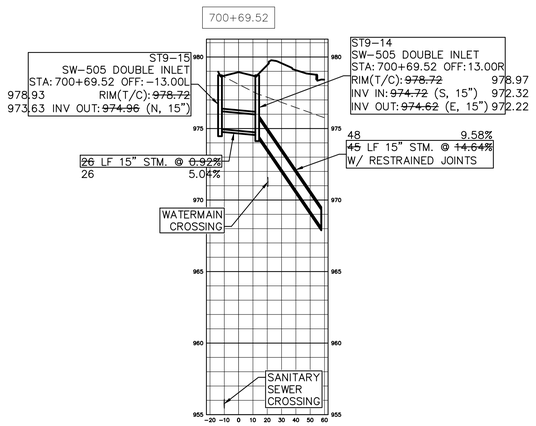




STORM SEWER CROSSING
BAILEY CIRCLE STA. 708+95.89

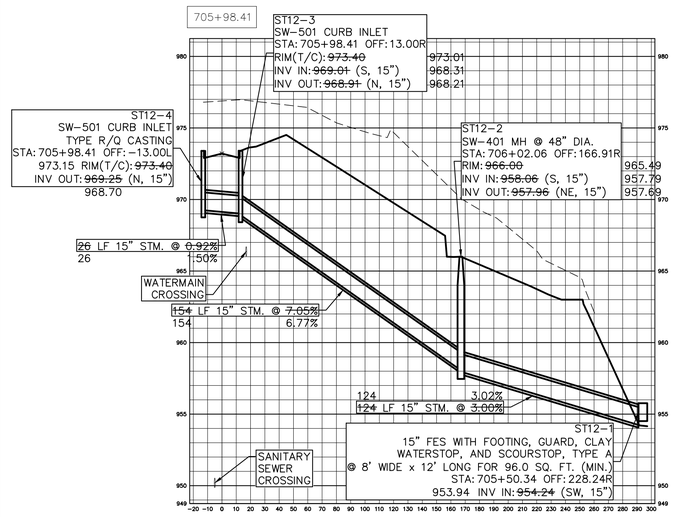


SCALES:
1" = 50' HOR
1" = 5' VER



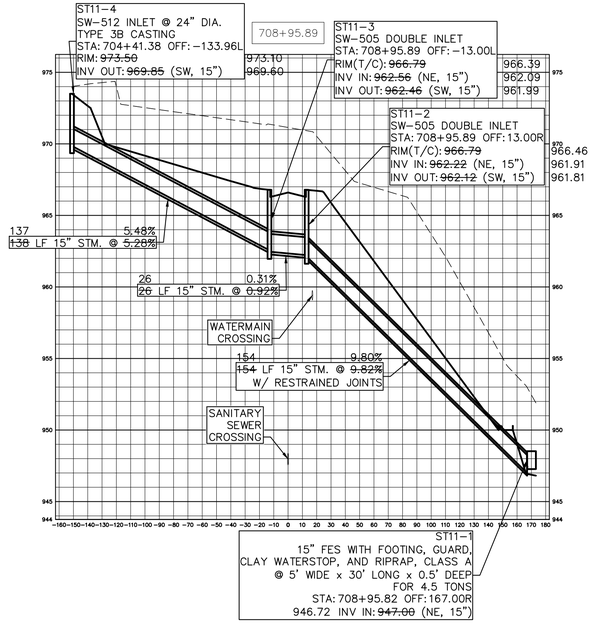
STORM SEWER CROSSING
BAILEY CIRCLE STA. 700+69.52

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
BAILEY CIRCLE STA. 705+98.41

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
BAILEY CIRCLE STA. 708+95.89

10 - BAILEY CIRCLE - STORM SECTIONS A

SCALE: 1" = 50'
DWG: 15-013-PP33.dwg
FIELD BOOK:
LOCATION:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 29 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

FOR:

NO.	REVISION	DATE	BY

GLYNN VILLAGE PLAT

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

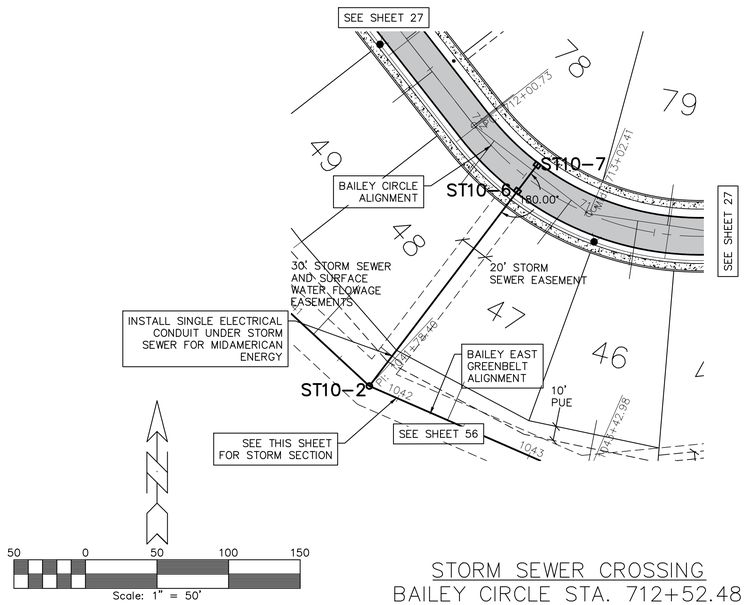
29

RECORD DRAWING

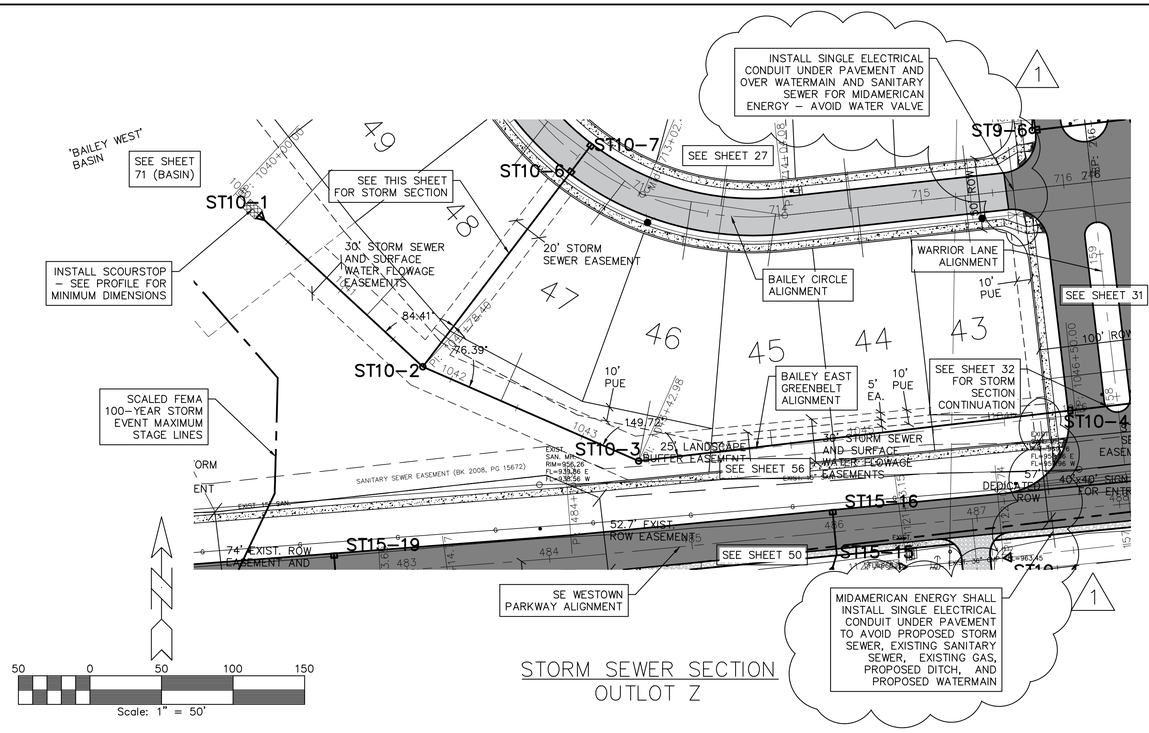
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP33.dwg, 10/19/2017 10:47:27 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

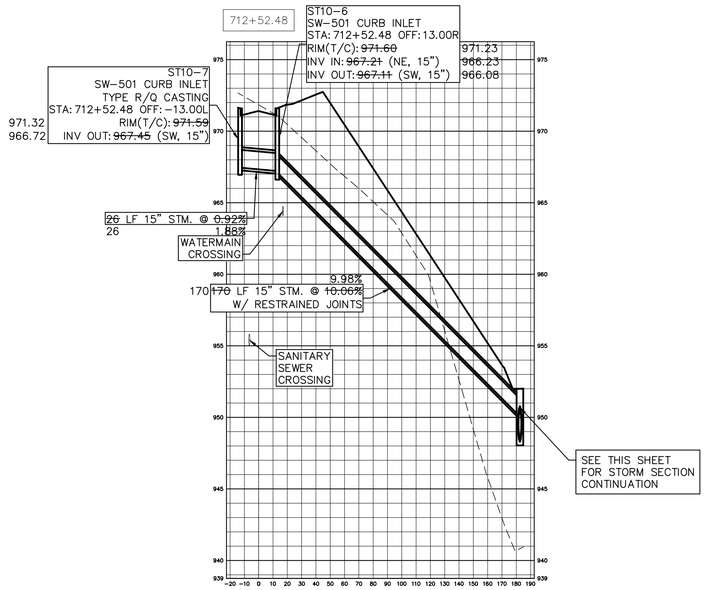


STORM SEWER CROSSING
BAILEY CIRCLE STA. 712+52.48



STORM SEWER SECTION
OUTLOT Z

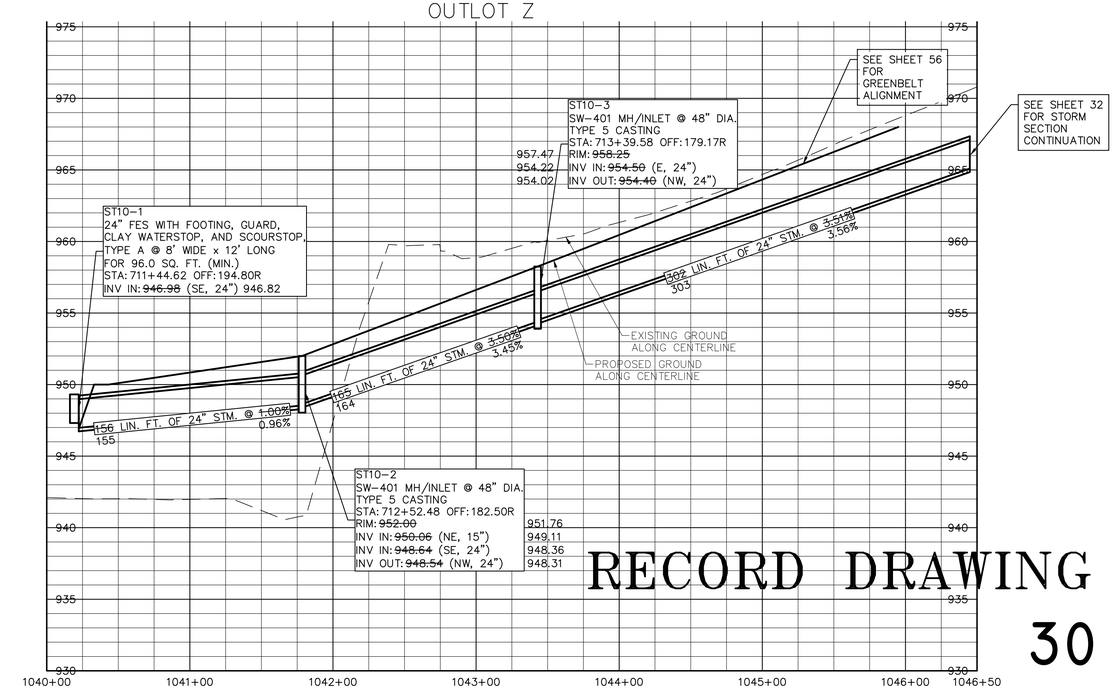
SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
BAILEY CIRCLE STA. 712+52.48

SCALES:
1" = 50' HOR
1" = 5' VER

STORM SEWER SECTION
OUTLOT Z



RECORD DRAWING

30

GLYNN VILLAGE PLAT 10 - BAILEY CIRCLE - STORM SECTIONS B

NO.	REVISION	DATE	BY
1	MIDAM REQUESTED DESIGN REVISION	04/08/16	JRK

FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP34.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 30 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

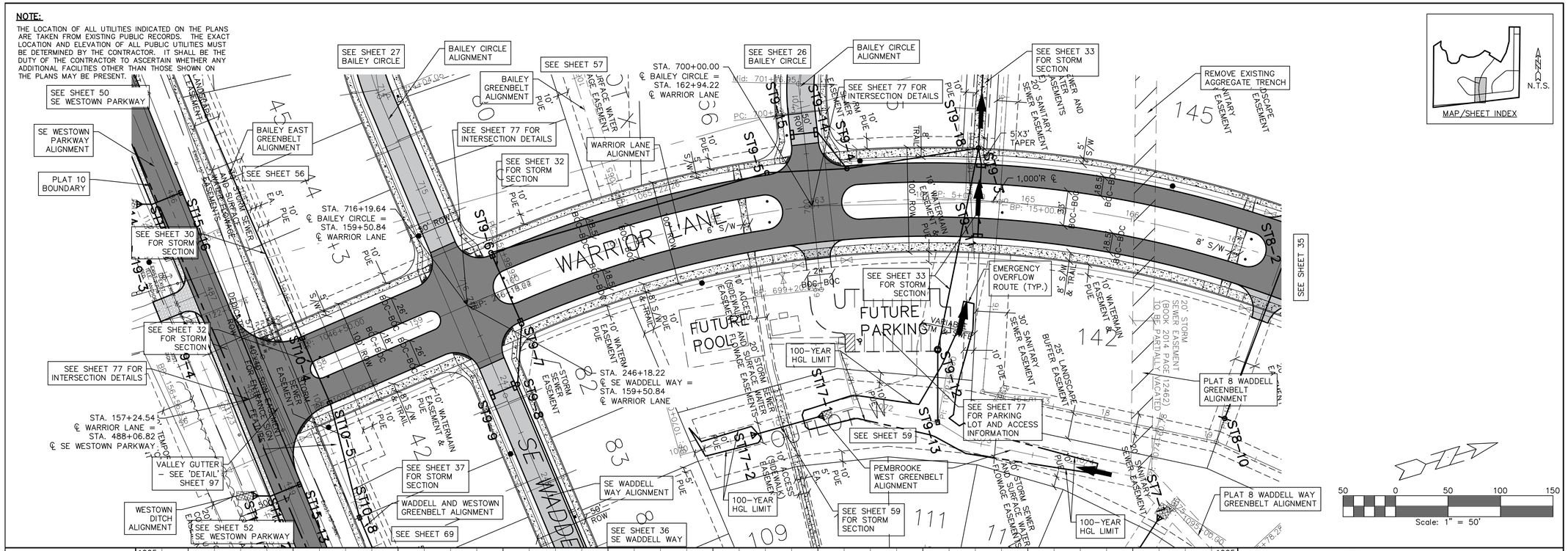
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

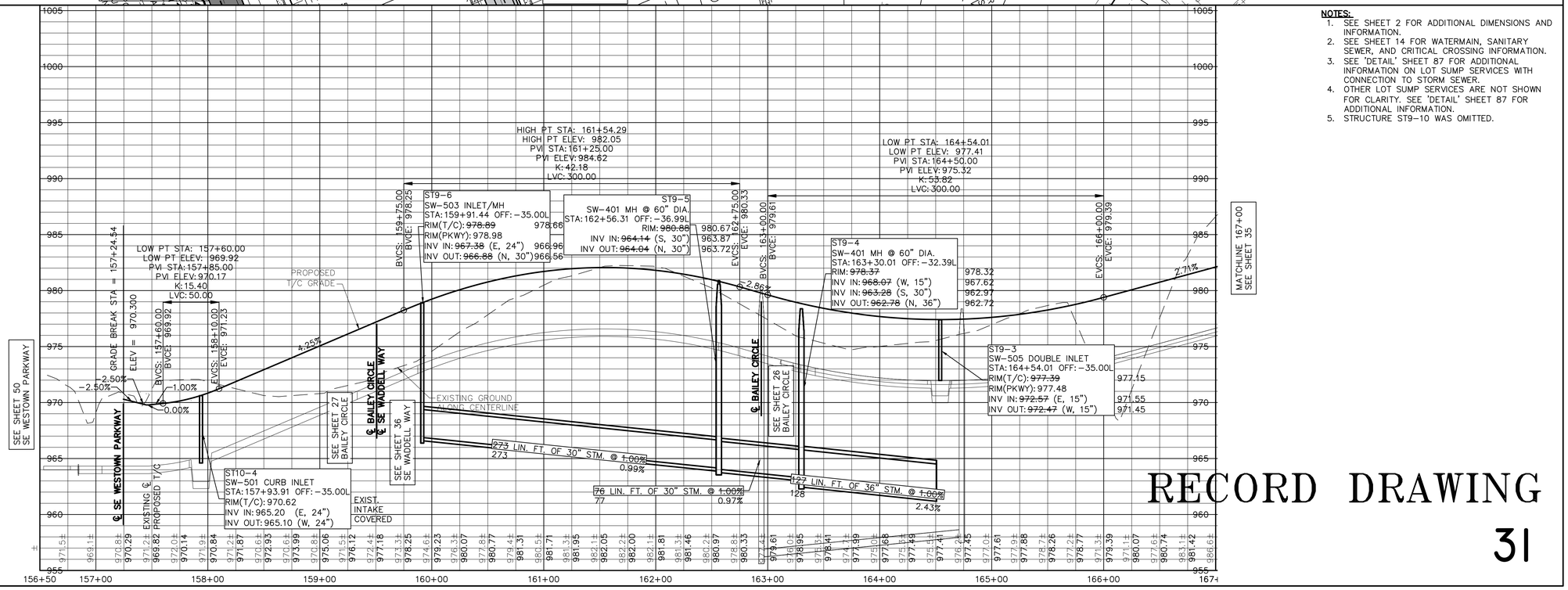
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP34.dwg, 10/19/2017 10:48:10 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 14 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.
5. STRUCTURE ST9-10 WAS OMITTED.

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - PAVEMENT & STORM I

LOCATION:

SCALE: 1" = 50' | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-PP13.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 31 OF 100 | FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

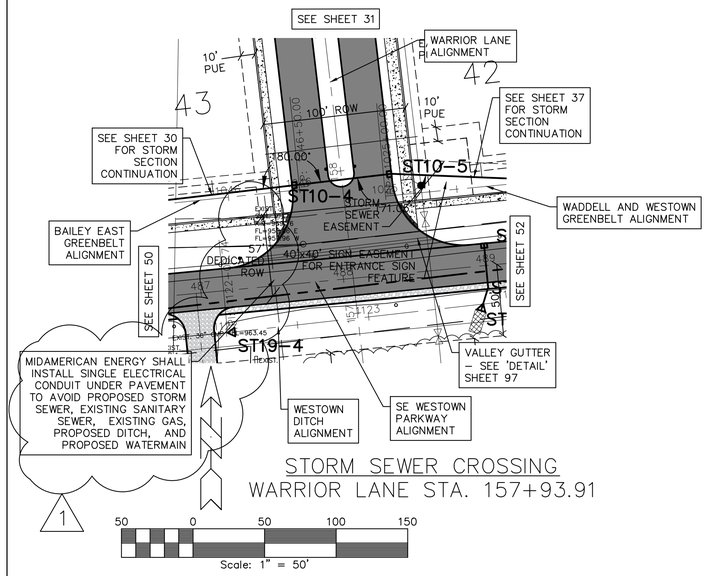
RECORD DRAWING

31

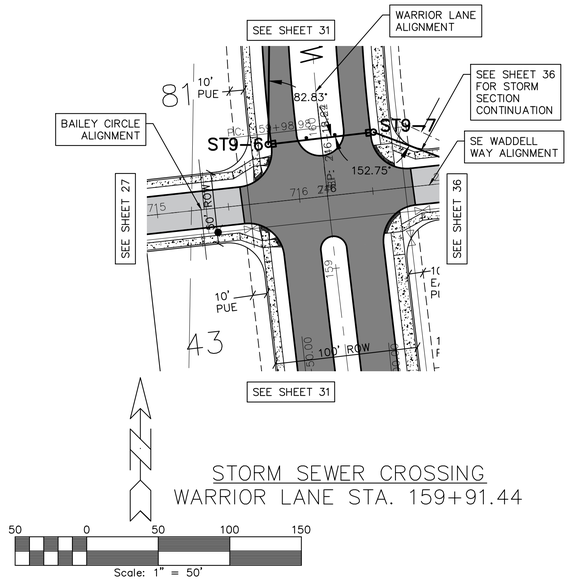
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP13.dwg, 10/19/2017 10:48:42 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

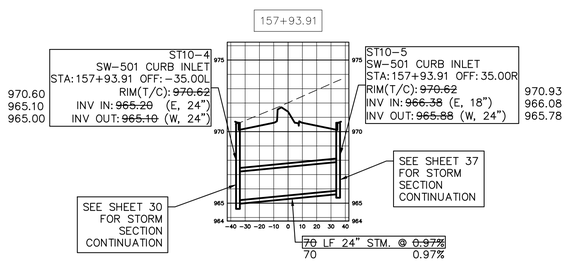


STORM SEWER CROSSING
WARRIOR LANE STA. 157+93.91



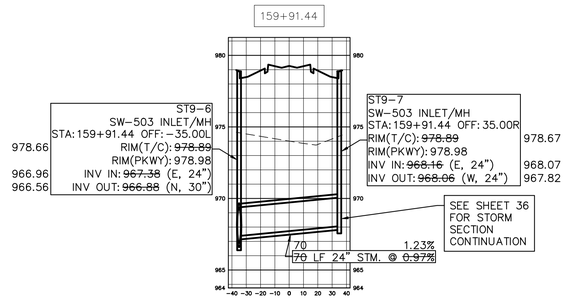
STORM SEWER CROSSING
WARRIOR LANE STA. 159+91.44

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
WARRIOR LANE STA. 157+93.91

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
WARRIOR LANE STA. 159+91.44

RECORD DRAWING

32

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - STORM SECTIONS A

NO.	REVISION	DATE	BY
1	MIDAM REQUESTED DESIGN REVISION	04/06/16	JRK

FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP26.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 32 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

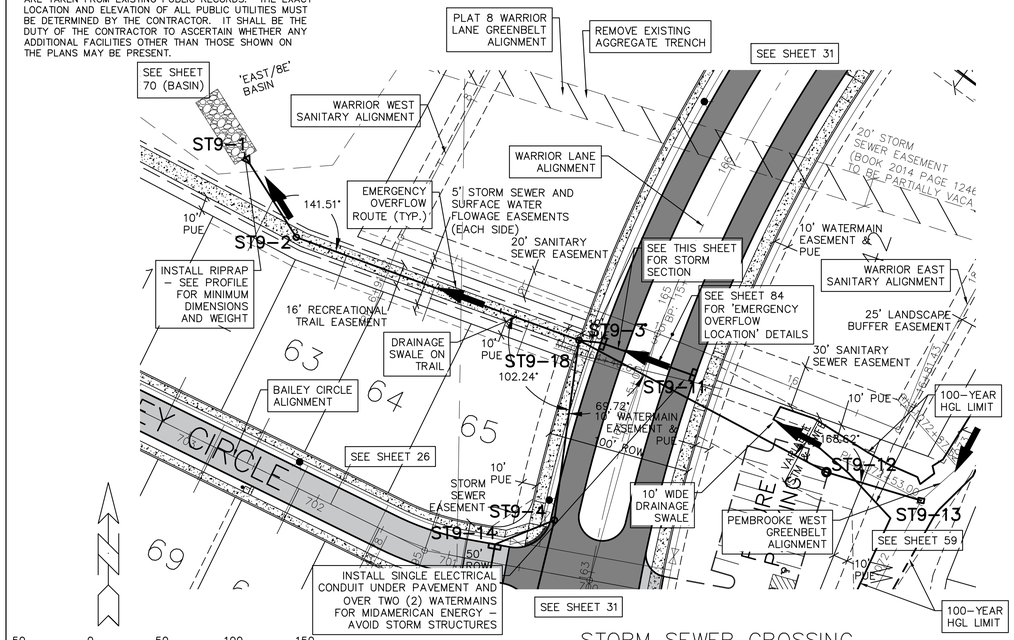
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

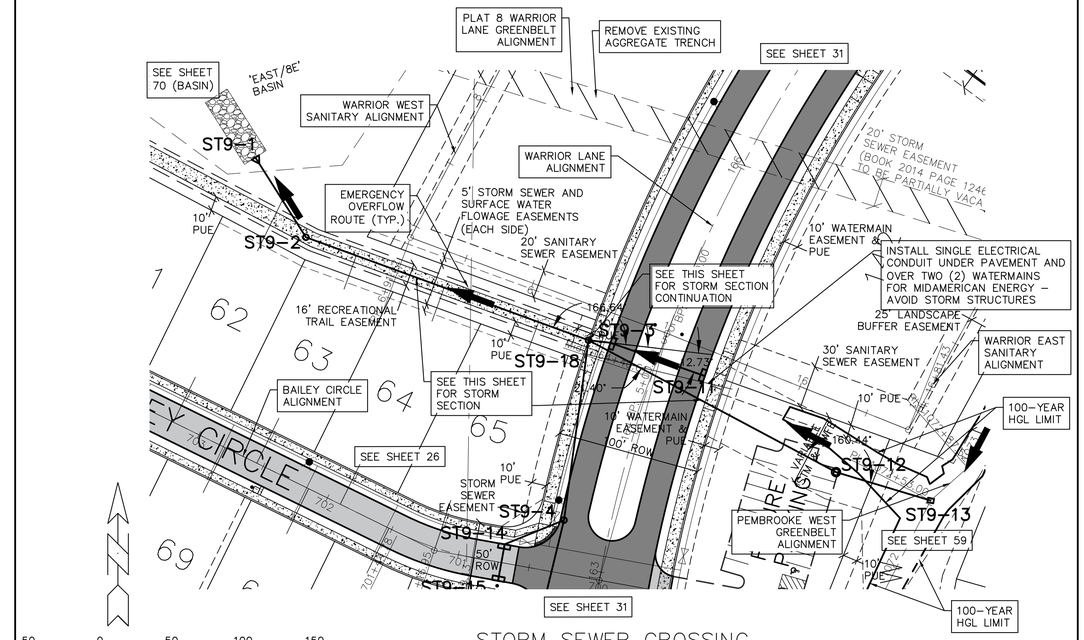
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP26.dwg, 10/19/2017 10:49:19 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

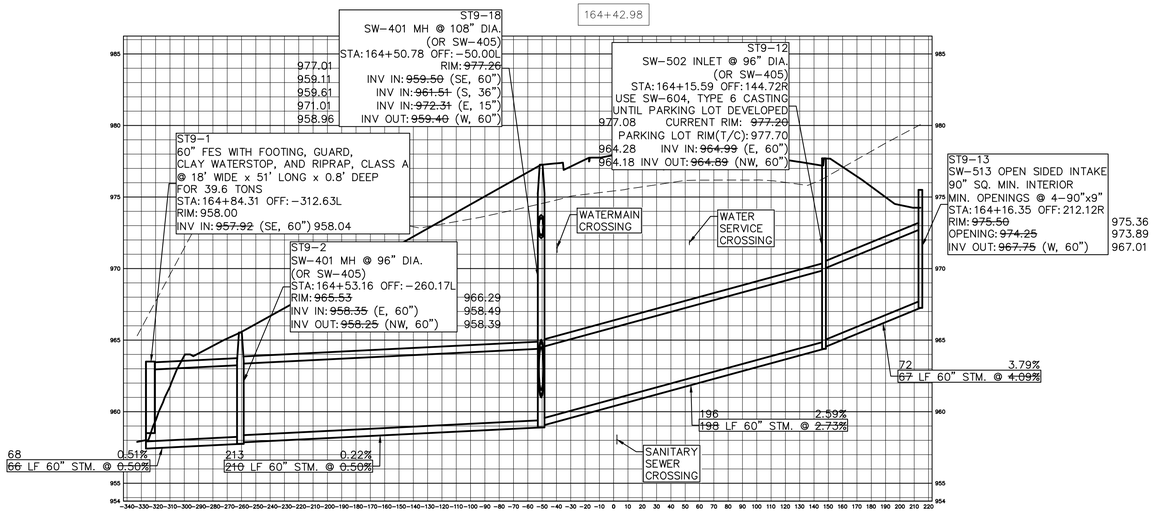


STORM SEWER CROSSING
WARRIOR LANE STA. 164+42.98



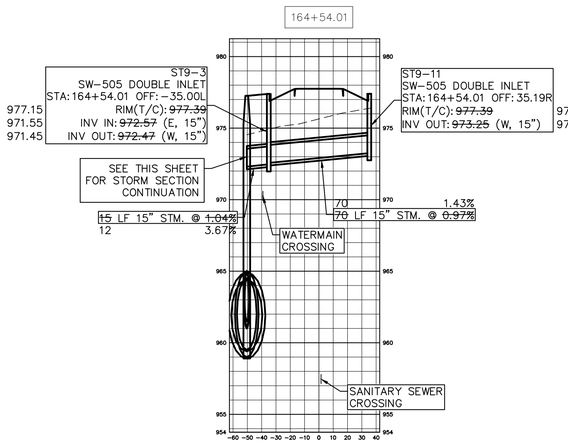
STORM SEWER CROSSING
WARRIOR LANE STA. 164+54.01

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
WARRIOR LANE STA. 164+42.98

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
WARRIOR LANE STA. 164+54.01

33

RECORD DRAWING

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - STORM SECTIONS B

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP25.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 33 OF 100

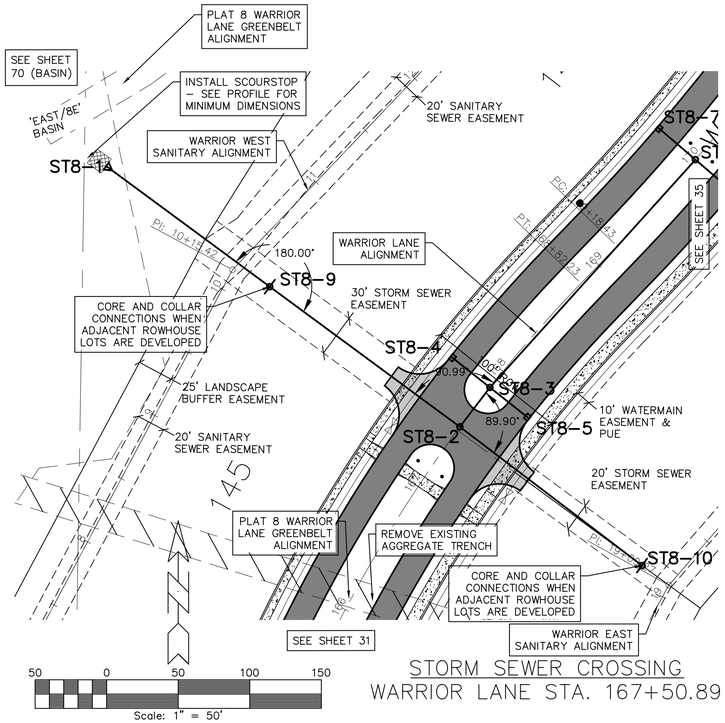
DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

15-013

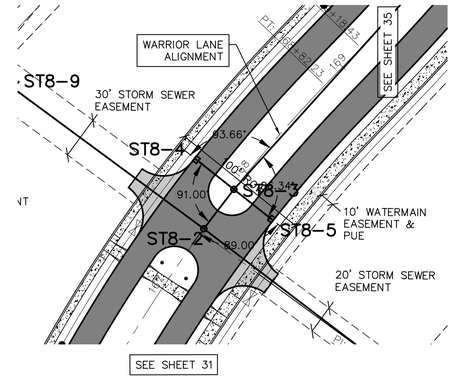
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP25.dwg, 10/19/2017 10:50:00 AM, PJV

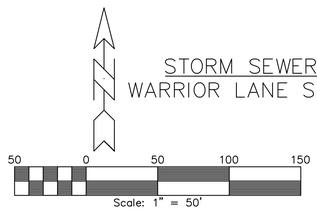
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

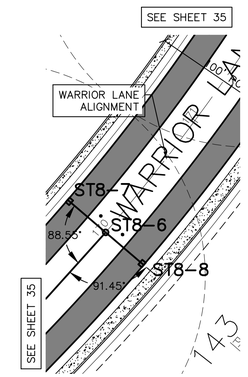


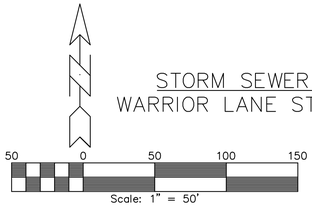
STORM SEWER CROSSING
WARRIOR LANE STA. 167+50.89





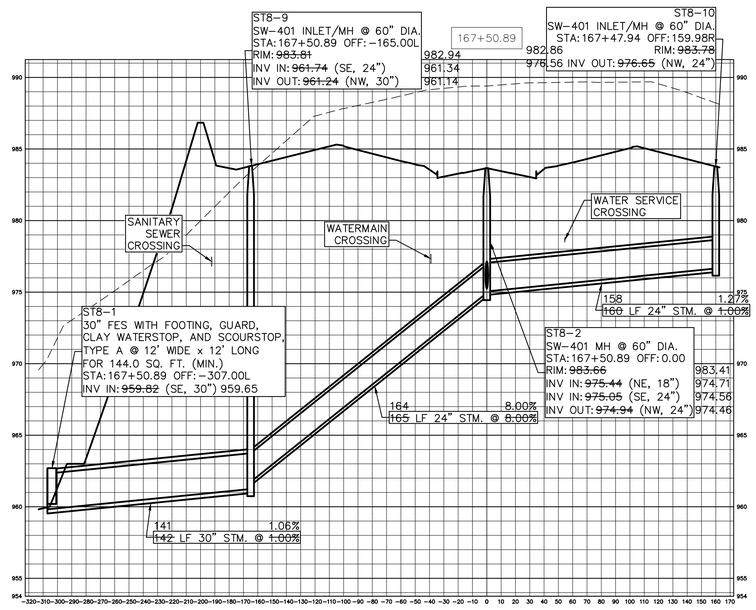
STORM SEWER CROSSING
WARRIOR LANE STA. 167+85.51





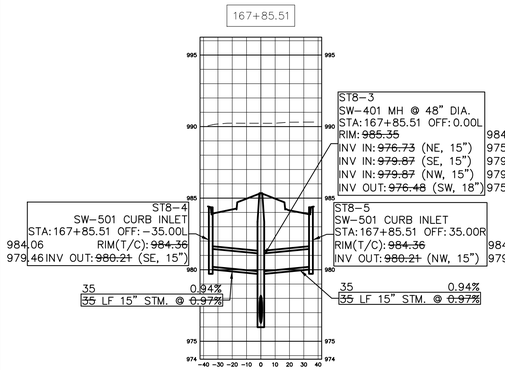
STORM SEWER CROSSING
WARRIOR LANE STA. 170+00.00

SCALES:
1" = 50' HOR
1" = 5' VER



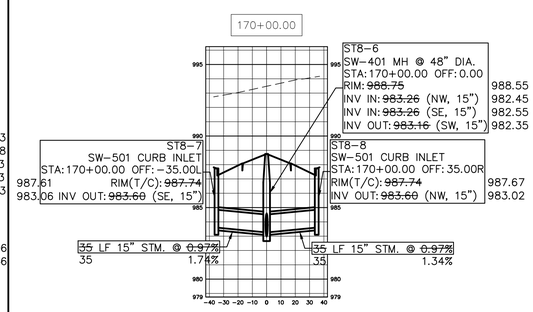
STORM SEWER CROSSING
WARRIOR LANE STA. 167+50.89

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
WARRIOR LANE STA. 167+85.51

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
WARRIOR LANE STA. 170+00.00

RECORD DRAWING 34

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - STORM SECTIONS C

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

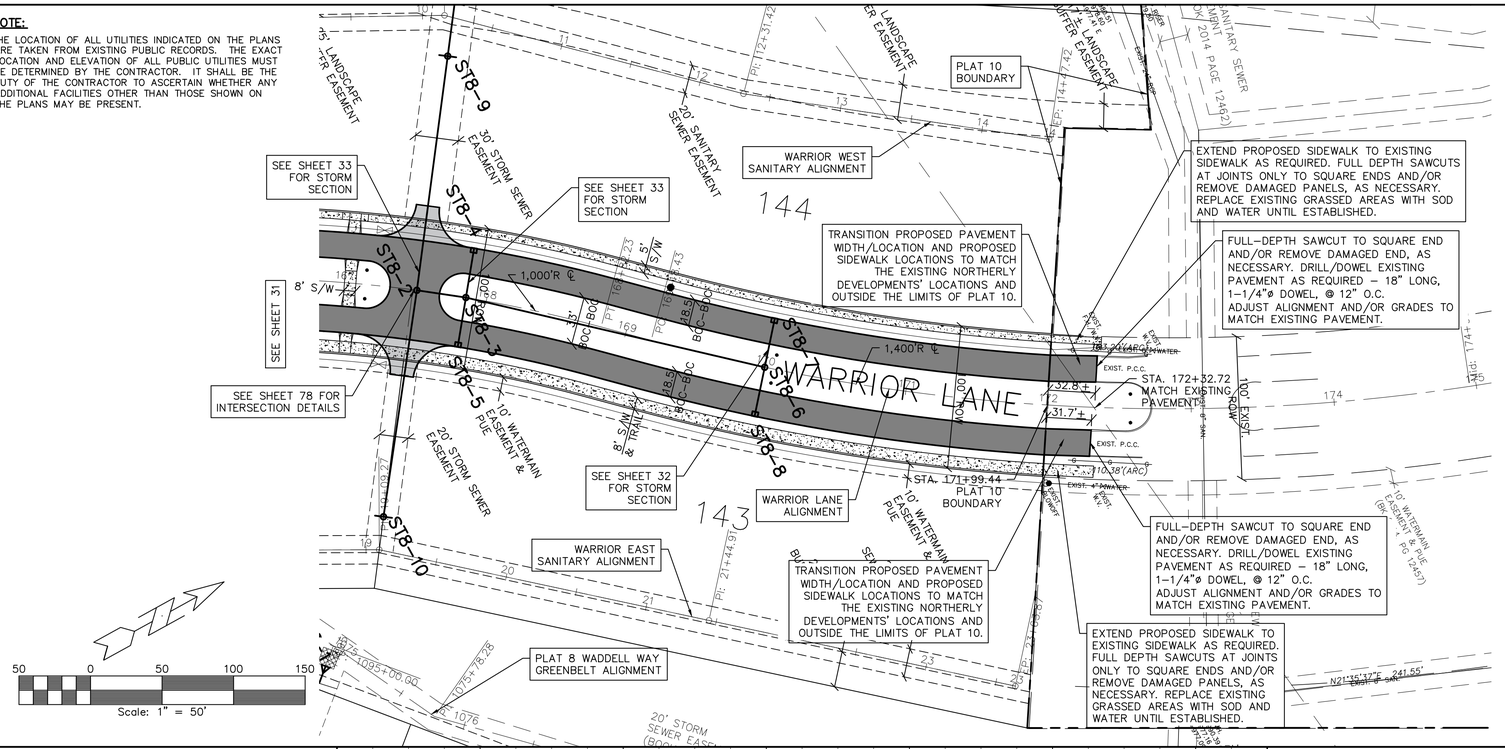
LOCATION:

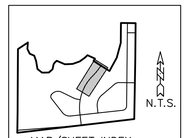
SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP25A.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET 34 OF 100	
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP25A.dwg, 10/19/2017 10:50:45 AM, PJV

NOTE:

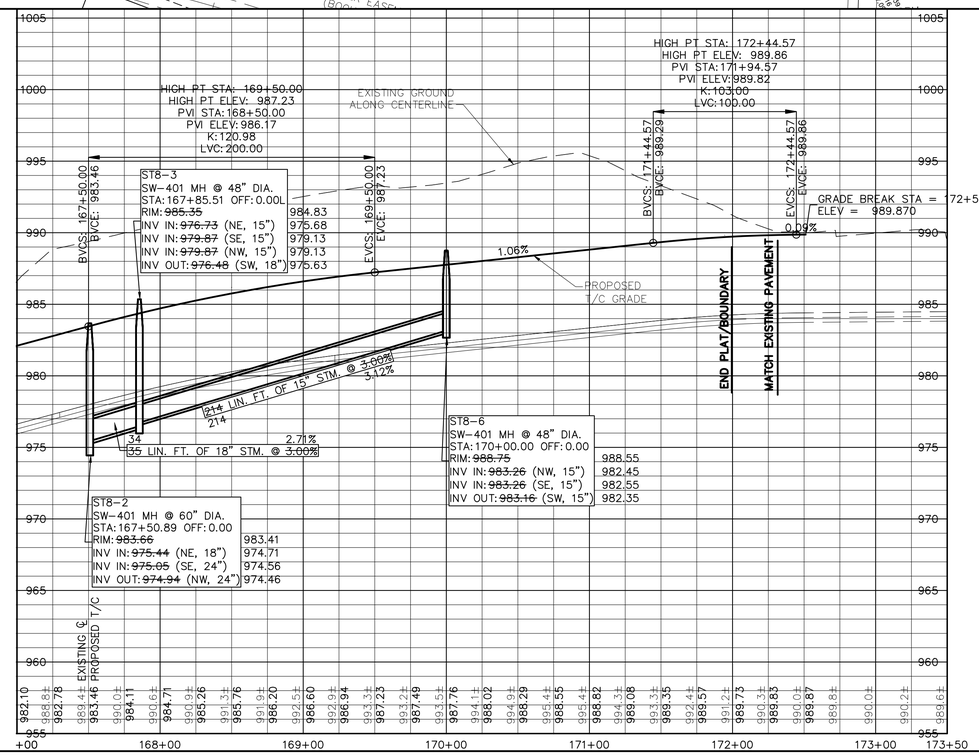
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





MAP/SHEET INDEX

SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 15 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

35

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - PAVEMENT & STORM 2

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-PP14.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	35 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY

FOR:

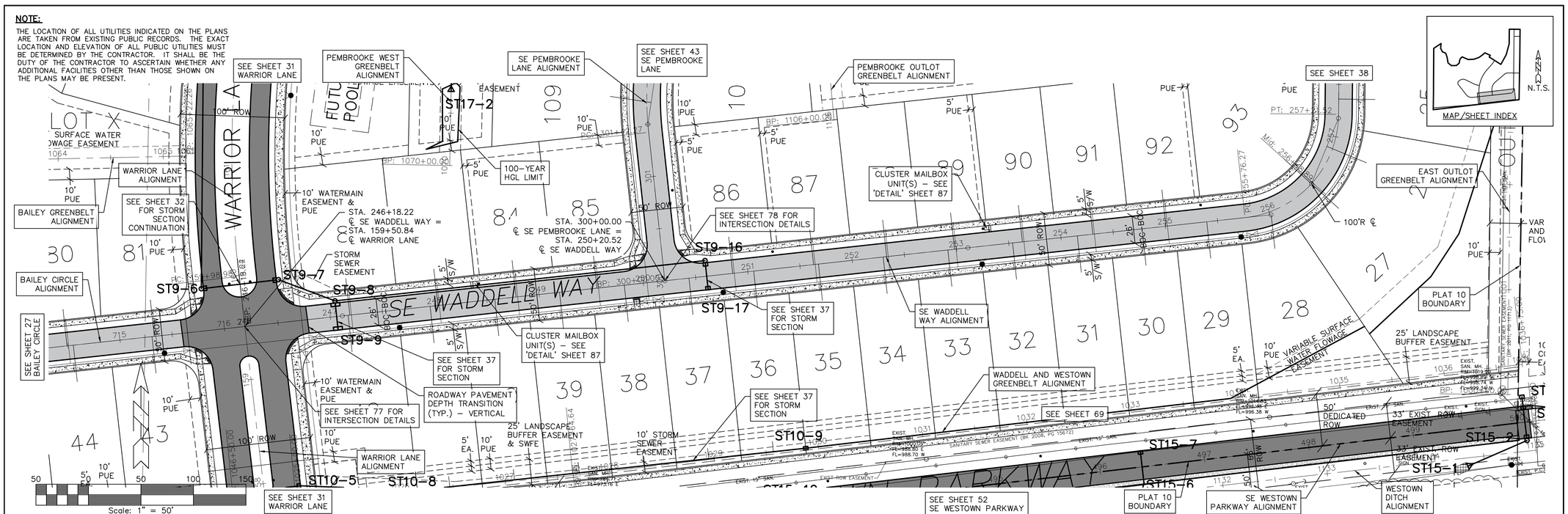
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

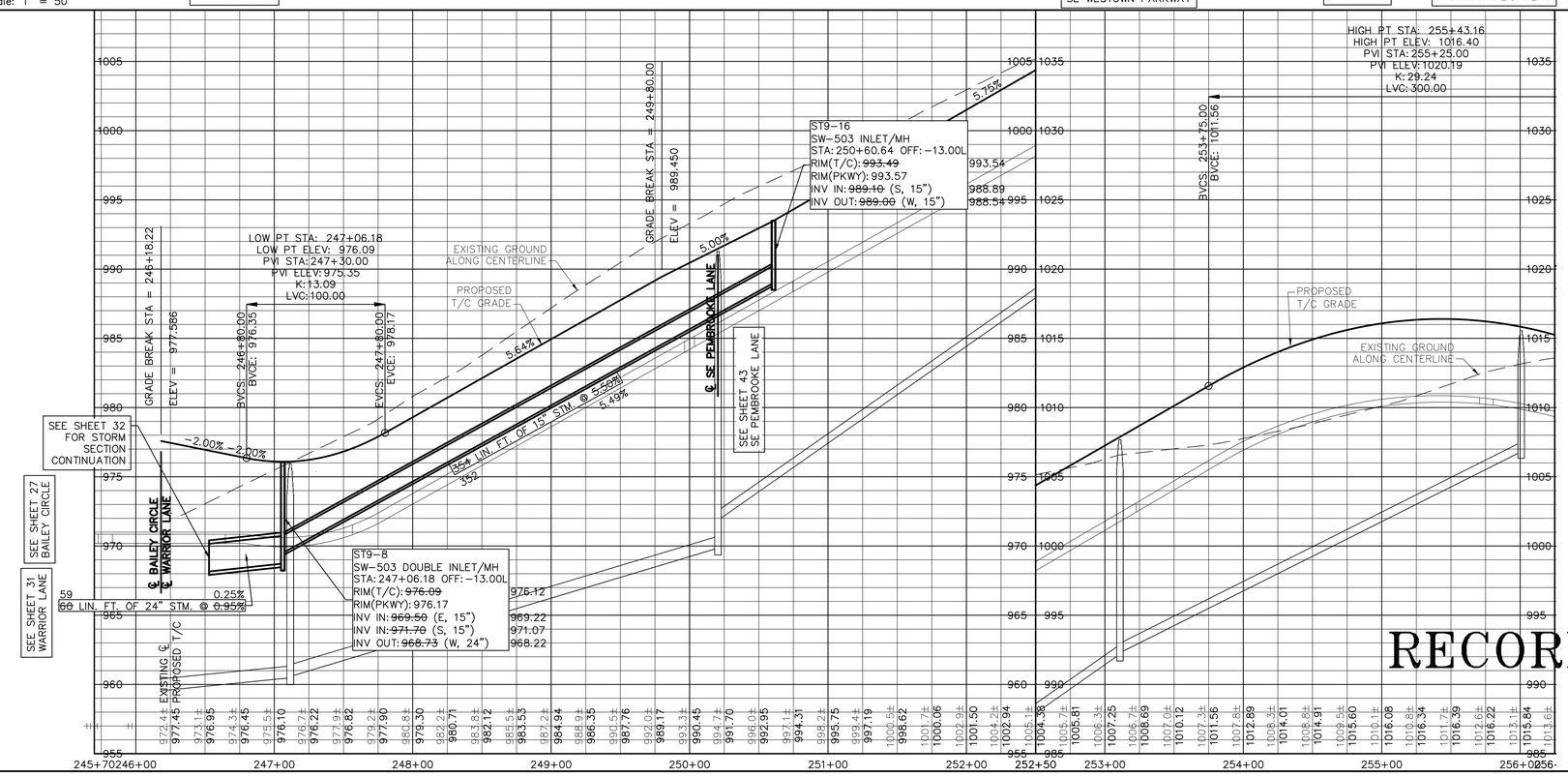
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP14.dwg, 10/19/2017 10:51:27 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 18 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

36

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - PAVEMENT & STORM I

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP15.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	36 OF 100
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

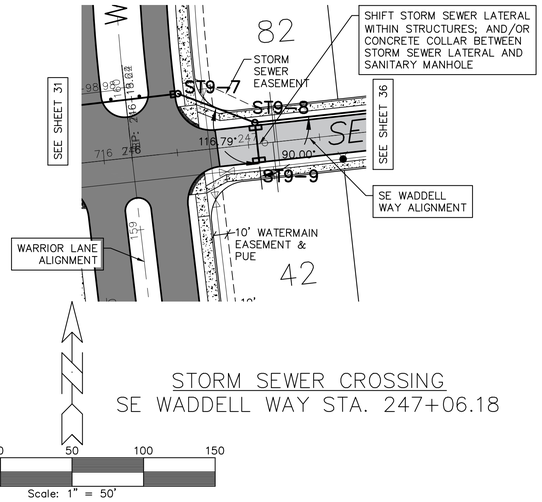
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP15.dwg, 10/19/2017 10:51:52 AM, PJV

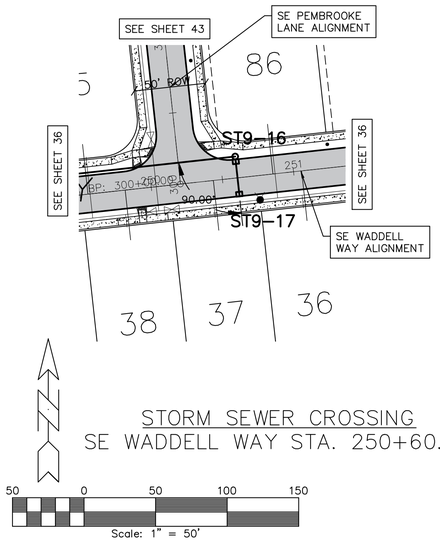
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



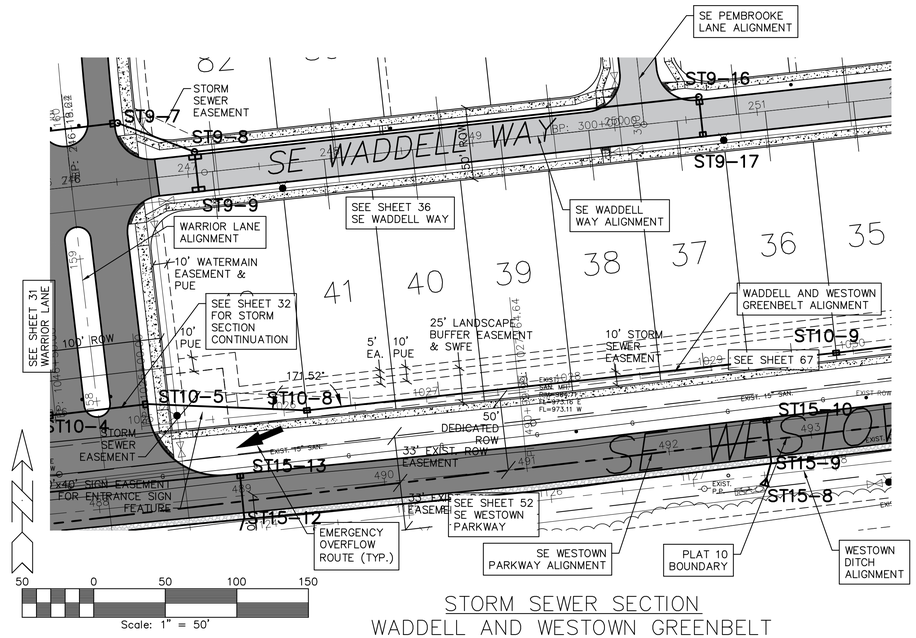
STORM SEWER CROSSING
SE WADDELL WAY STA. 247+06.18

50 0 50 100 150
Scale: 1" = 50'



STORM SEWER CROSSING
SE WADDELL WAY STA. 250+60.64

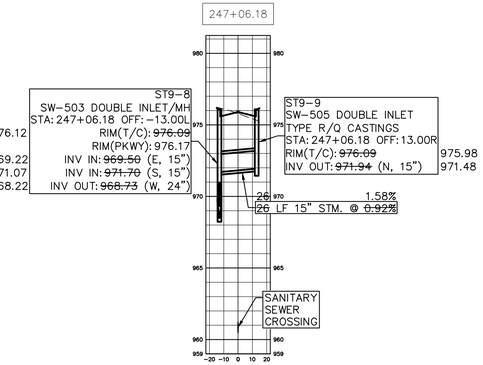
50 0 50 100 150
Scale: 1" = 50'



50 0 50 100 150
Scale: 1" = 50'

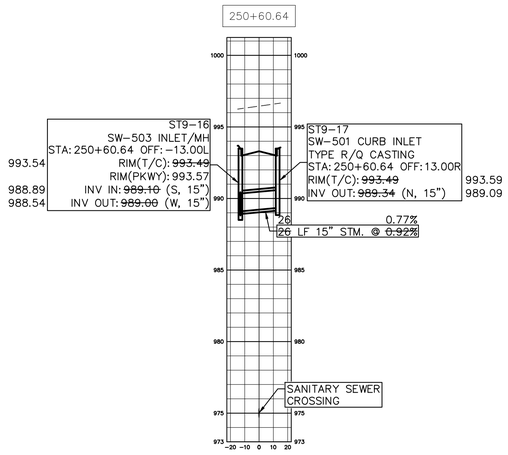
STORM SEWER SECTION
WADDELL AND WESTOWN GREENBELT

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WADDELL WAY STA. 247+06.18

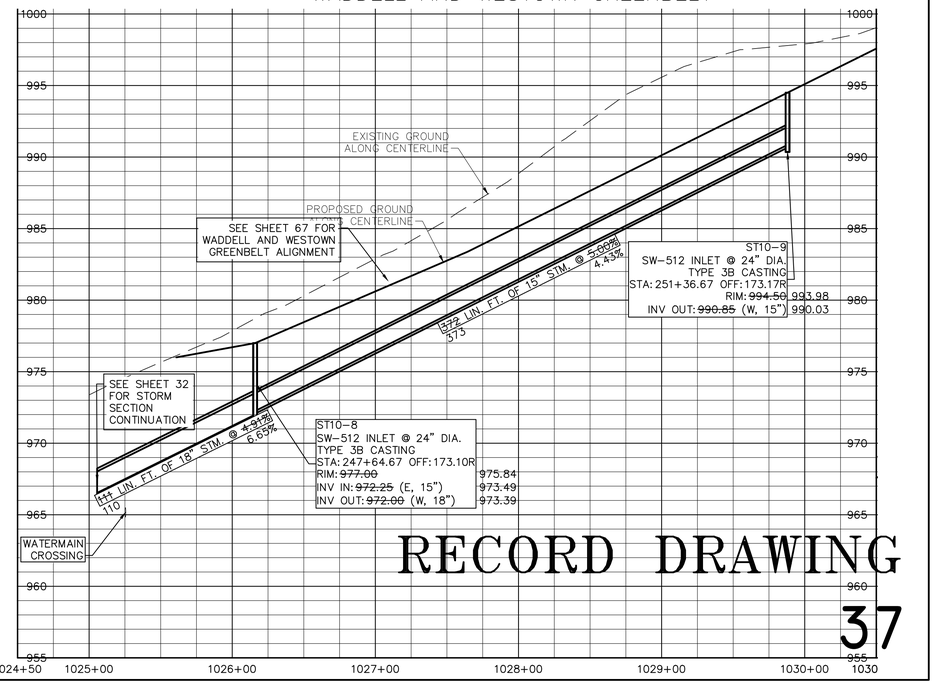
SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WADDELL WAY STA. 250+60.64

SCALES:
1" = 50' HOR
1" = 5' VER

STORM SEWER SECTION
WADDELL AND WESTOWN GREENBELT



RECORD DRAWING

37

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - STORM SECTIONS A

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

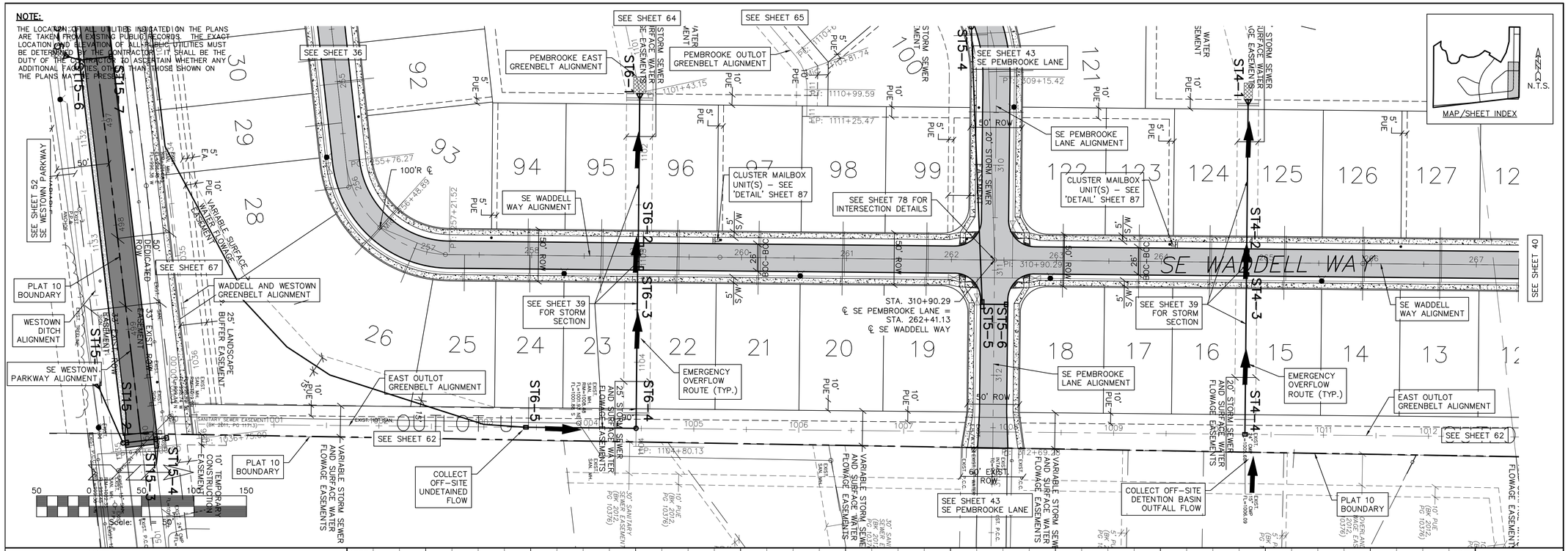
LOCATION:	SCALE:	1" = 50'	DRAWN BY: PJV
	DWG:	15-013-PP29.dwg	DESIGNED BY: JRK
	FIELD BOOK:		CHECKED BY: DJS
			DATE: 02/24/2016
			SHEET 37 OF 100
			FILE NO.: 15-013

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP29.dwg, 10/19/2017 10:52:24 AM, PJV

NOTE:

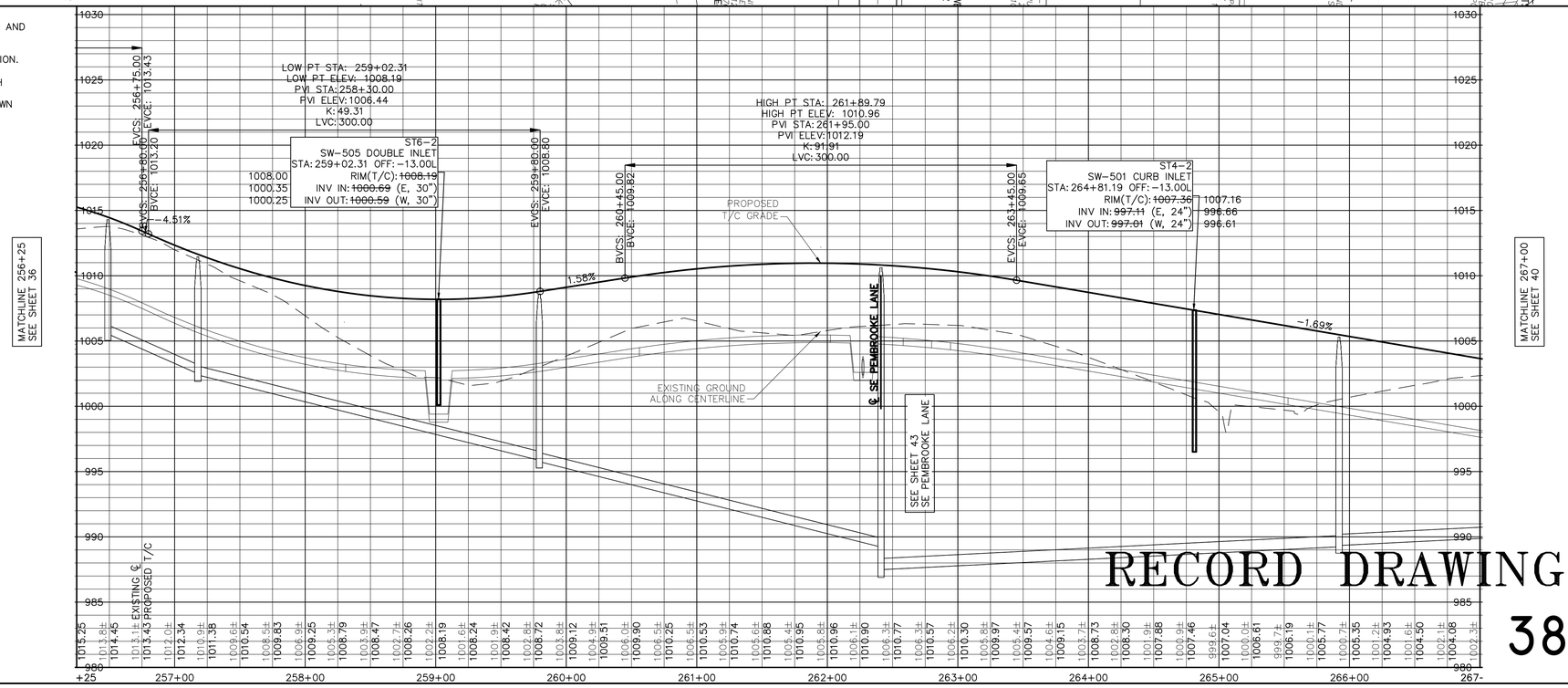
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES, OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 19 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.



RECORD DRAWING

38

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - PAVEMENT & STORM 2

LOCATION:	
SCALE:	1" = 50'
DWG:	15-013-PP16.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	38 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

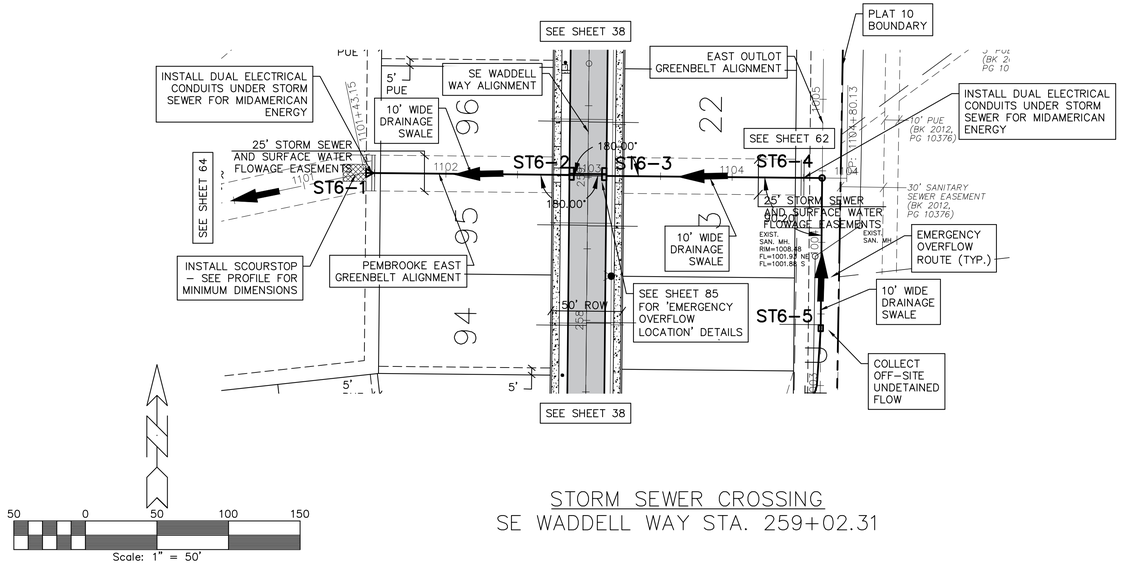
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

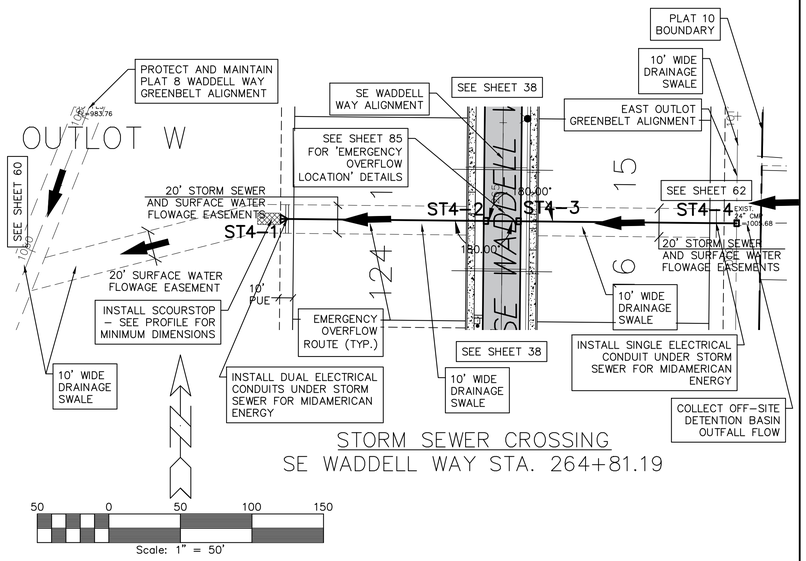
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP16.dwg, 10/19/2017 10:52:56 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

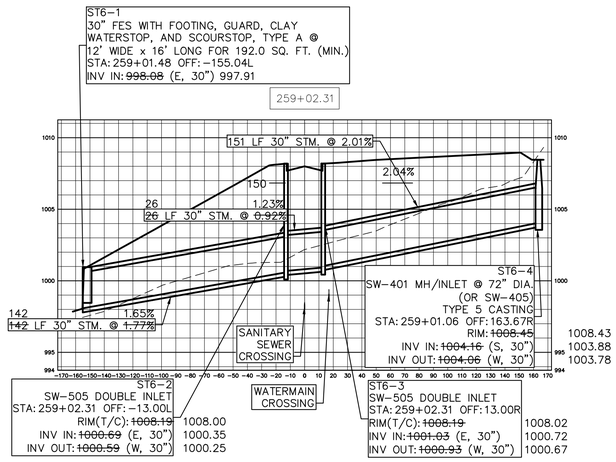


STORM SEWER CROSSING
SE WADDELL WAY STA. 259+02.31



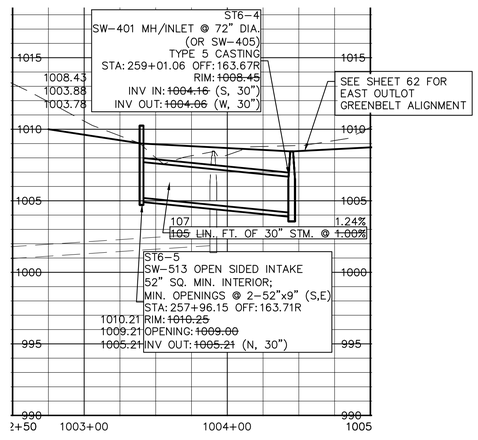
STORM SEWER CROSSING
SE WADDELL WAY STA. 264+81.19

SCALES:
1" = 50' HOR
1" = 5' VER



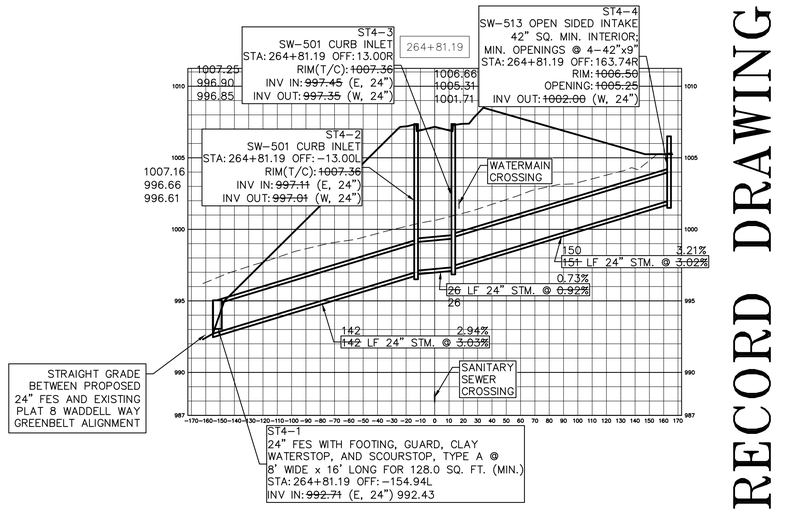
STORM SEWER CROSSING
SE WADDELL WAY STA. 259+02.31

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WADDELL WAY STA. 259+02.31
OUTLOT U

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WADDELL WAY STA. 264+81.19

39

RECORD DRAWING

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - STORM SECTIONS B

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

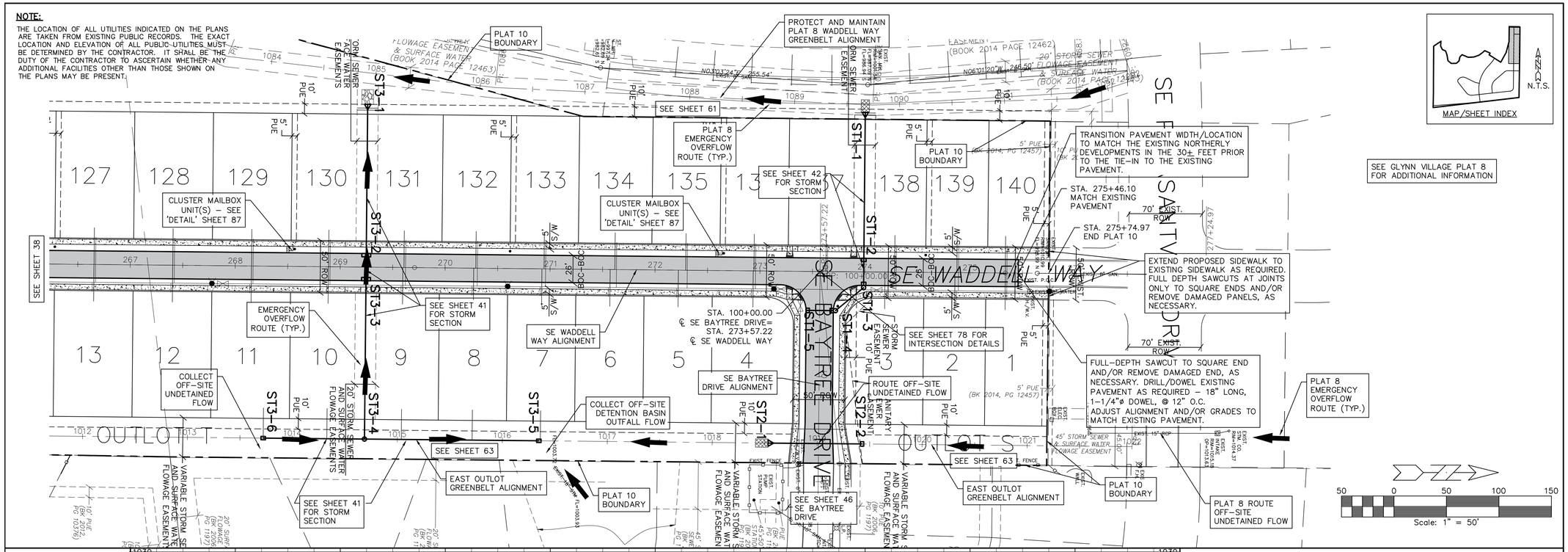
15-013

LOCATION:	SCALE:	1" = 50'	DRAWN BY: PJV
	DWG:	15-013-PP30.dwg	DESIGNED BY: JRK
	FIELD BOOK:		CHECKED BY: DJS
			DATE: 02/24/2016
			SHEET 39 OF 100
			FILE NO.: 15-013

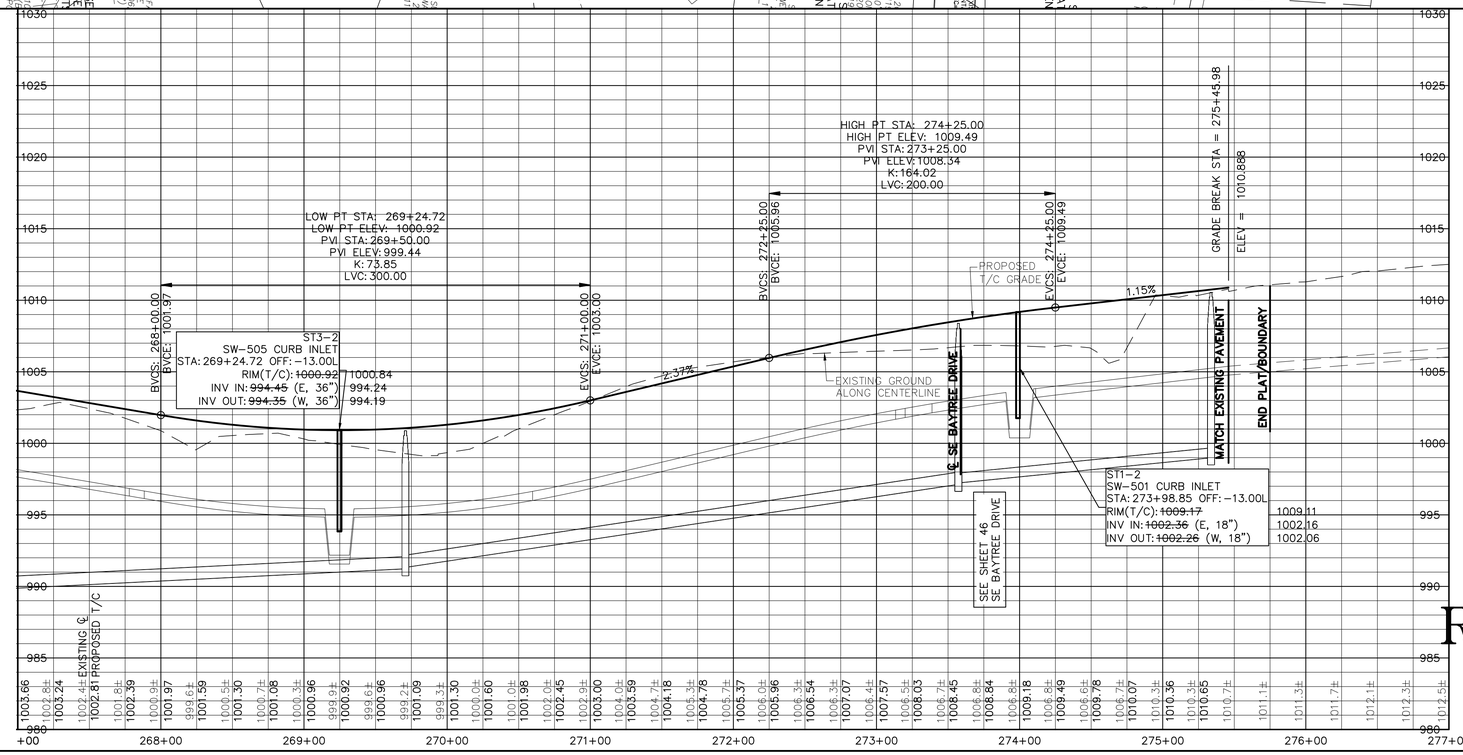
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP30.dwg, 10/19/2017 10:53:27 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 20 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

40

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - PAVEMENT & STORM 3

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP17.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 40 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

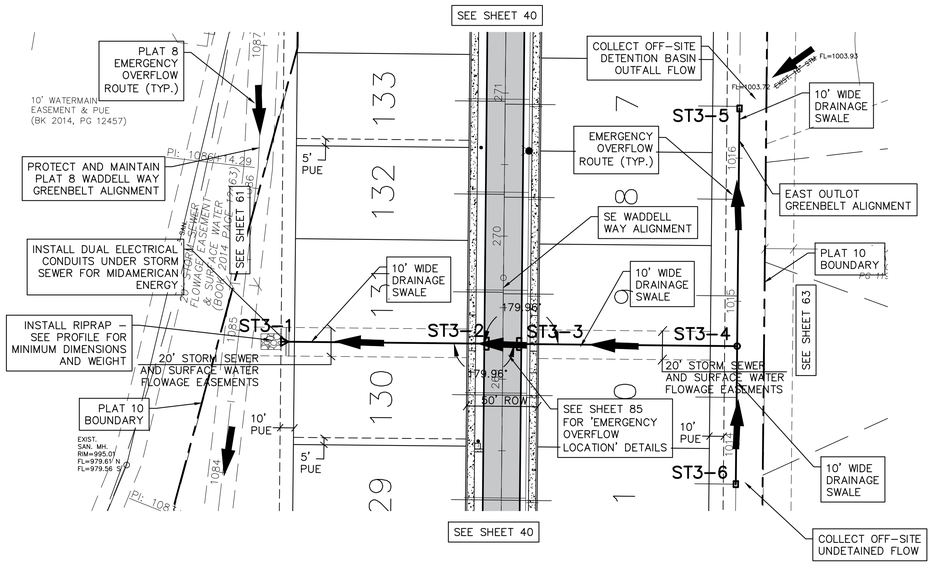
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP17.dwg, 10/19/2017 10:54:01 AM, PJV

NOTE:

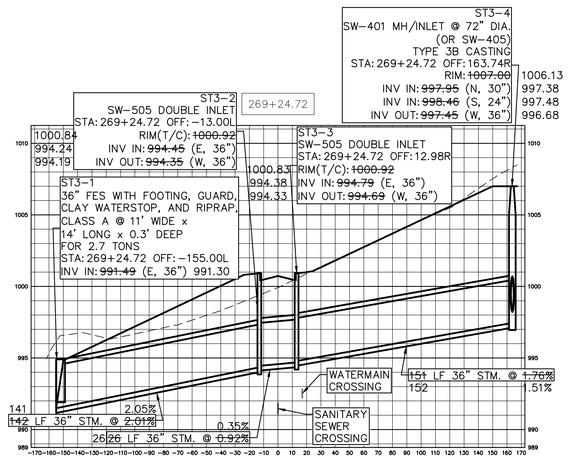
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



STORM SEWER CROSSING
SE WADDELL WAY STA. 269+24.72

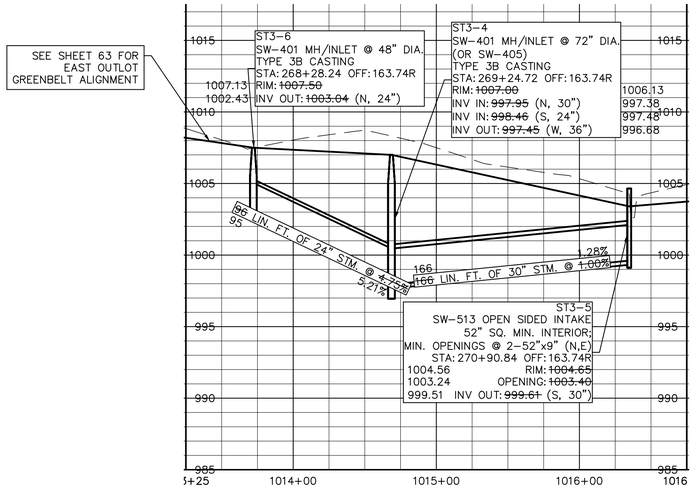
50 0 50 100 150
Scale: 1" = 50'

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WADDELL WAY STA. 269+24.72

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WADDELL WAY STA. 269+24.72
OUTLOT T

4 RECORD DRAWING

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - STORM SECTIONS C

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

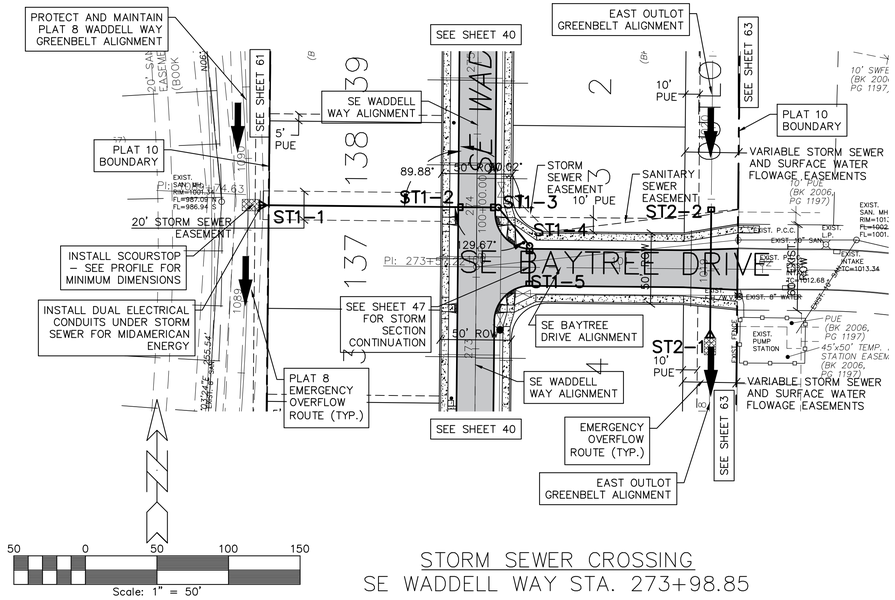
LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP35.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET 41 OF 100	
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP35.dwg, 10/19/2017 10:54:26 AM, PJV

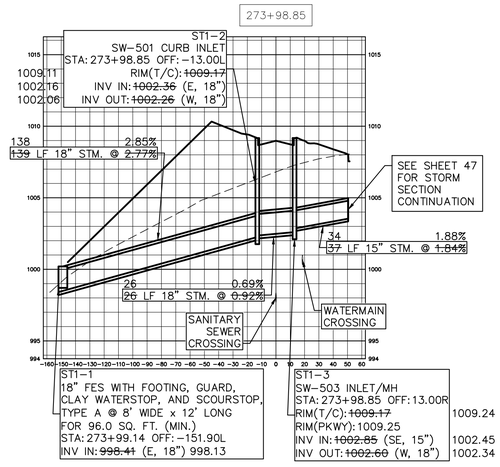
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



STORM SEWER CROSSING
SE WADDELL WAY STA. 273+98.85

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WADDELL WAY STA. 273+98.85

RECORD DRAWING

42

LOCATION:	
SCALE:	1" = 50'
DWG:	15-013-PP36.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	42 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

GLYNN VILLAGE PLAT 10 - SE WADDELL WAY - STORM SECTIONS D

NO.	REVISION	DATE	BY	FOR:

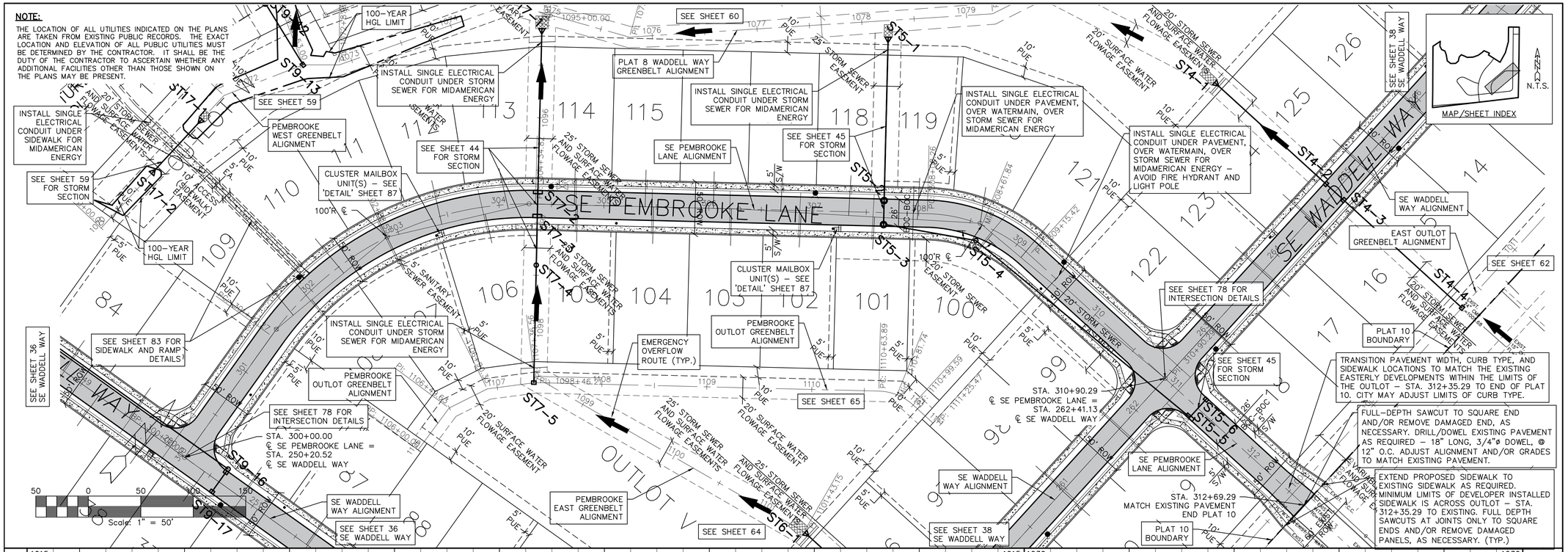
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP36.dwg, 10/19/2017 10:54:52 AM, PJV

NOTE:

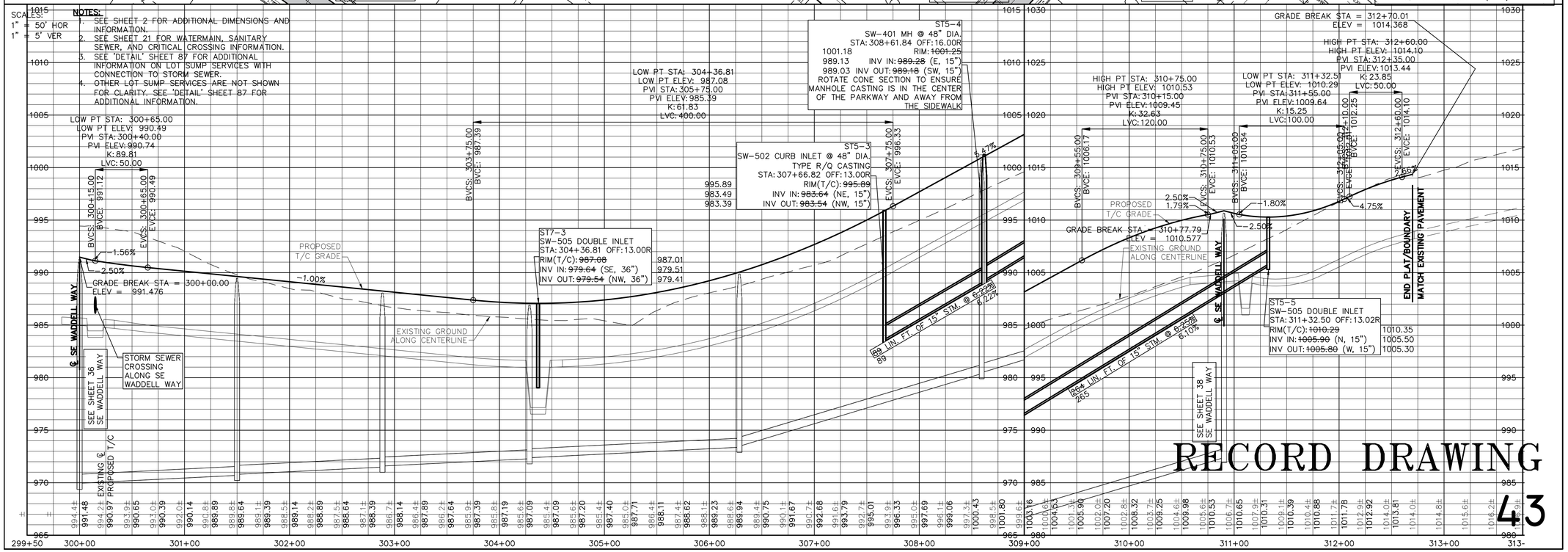
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 21 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.



RECORD DRAWING

43

GLYNN VILLAGE PLAT 10 - SE PEMBROOKE LANE - PAVEMENT & STORM

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP19.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 43 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

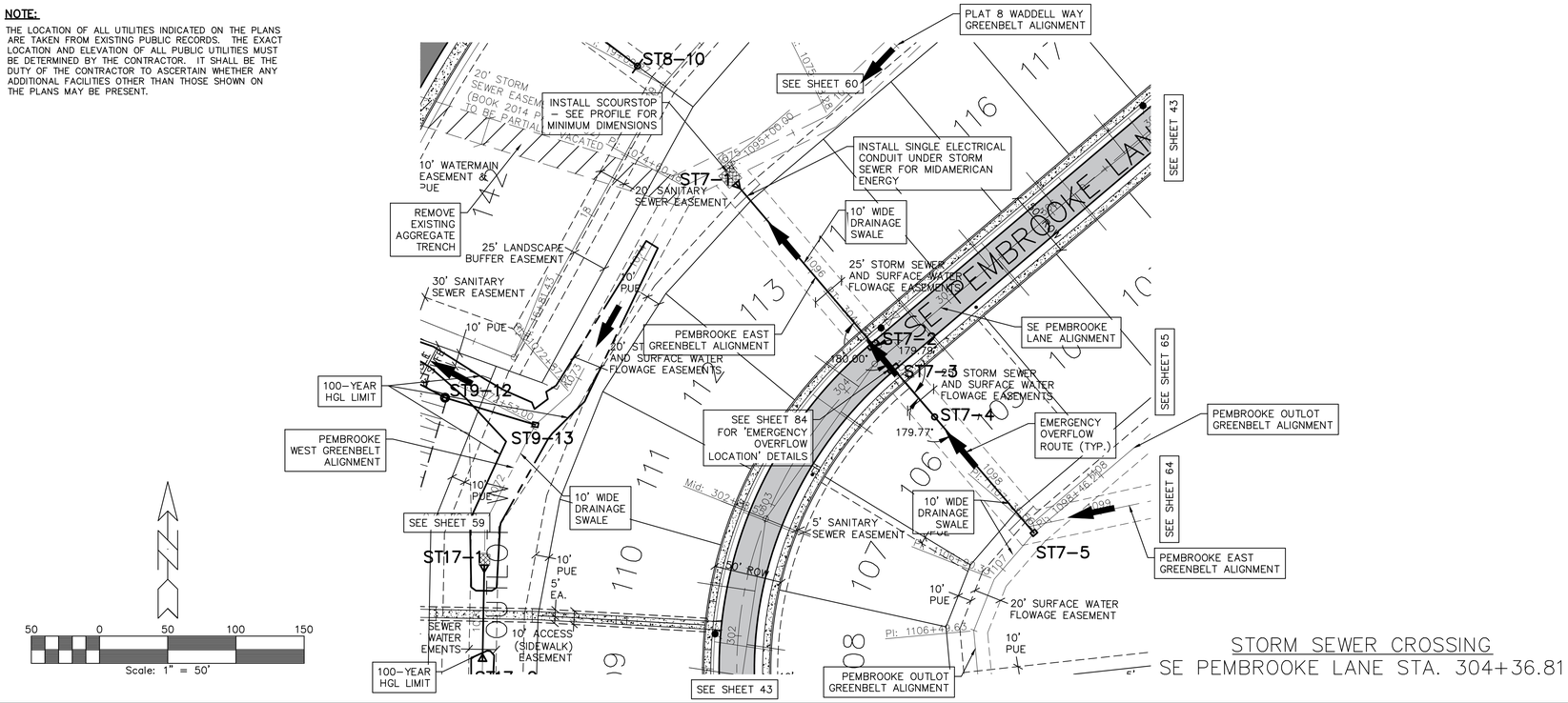
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP19.dwg, 10/19/2017 10:55:17 AM, PJV

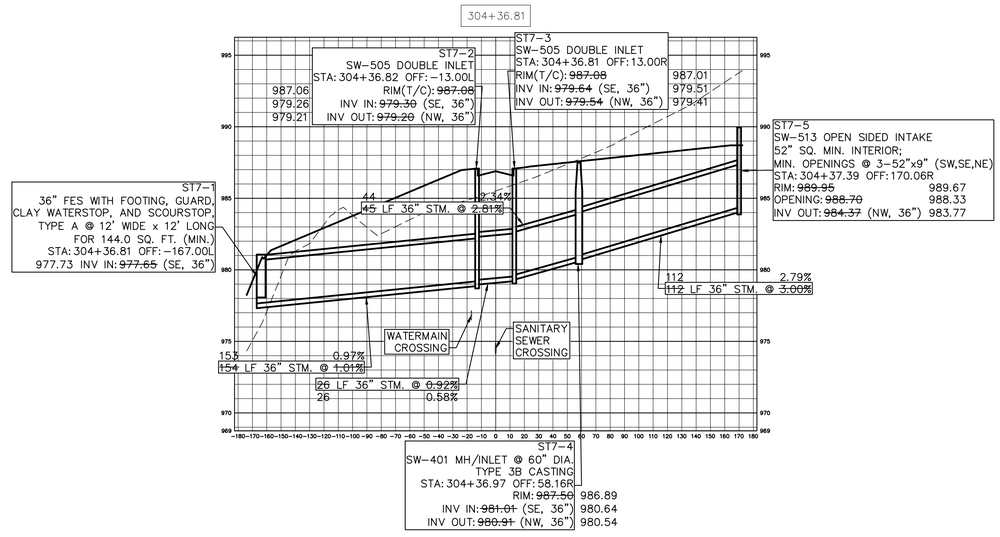
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



STORM SEWER CROSSING
SE PEMBROOKE LANE STA. 304+36.81

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE PEMBROOKE LANE STA. 304+36.81

RECORD DRAWING

44

GLYNN VILLAGE PLAT 10 - SE PEMBROOKE LANE - STORM SECTIONS A

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP27.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET 44 OF 100	

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

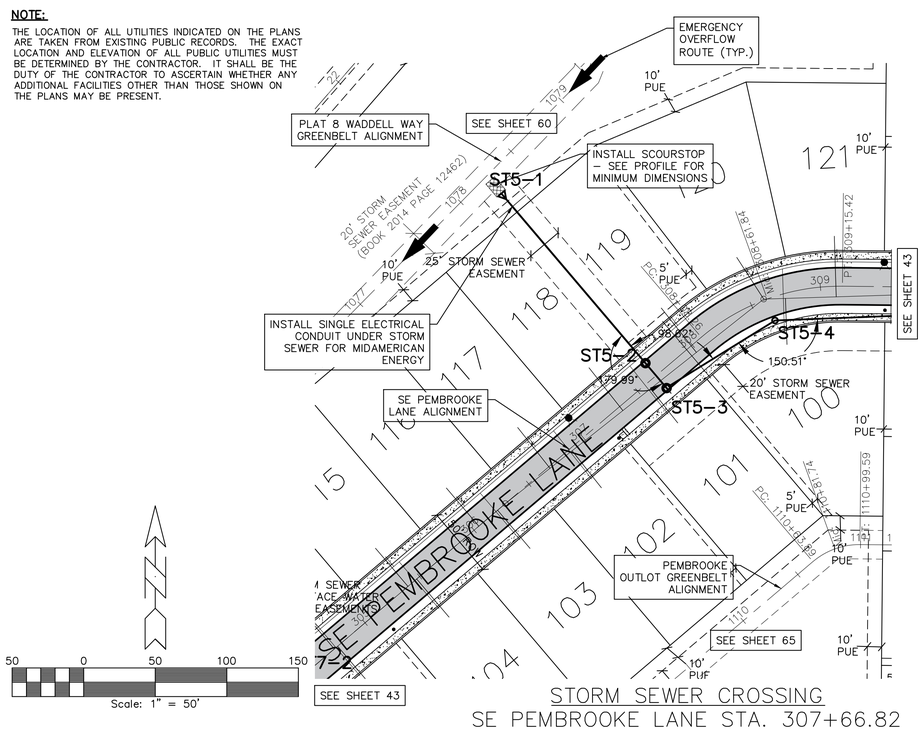
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

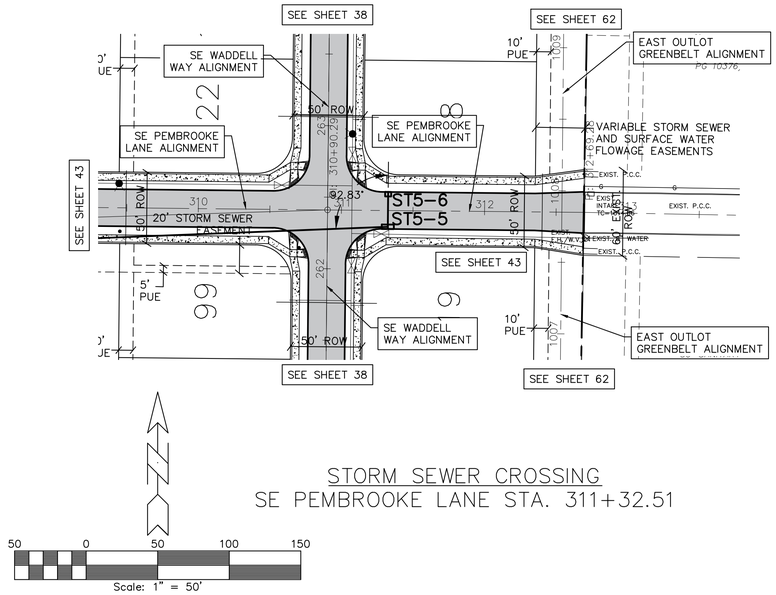
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP27.dwg, 10/19/2017 10:55:47 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

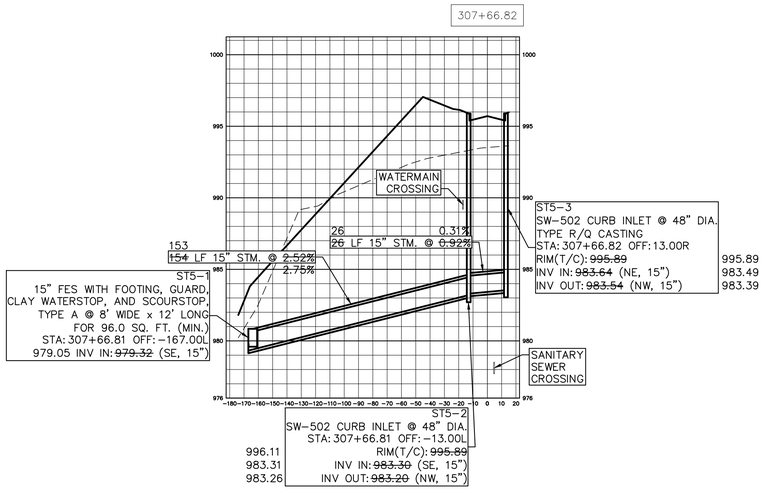


STORM SEWER CROSSING
SE PEMBROOKE LANE STA. 307+66.82



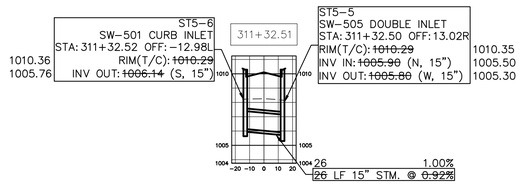
STORM SEWER CROSSING
SE PEMBROOKE LANE STA. 311+32.51

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE PEMBROOKE LANE STA. 307+66.82

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE PEMBROOKE LANE STA. 311+32.51

RECORD DRAWING

45

GLYNN VILLAGE PLAT 10 - SE PEMBROOKE LANE - STORM SECTIONS B

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP37.dwg
FIELD BOOK:

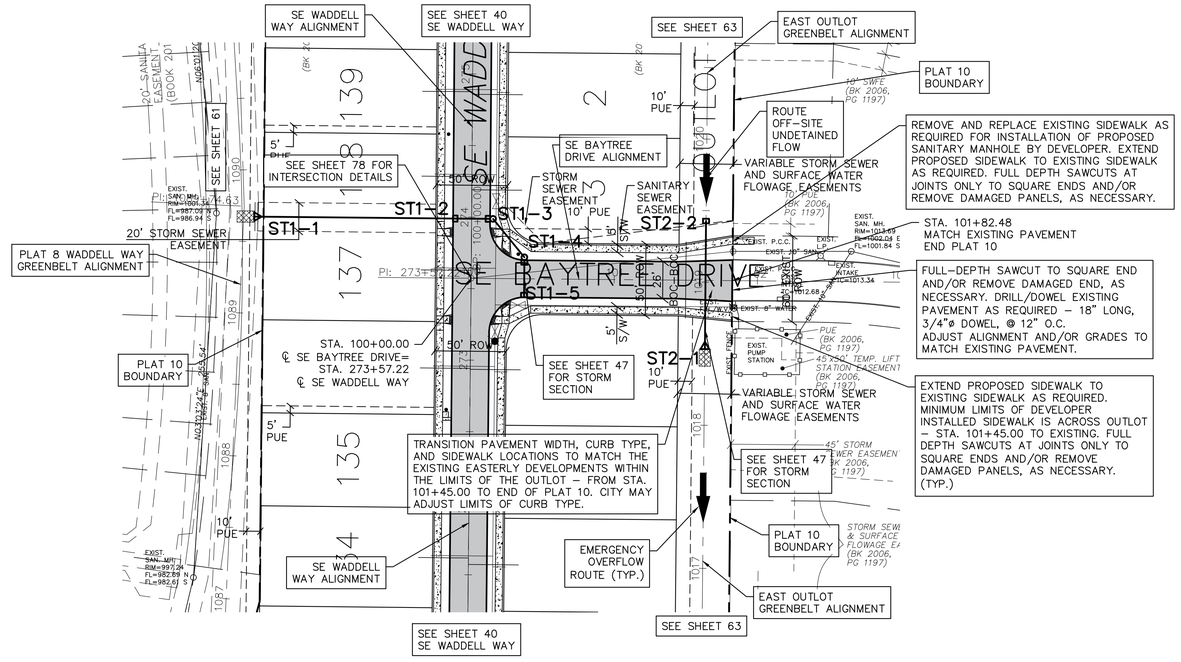
DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 45 OF 100

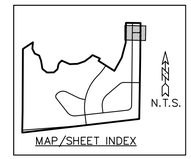
DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP37.dwg, 10/19/2017 10:56:18 AM, PJV

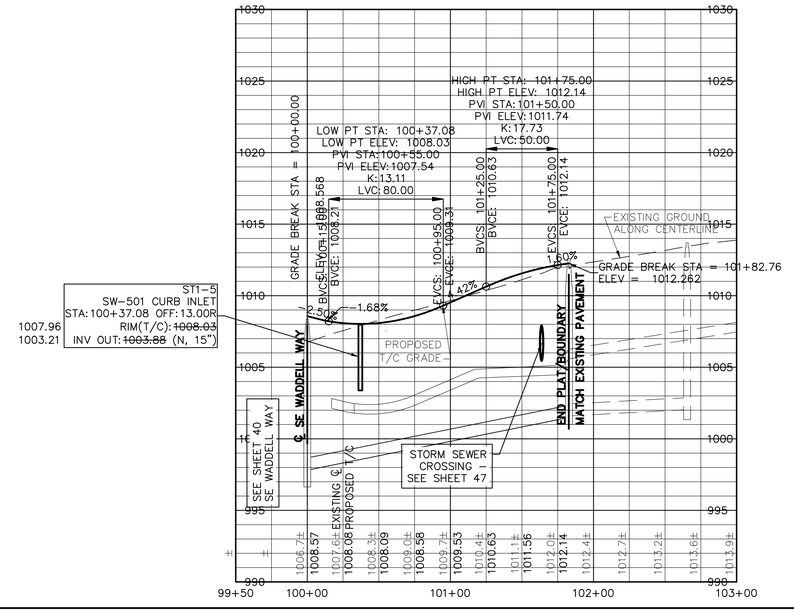
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





SCALES:
1" = 50' HOR
1" = 5' VER



RECORD DRAWING

46

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 22 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

GLYNN VILLAGE PLAT 10 - SE BAYTREE DRIVE - PAVEMENT & STORM

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP18.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 46 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

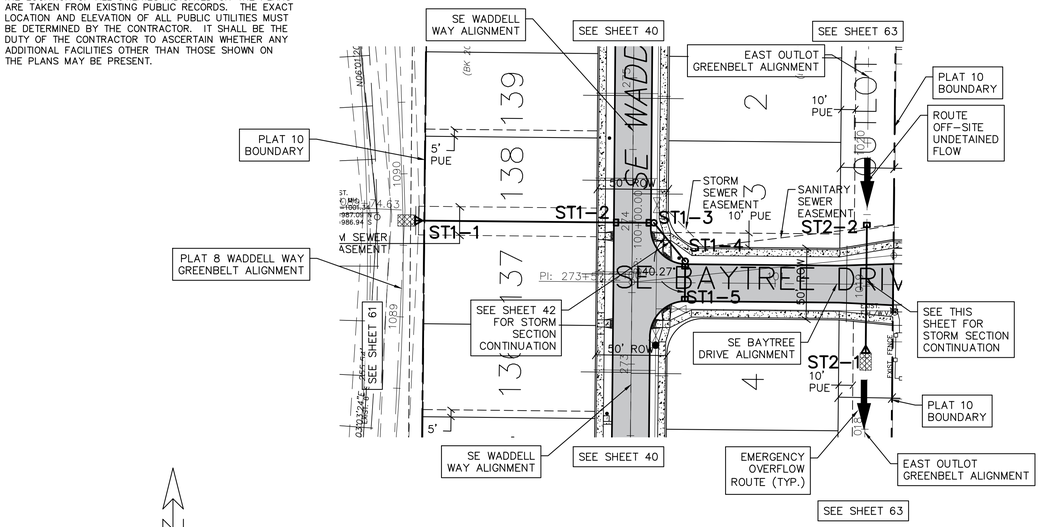
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

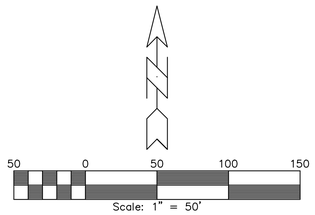
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP18.dwg, 10/19/2017 10:56:51 AM, PJV

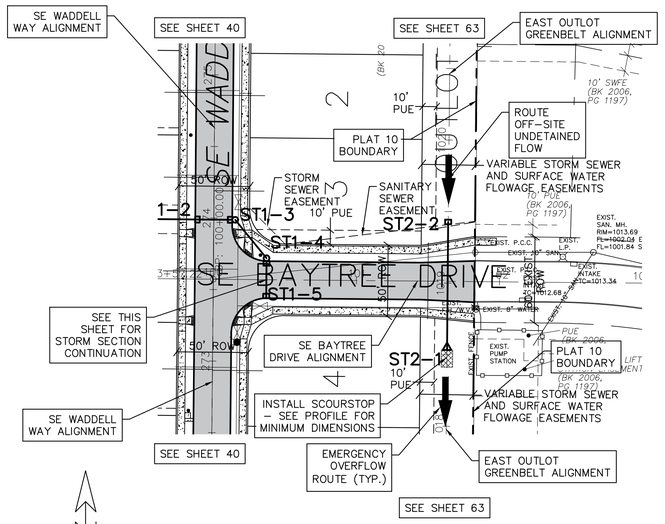
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

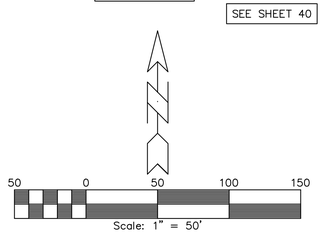


STORM SEWER CROSSING
SE BAYTREE DRIVE STA. 100+37.08

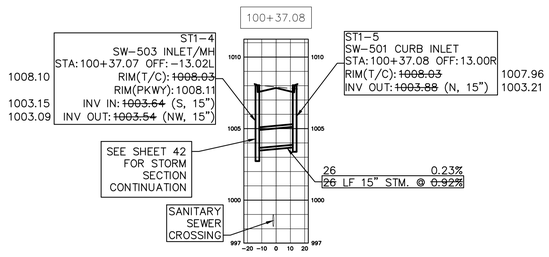




STORM SEWER CROSSING
SE BAYTREE DRIVE STA. 101+63.76

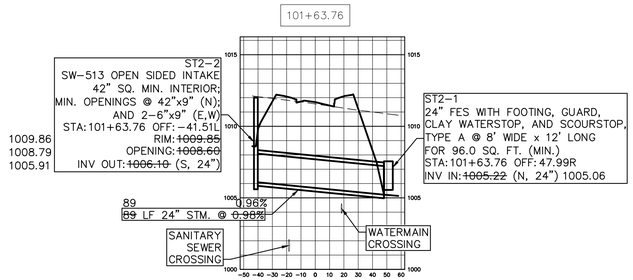


SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE BAYTREE DRIVE STA. 100+37.08

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE BAYTREE DRIVE STA. 101+63.76

RECORD DRAWING

47

GLYNN VILLAGE PLAT 10 - SE BAYTREE DRIVE - STORM SECTIONS

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP38.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	47 OF 100
LOCATION:		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP38.dwg, 10/19/2017 10:57:23 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

50 0 50 100 150

Scale: 1" = 50'

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 23 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

SCALES:
1" = 50' HOR
1" = 5' VER

MATCHLINE 476+00
SEE SHEET 50

48 RECORD DRAWING

GLYNN VILLAGE PLAT 10-SE WESTOWN PARKWAY - PAVEMENT & STORM I

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

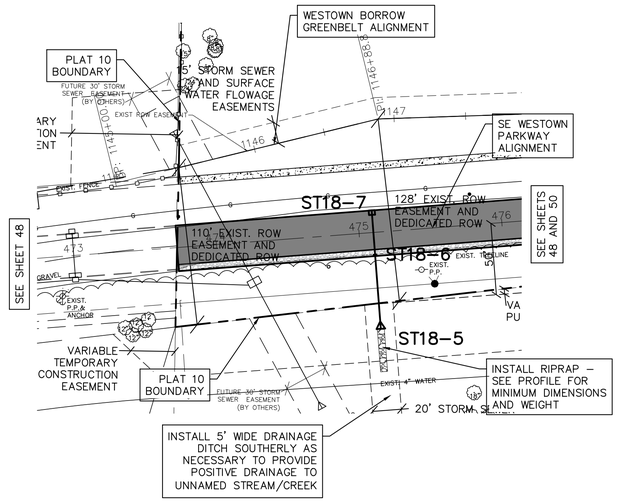
SCALE: 1" = 50'
DWG: 15-013-PP21.dwg
FIELD BOOK:
LOCATION:

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013
DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 48 OF 100

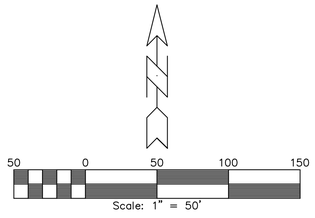
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP21.dwg, 10/19/2017 10:57:57 AM, PJV

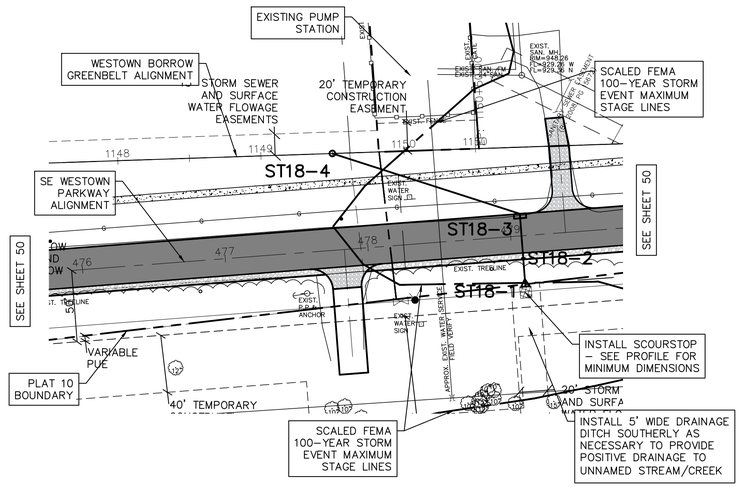
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

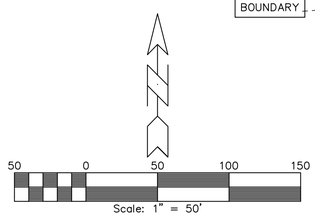


STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 475+10.00

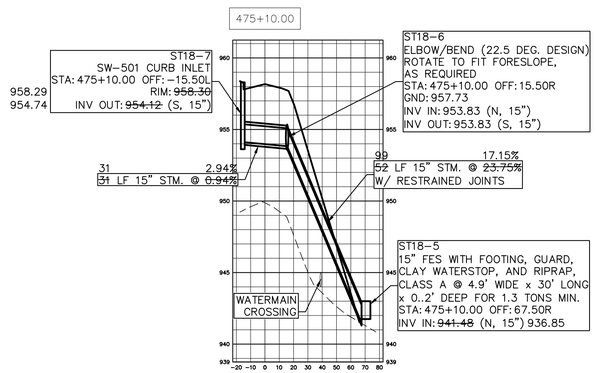




STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 479+07.60

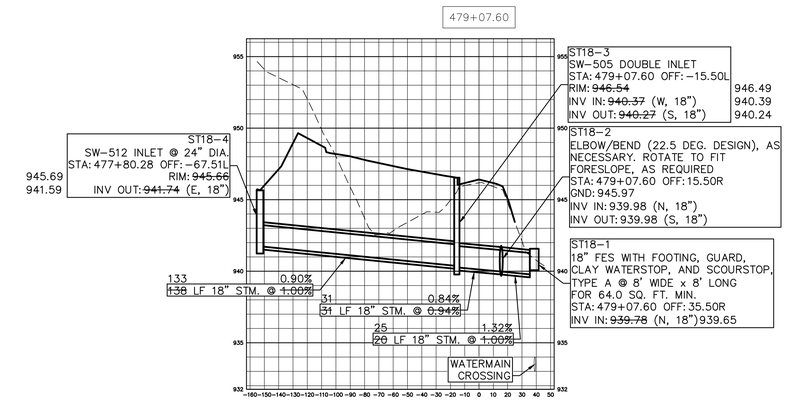


SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 475+10.00

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 479+07.60

RECORD DRAWING 49

SE WESTOWN PARKWAY - STORM SECTIONS A

GLYNN VILLAGE PLAT 10 - SE

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP21B.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 49 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

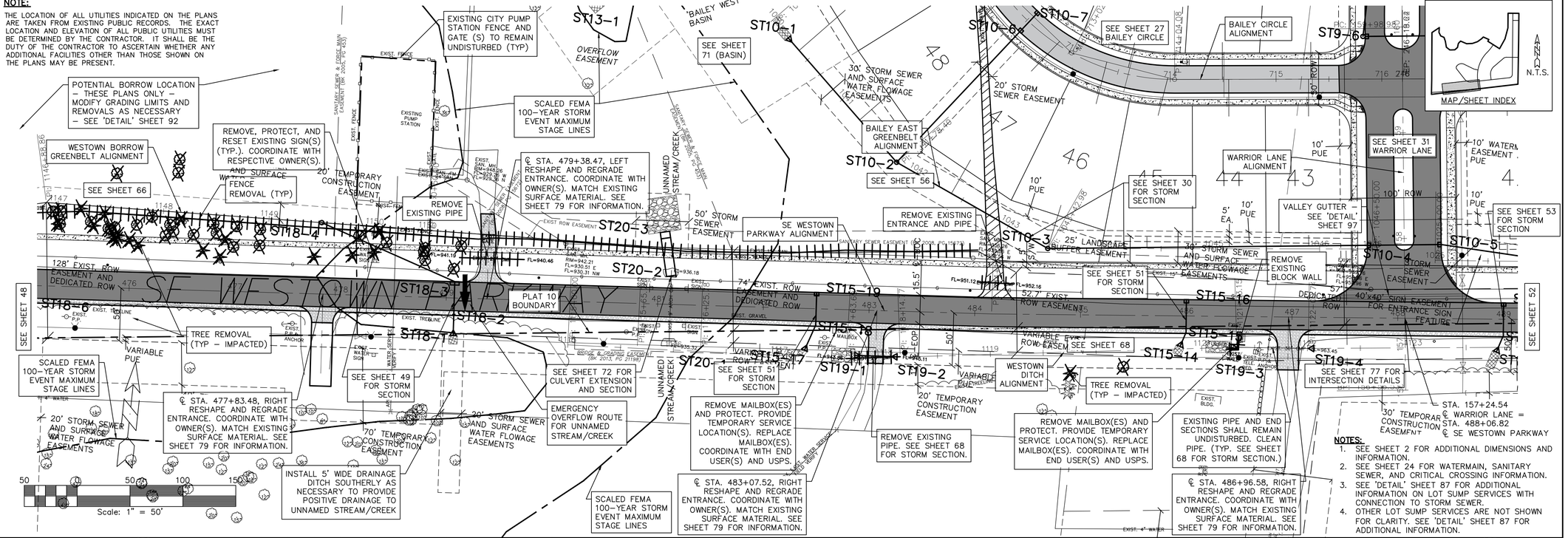
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP21B.dwg, 10/19/2017 10:58:33 AM, PJV

NOTE:

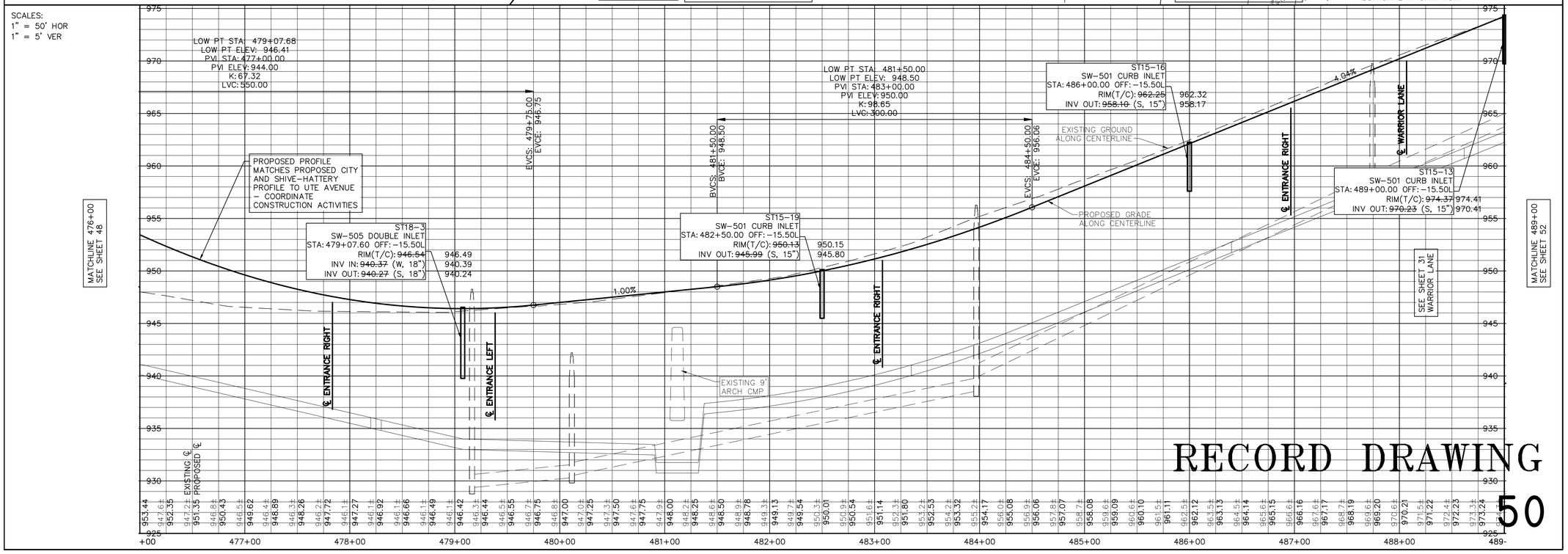
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 24 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

SCALES:
1" = 50' HOR
1" = 5' VER



RECORD DRAWING

50

SCALE:	1" = 50'
DWG:	15-013-PP22.dwg
FIELD BOOK:	
LOCATION:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	50 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

GLYNN VILLAGE PLAT 10-SE WESTOWN PARKWAY - PAVEMENT & STORM 2

NO.	REVISION	DATE	BY	FOR:

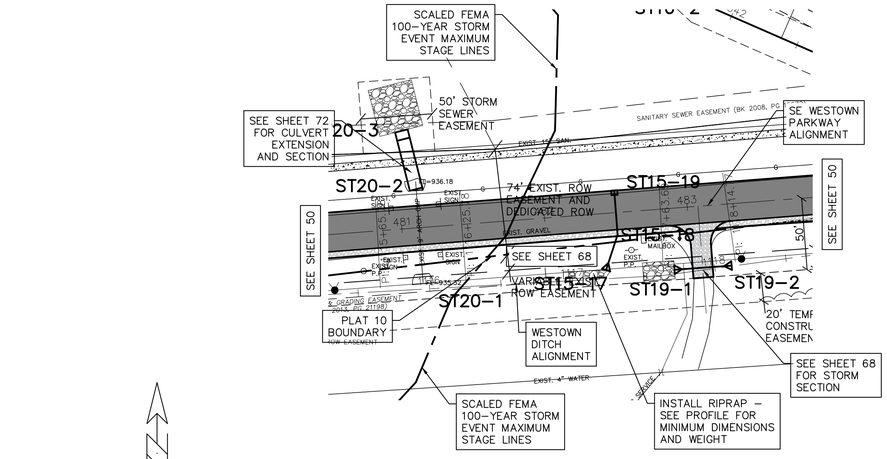
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP22.dwg, 10/19/2017 10:59:09 AM, PJV

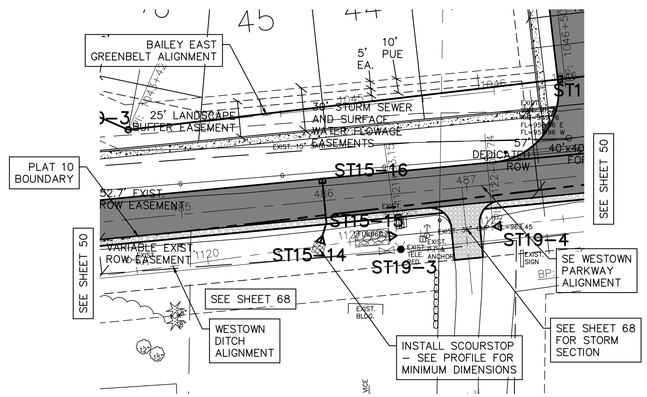
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 482+50.00

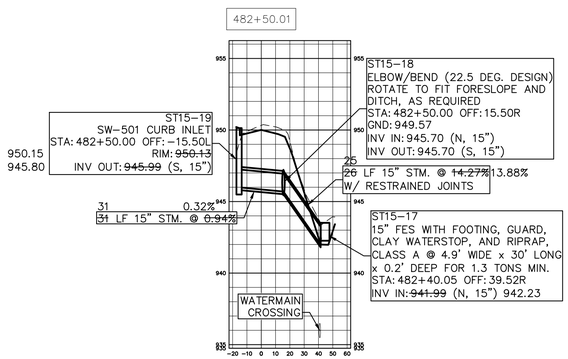
50 0 50 100 150
Scale: 1" = 50'



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 486+00.00

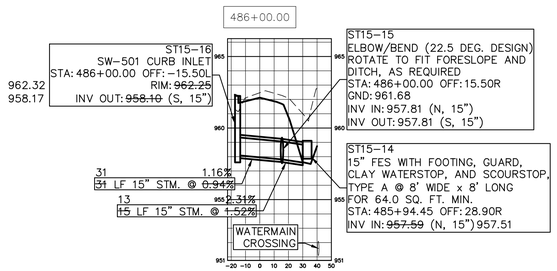
50 0 50 100 150
Scale: 1" = 50'

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 482+50.00

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 486+00.00

RECORD DRAWING

51

SE WESTOWN PARKWAY - STORM SECTIONS B

GLYNN VILLAGE PLAT 10 - SE

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP22B.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 51 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

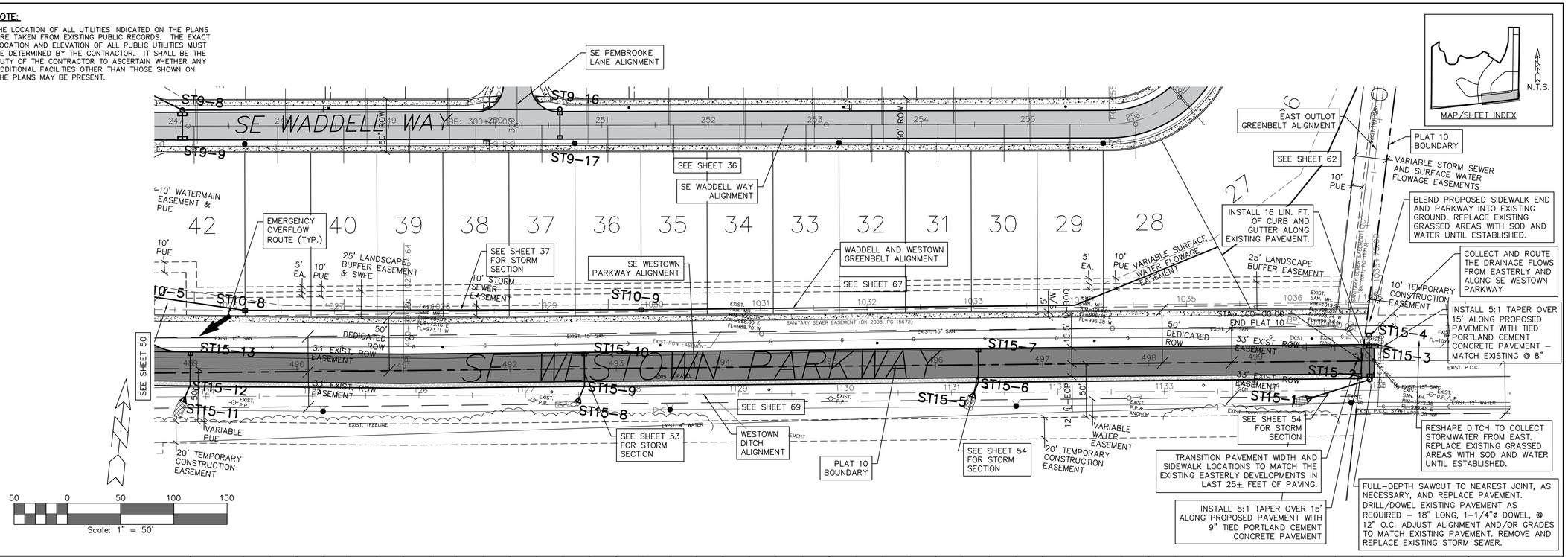
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP22B.dwg, 10/19/2017 10:59:43 AM, PJV

NOTE:

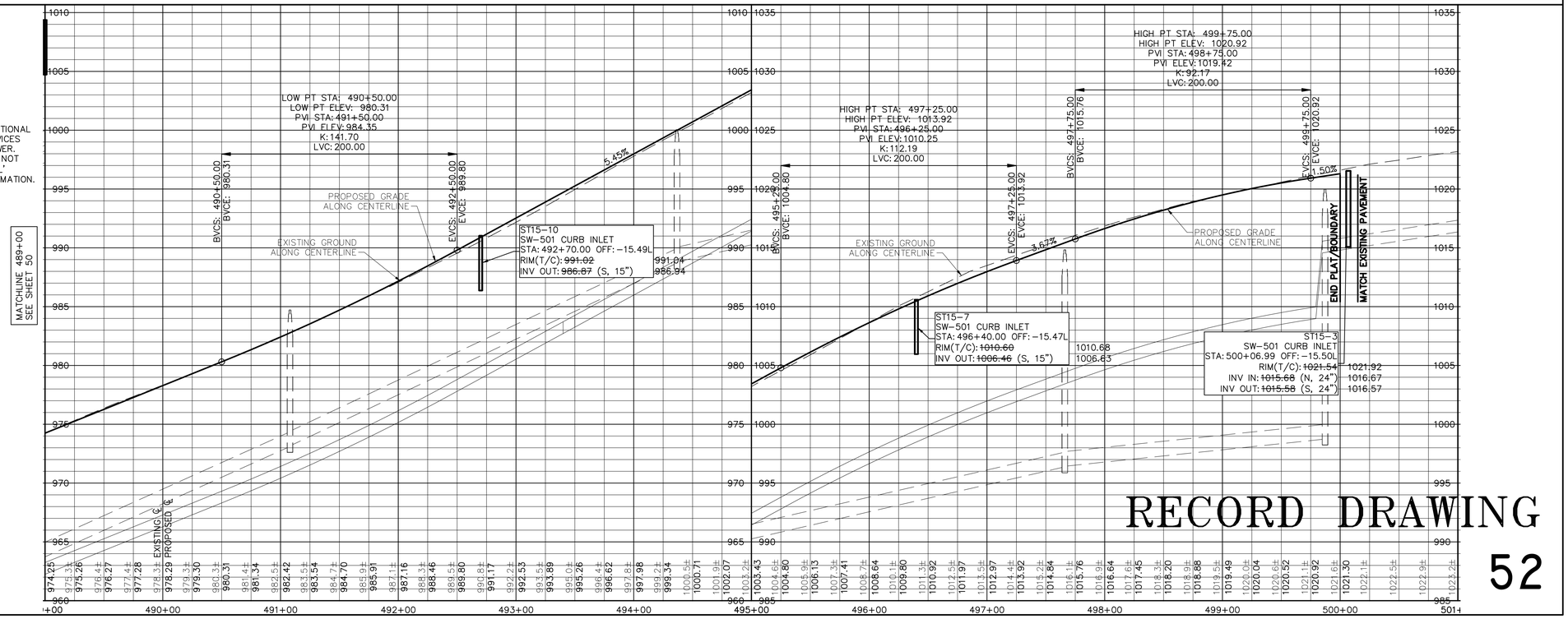
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL DIMENSIONS AND INFORMATION.
2. SEE SHEET 25 FOR WATERMAIN, SANITARY SEWER, AND CRITICAL CROSSING INFORMATION.
3. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
4. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.



RECORD DRAWING

52

SCALE:	1" = 50'
DWG:	15-013-PP23.dwg
FIELD BOOK:	
LOCATION:	
DRAWN BY:	PJV
DESIGNED BY:	JRK
CHECKED BY:	DJS
DATE:	02/24/2016
FILE NO.:	15-013
SHEET	52 OF 100

GLYNN VILLAGE PLAT 10-SE WESTOWN PARKWAY - PAVEMENT & STORM 3

NO.	REVISION	DATE	BY	FOR:

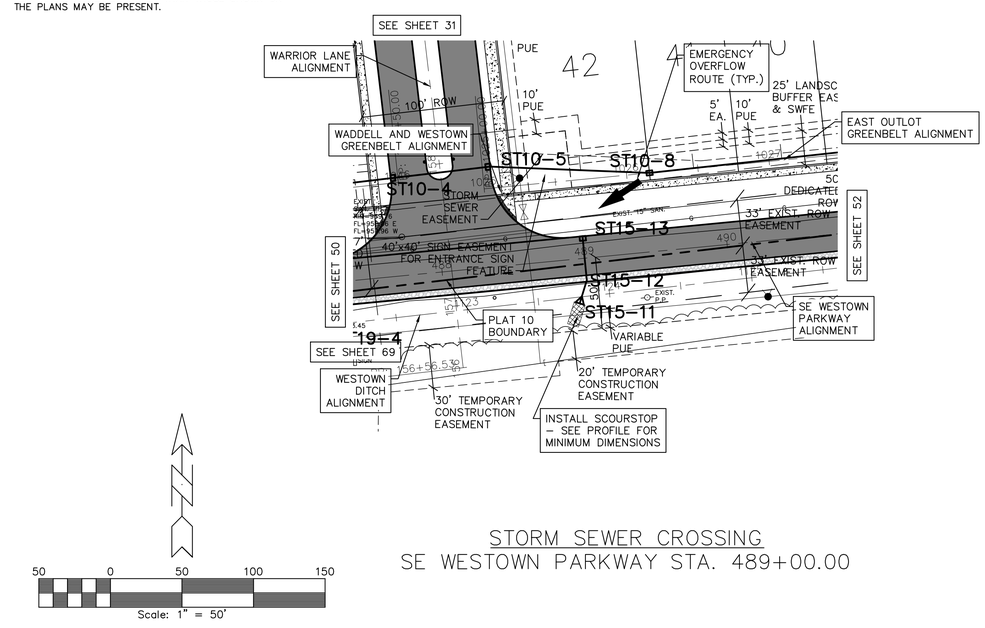
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

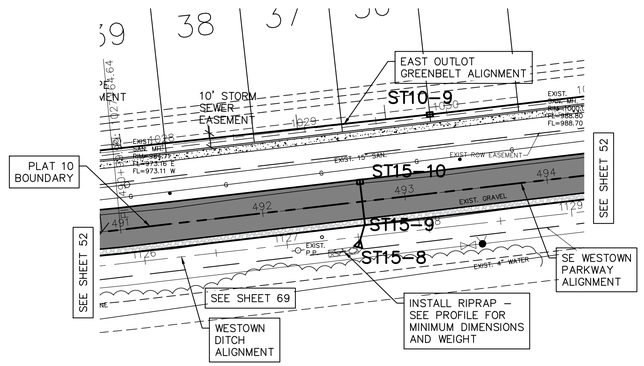
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP23.dwg, 10/19/2017 11:00:18 AM, PJV

NOTE:

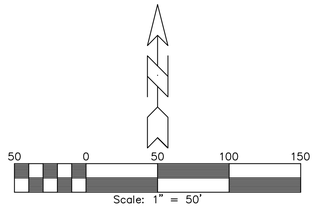
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



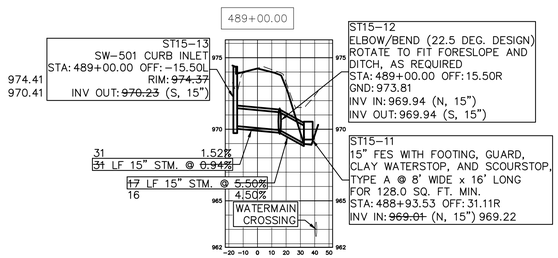
STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 489+00.00



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 492+70.00

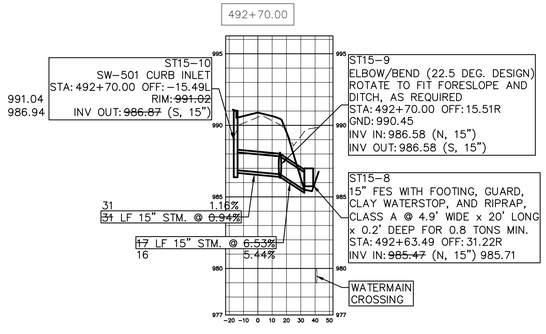


SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 489+00.00

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 492+70.00

RECORD DRAWING

53

SE WESTOWN PARKWAY - STORM SECTIONS

GLYNN VILLAGE PLAT 10 - SE

LOCATION:		DESIGNED BY:	JRK	DRAWN BY:	PJV
	SCALE: 1" = 50'	CHECKED BY:	DJS	DATE:	02/24/2016
	DWG: 15-013-PP51A.dwg	SHEET	53 OF 100	FILE NO.:	15-013
	FIELD BOOK:				

NO.	REVISION	DATE	BY	FOR:

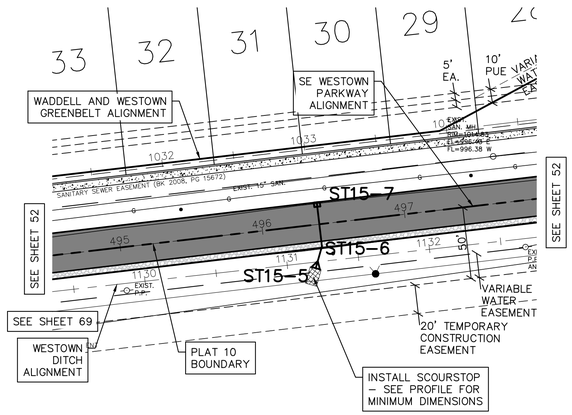
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

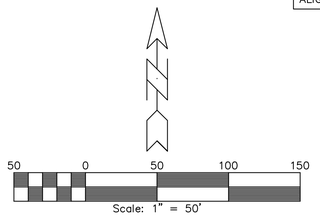
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP51A.dwg, 10/19/2017 11:00:53 AM, PJV

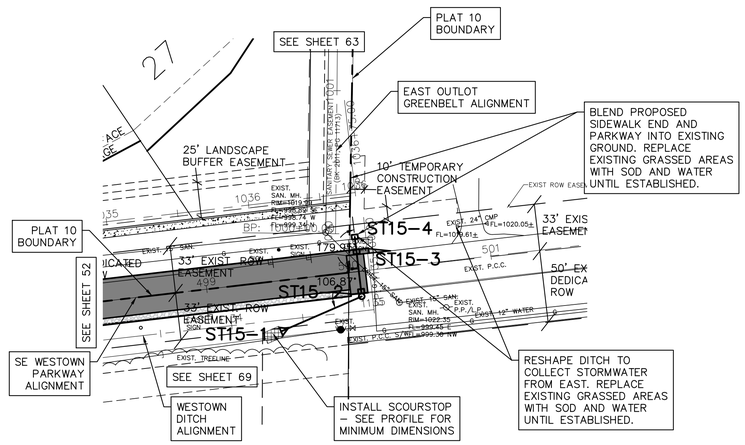
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

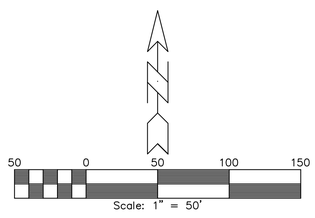


STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 496+40.00

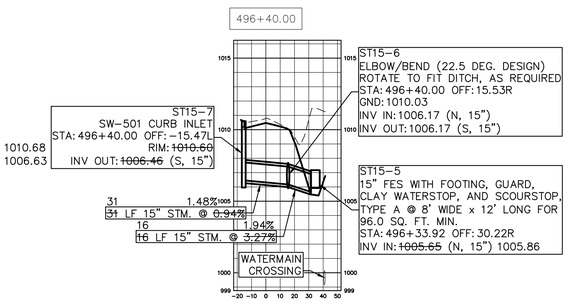




STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 500+07.00

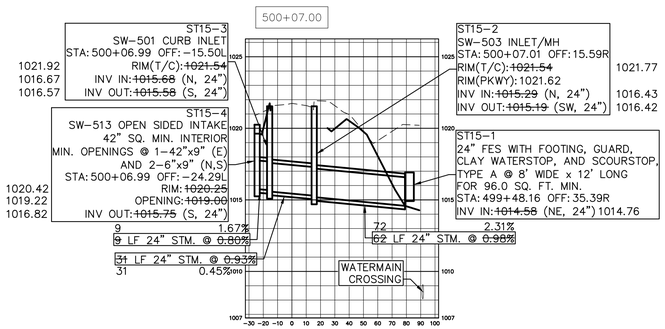


SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 496+40.00

SCALES:
1" = 50' HOR
1" = 5' VER



STORM SEWER CROSSING
SE WESTOWN PARKWAY STA. 500+07.00

RECORD DRAWING 54

SE WESTOWN PARKWAY - STORM SECTIONS D

GLYNN VILLAGE PLAT 10 - SE

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

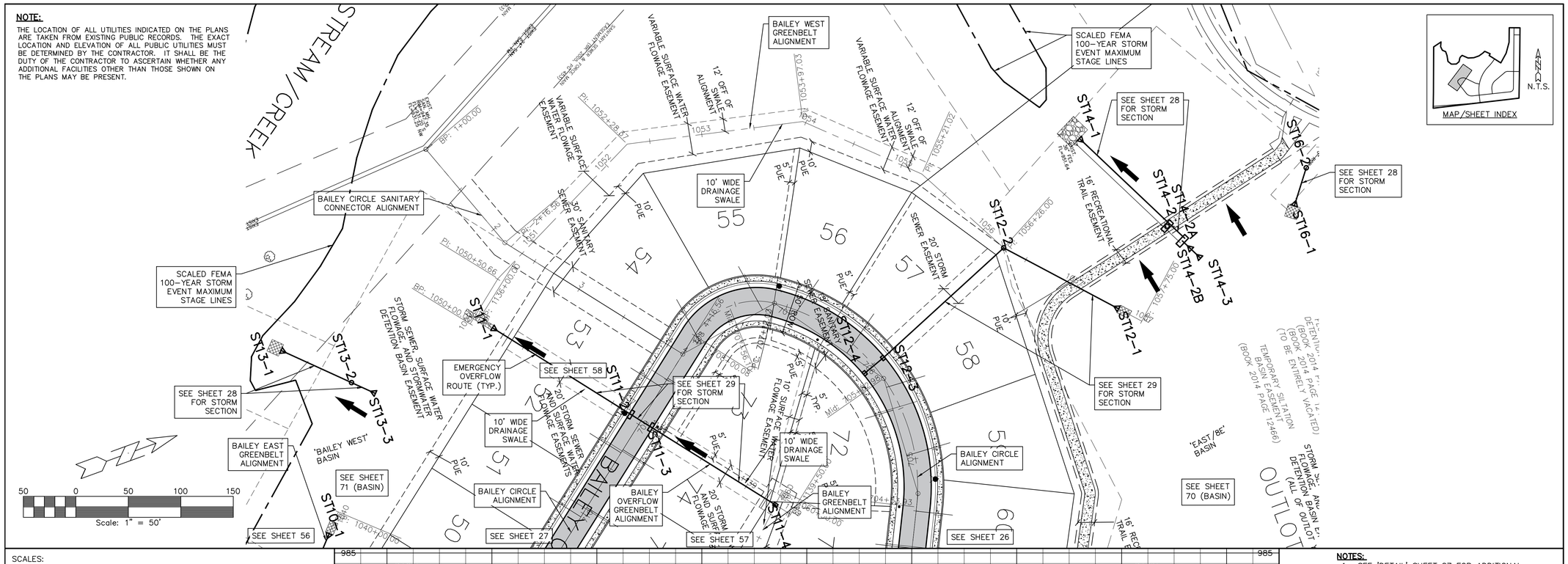
15-013

LOCATION:
SCALE: 1" = 50'
DWG: 15-013-PP52.dwg
FIELD BOOK:
DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 54 OF 100
DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

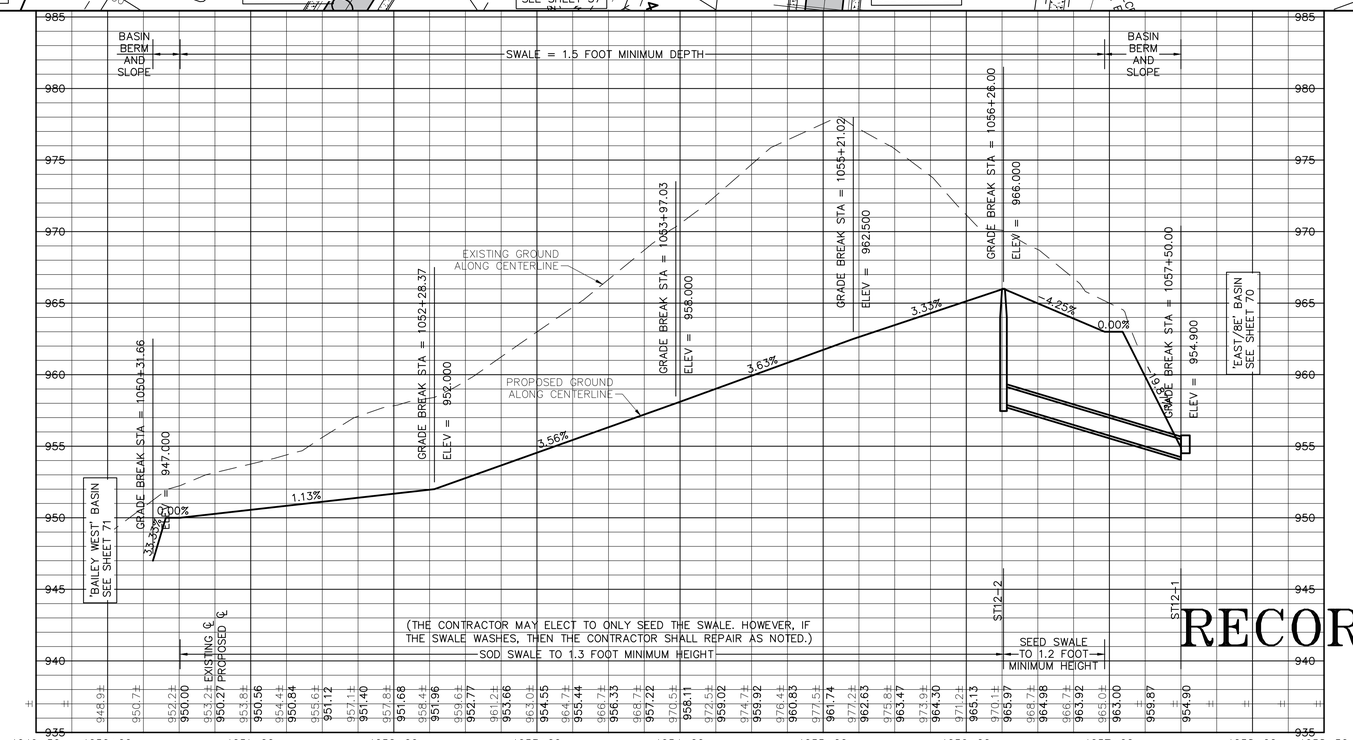
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP52.dwg, 10/19/2017 11:01:33 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

55

GLYNN VILLAGE PLAT 10 - BAILEY - GREENBELT

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP44.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 55 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

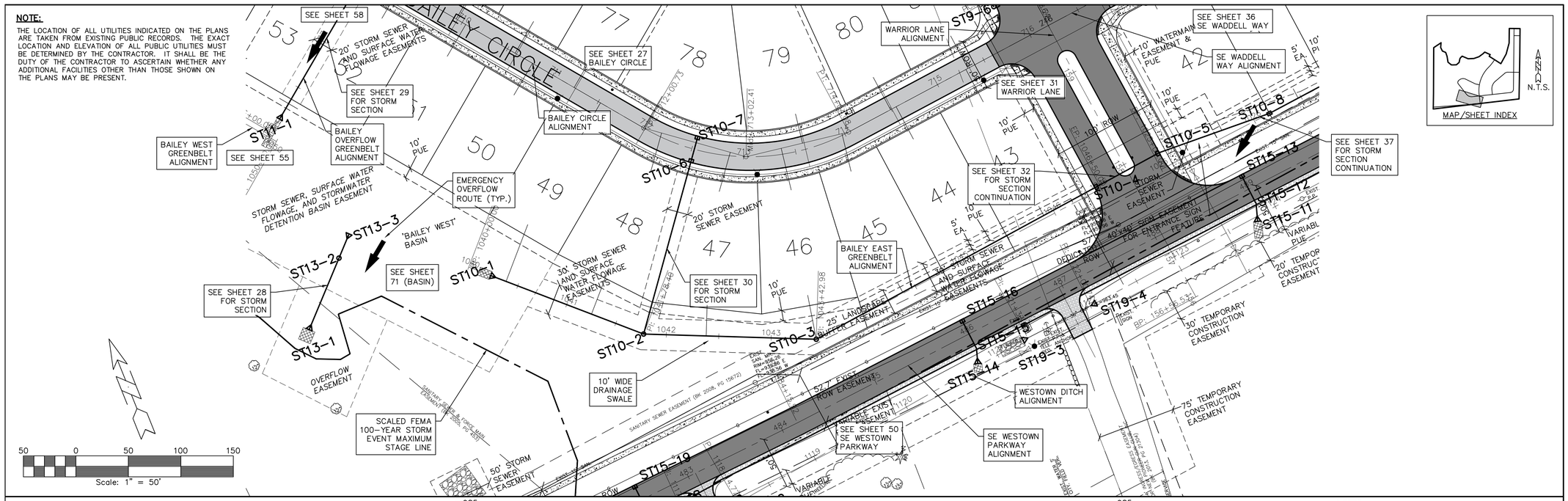
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

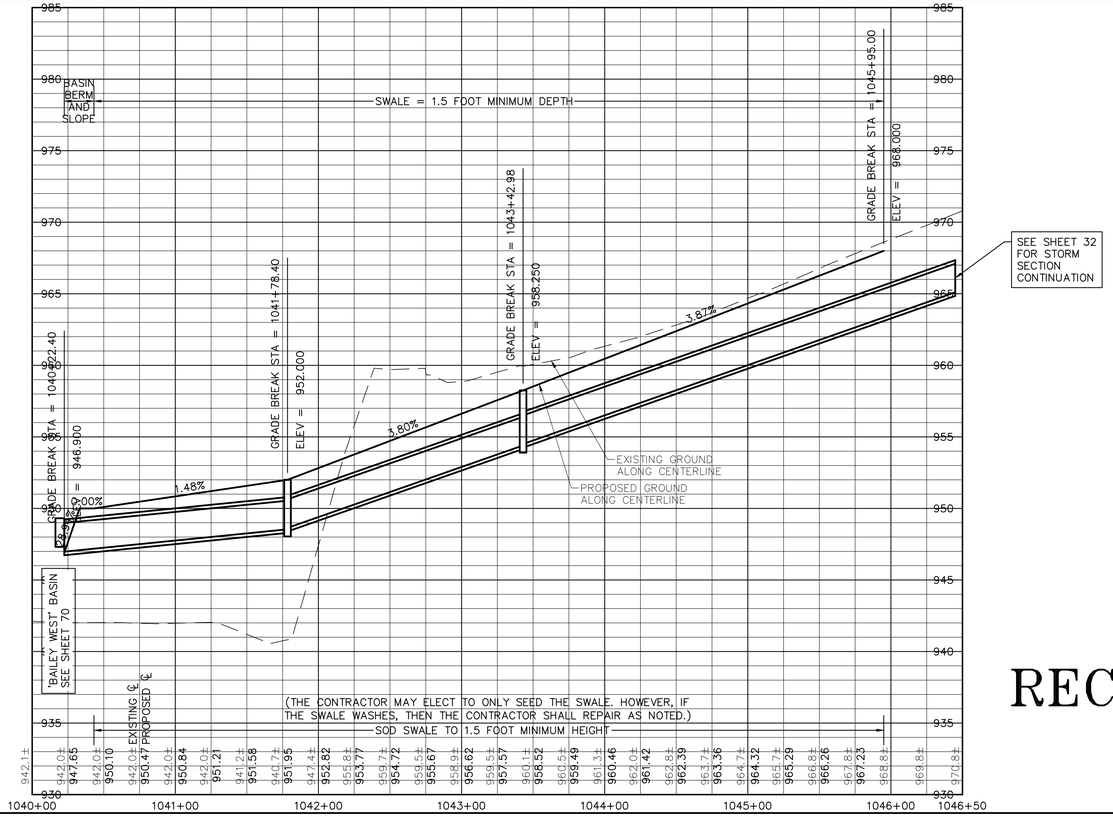
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP44.dwg, 10/19/2017 11:02:06 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

56

GLYNN VILLAGE PLAT 10 - BAILEY - GREENBELT

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP45.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 56 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

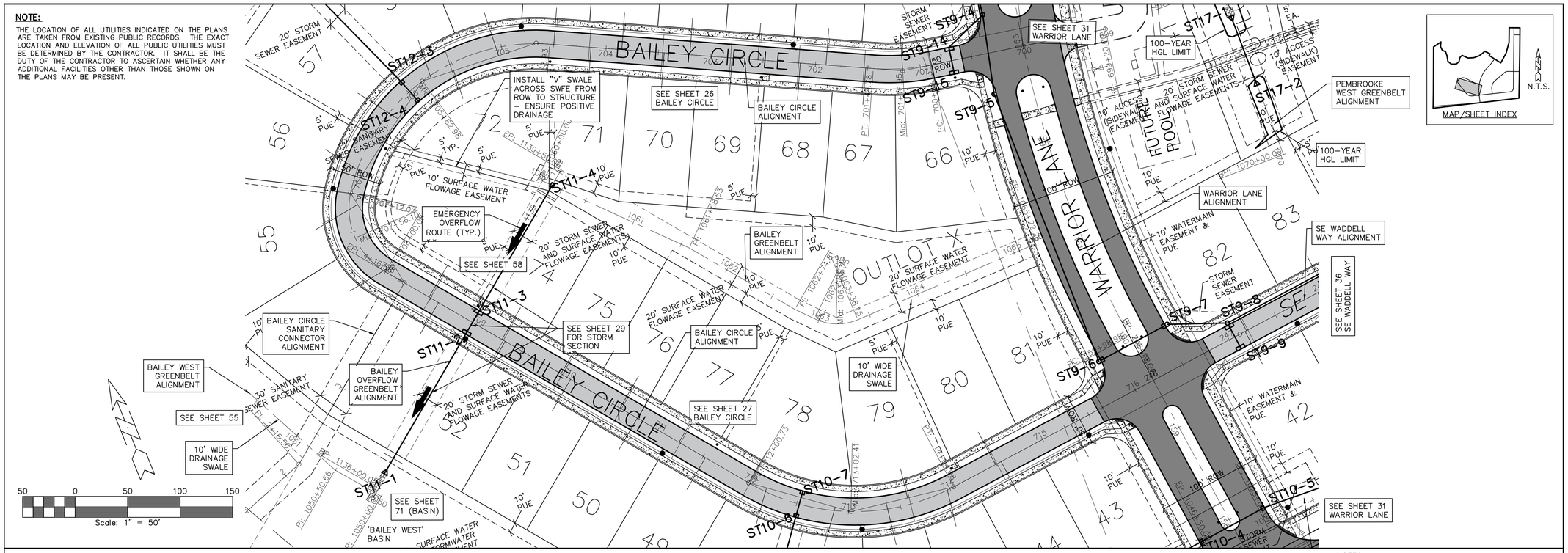
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

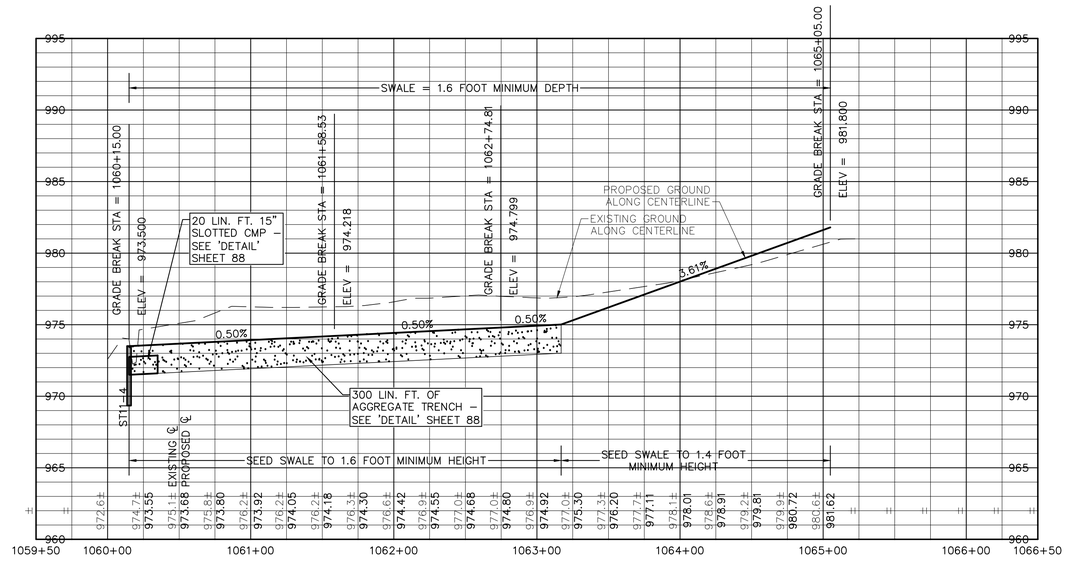
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP45.dwg, 10/19/2017 11:02:30 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING 57

GLYNN VILLAGE

PLAT 10 - BAILEY - GREENBELT

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP39.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	57 OF 100
DRAWN BY:	PJV		
DATE:	02/24/2016		
FILE NO.:	15-013		

NO.	REVISION	DATE	BY	FOR:

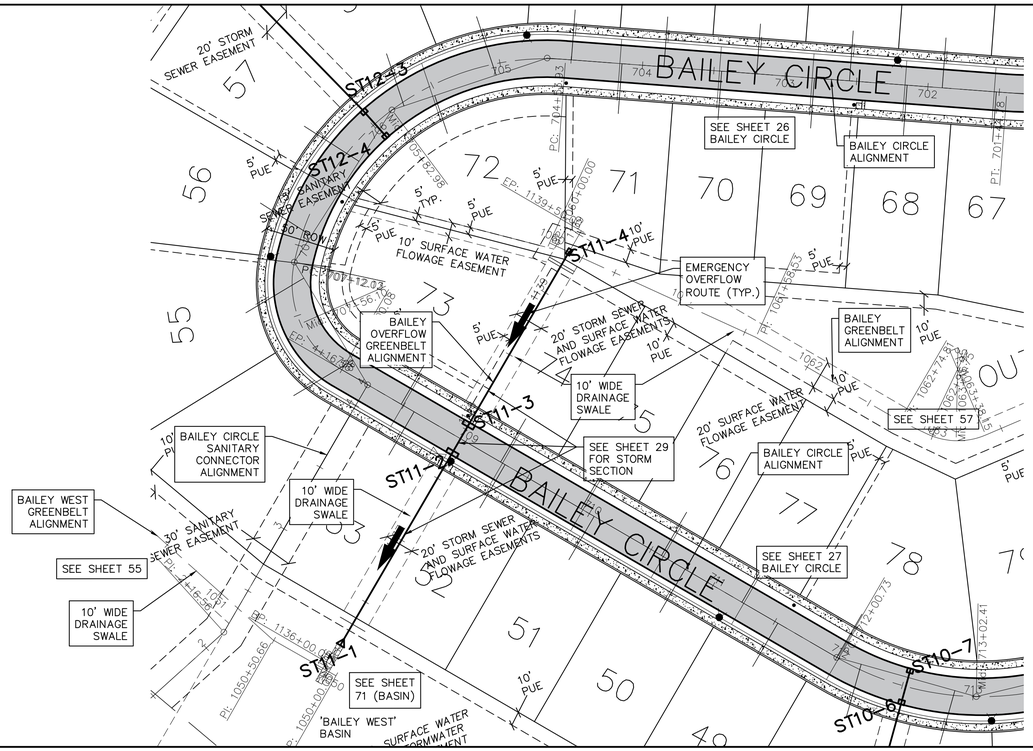
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

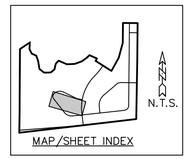
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP39.dwg, 10/19/2017 11:02:56 AM, PJV

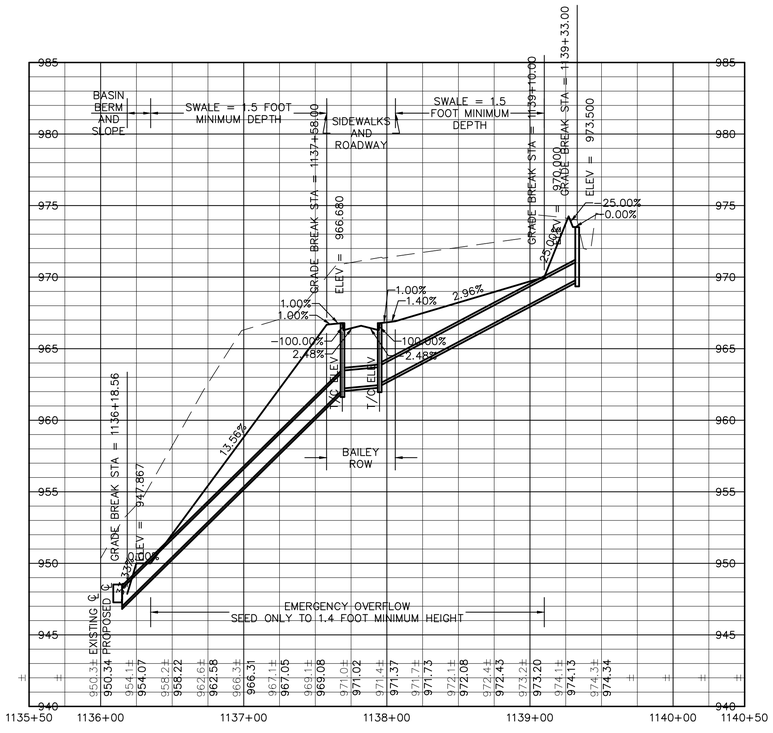
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

58

GLYNN VILLAGE PLAT 10 - BAILEY OVERFLOW - GREENBELT

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP39A.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 58 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

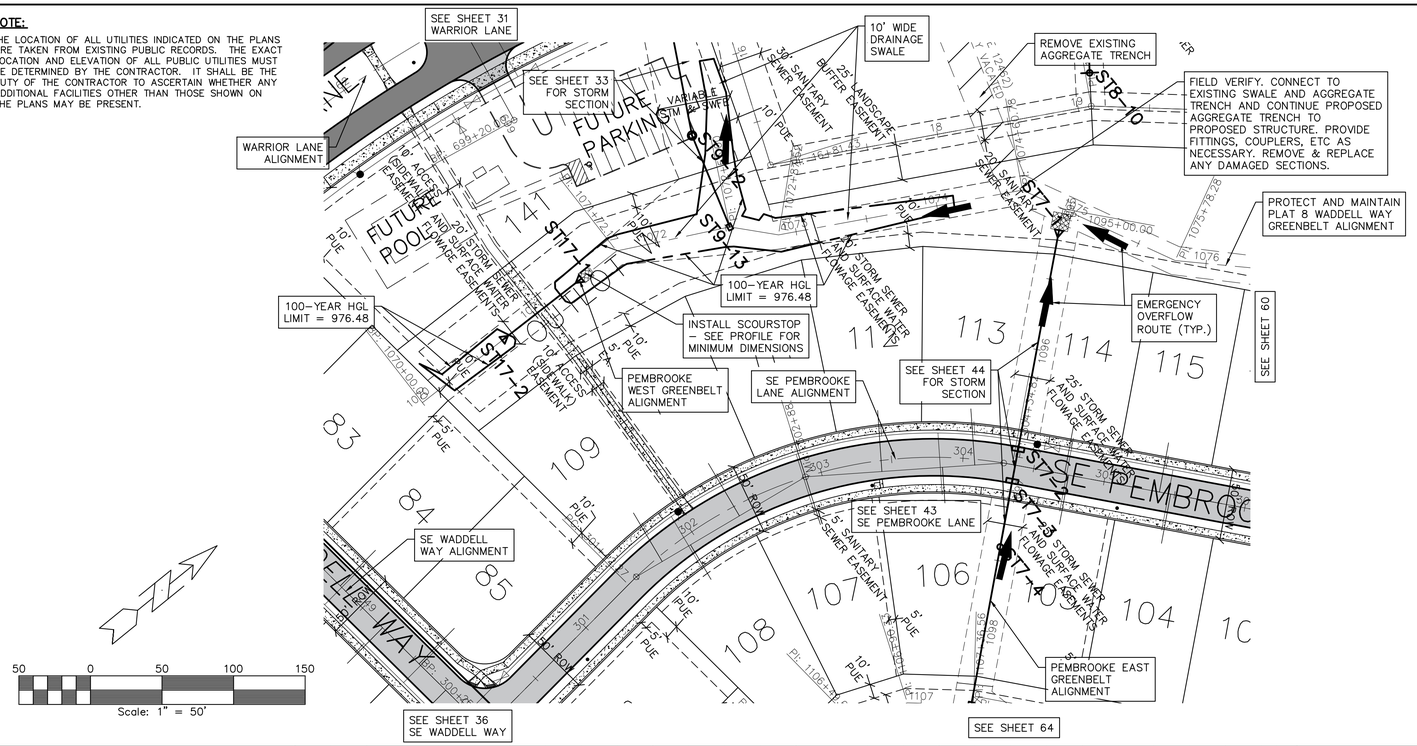
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

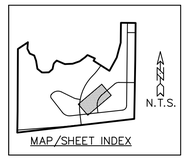
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP39A.dwg, 10/19/2017 11:03:20 AM, PJV

NOTE:

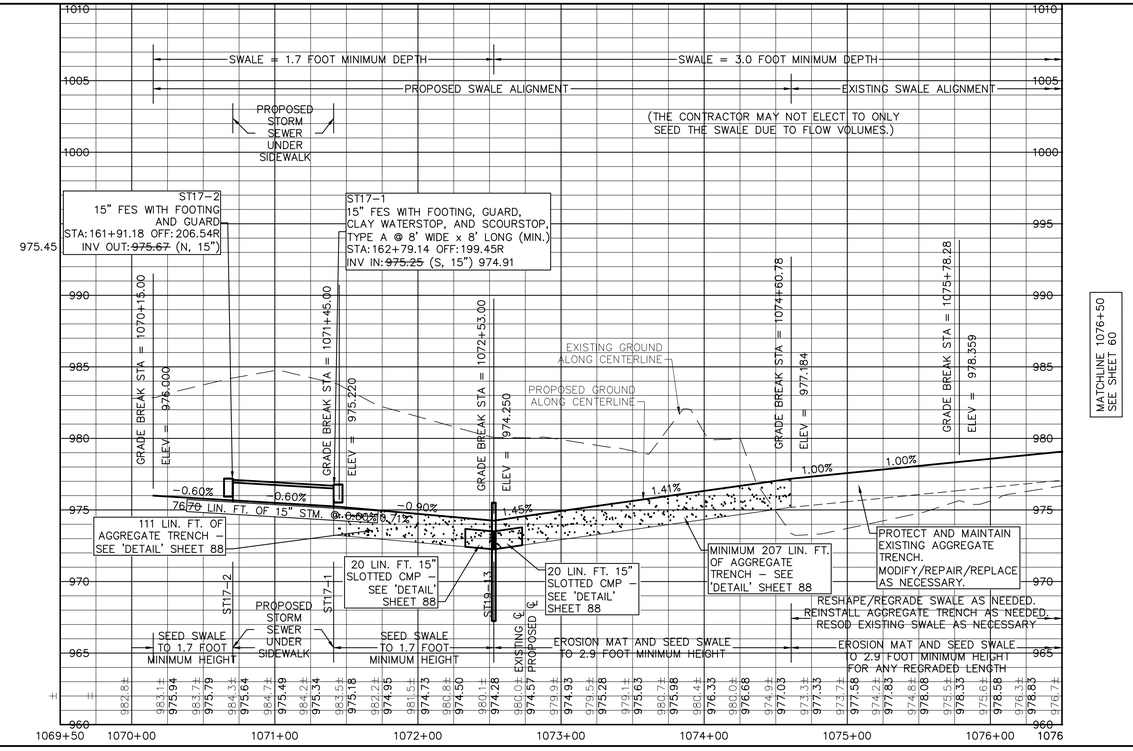
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





MAP/SHEET INDEX

SCALES:
1" = 50' HOR
1" = 5' VER



MATCHLINE 1076+50
SEE SHEET 60

NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

59

GLYNN VILLAGE PLAT 10 - PEMBROOKE WEST - GREENBELT

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP28.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 59 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

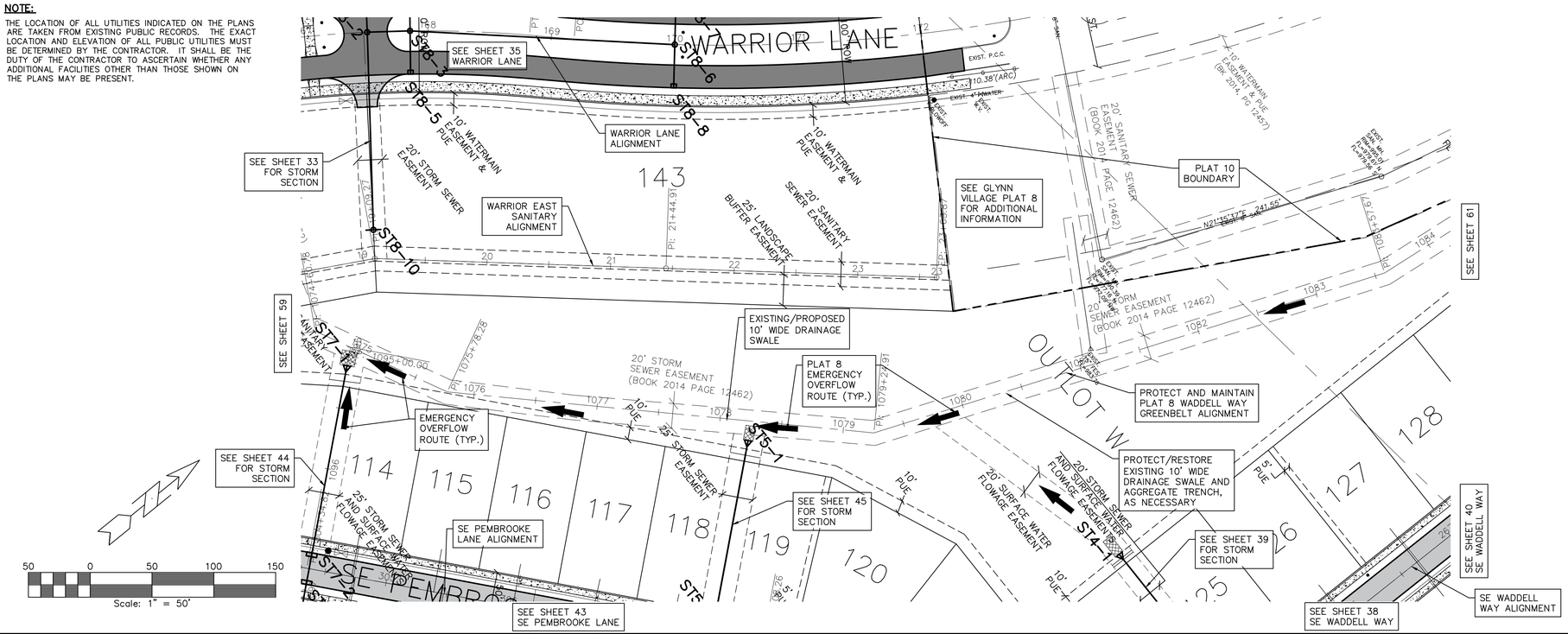
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

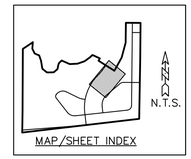
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP28.dwg, 10/19/2017 11:03:47 AM, PJV

NOTE:

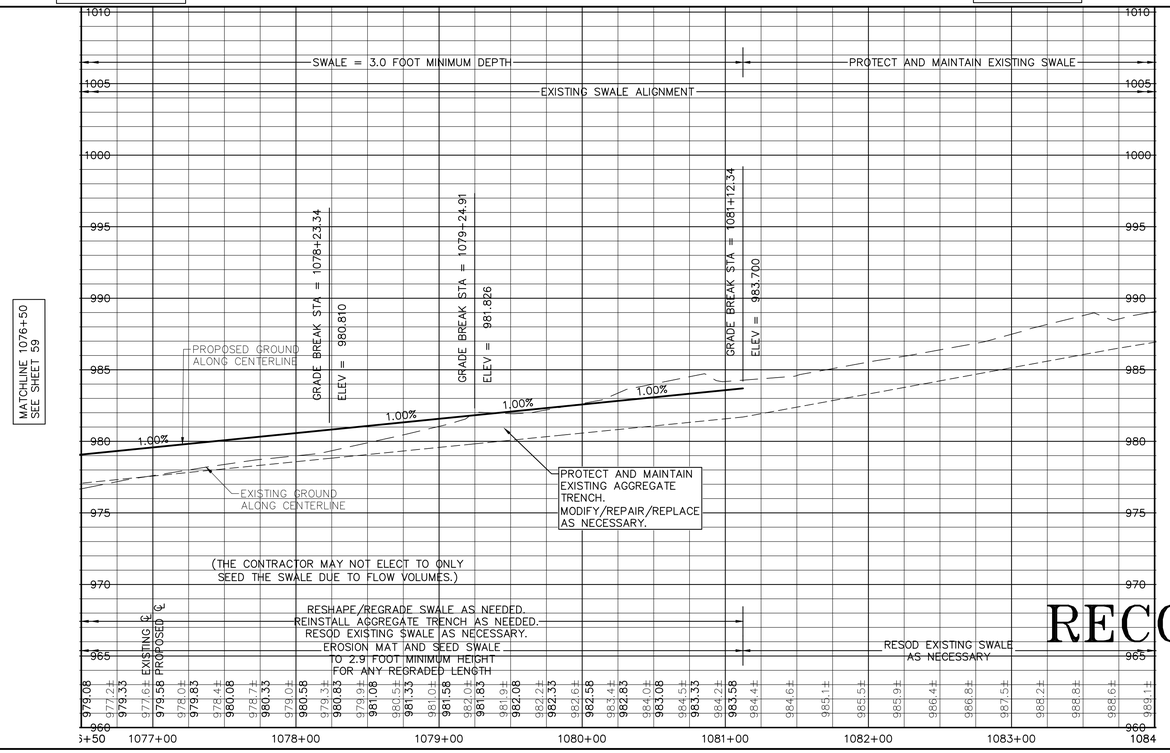
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





MAP/SHEET INDEX

SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

60

GLYNN VILLAGE PLAT 10 - PLAT 8 WADDELL WAY - GREENBELT

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP41.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 60 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY

FOR:

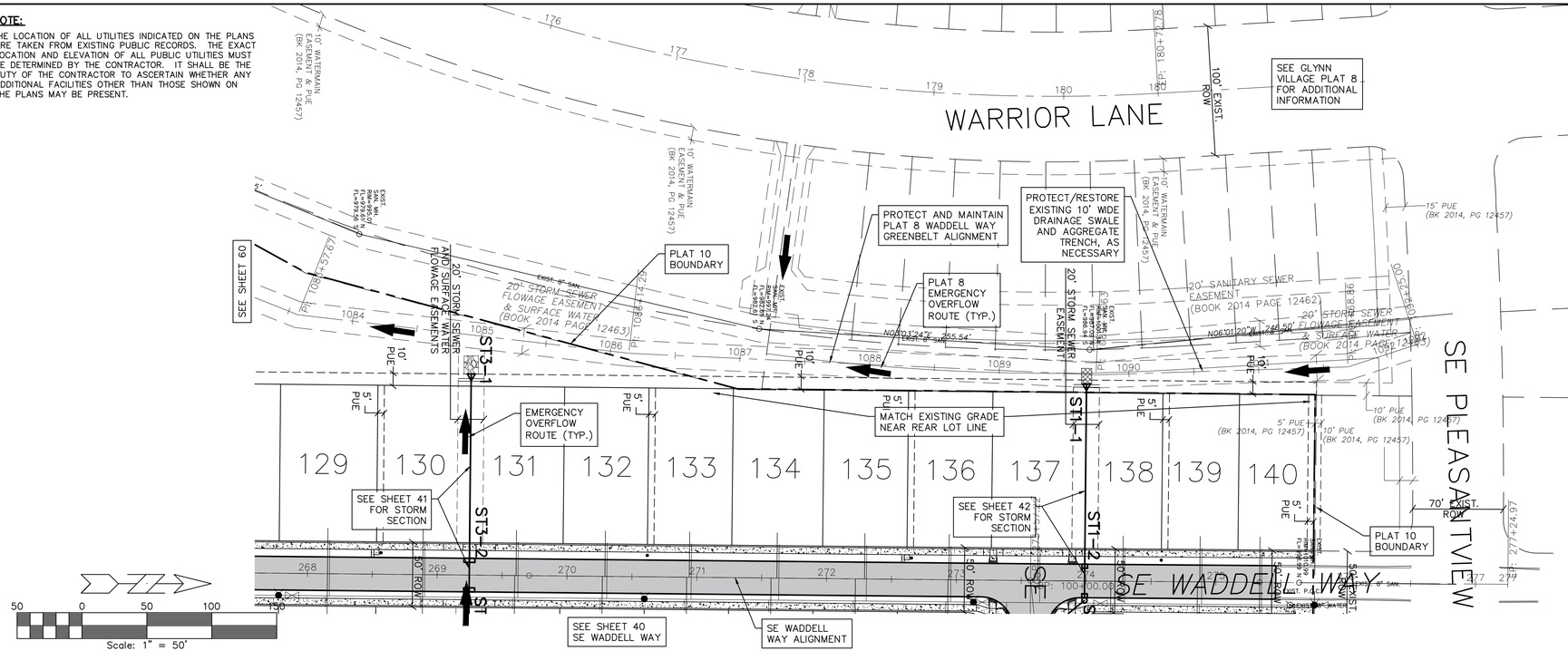
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

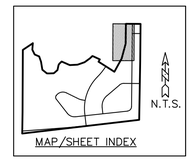
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP41.dwg, 10/19/2017 11:04:18 AM, PJV

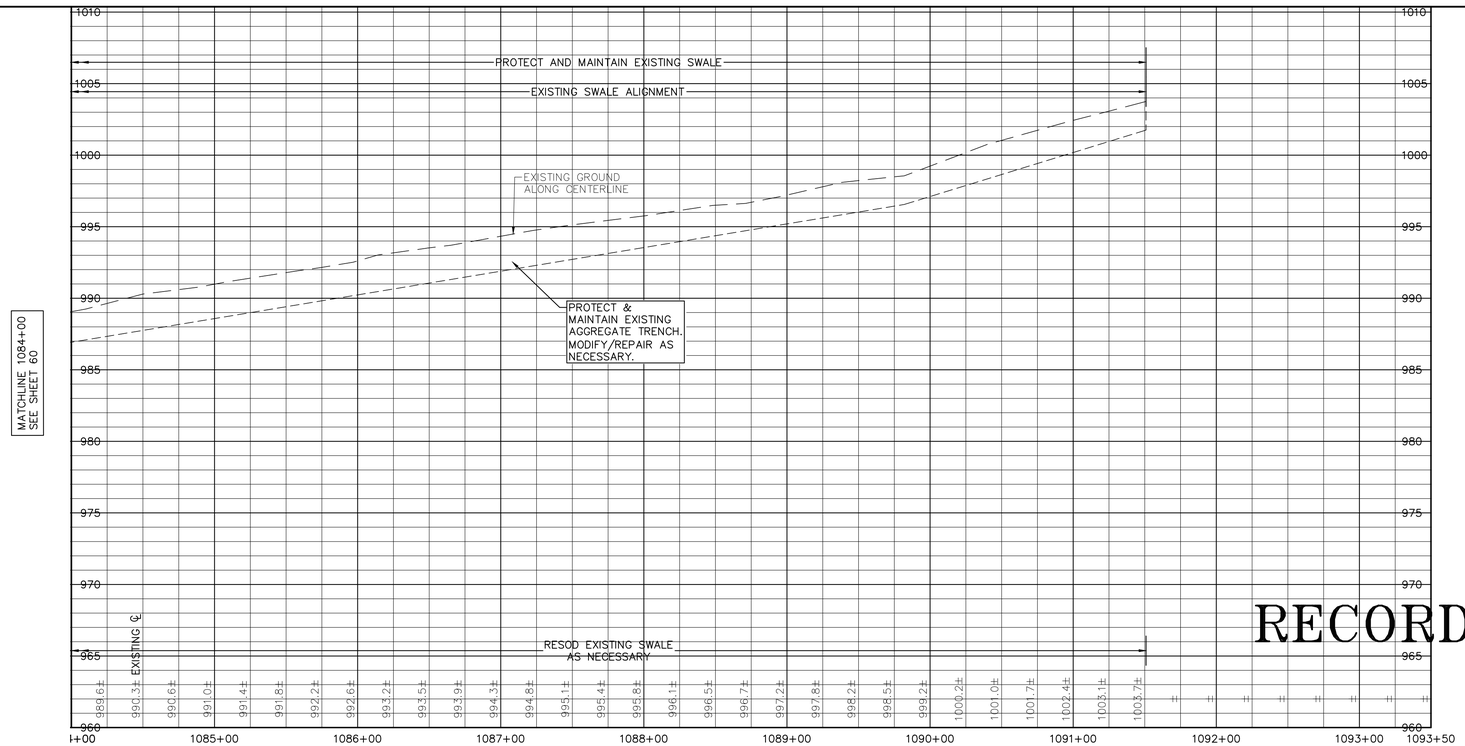
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

61

GLYNN VILLAGE PLAT 10 - PLAT 8 - GREENBELT

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-PP42.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	61 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

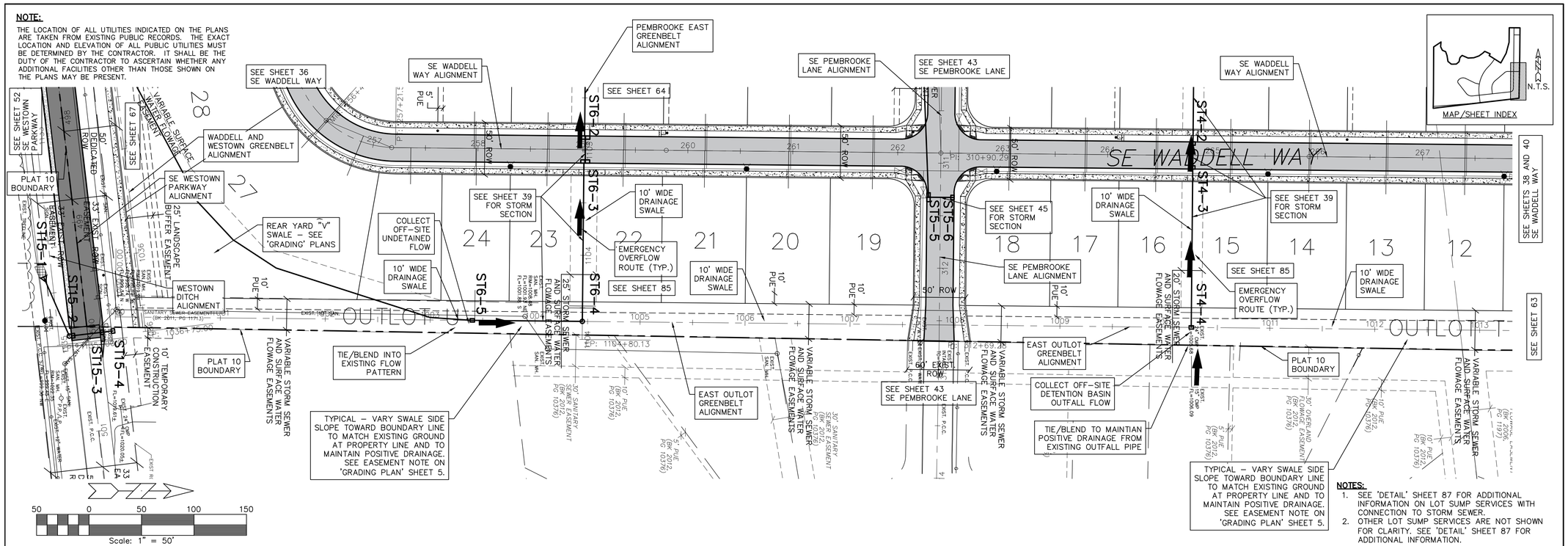
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP42.dwg, 10/19/2017 11:04:47 AM, PJV

NOTE:

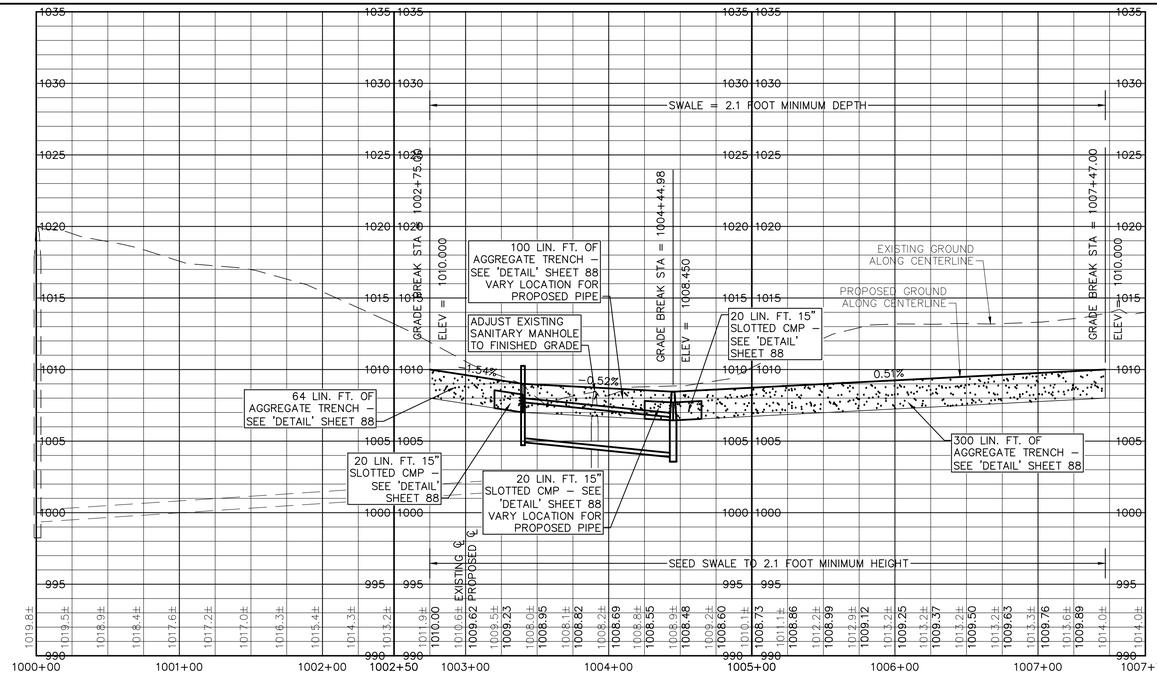
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

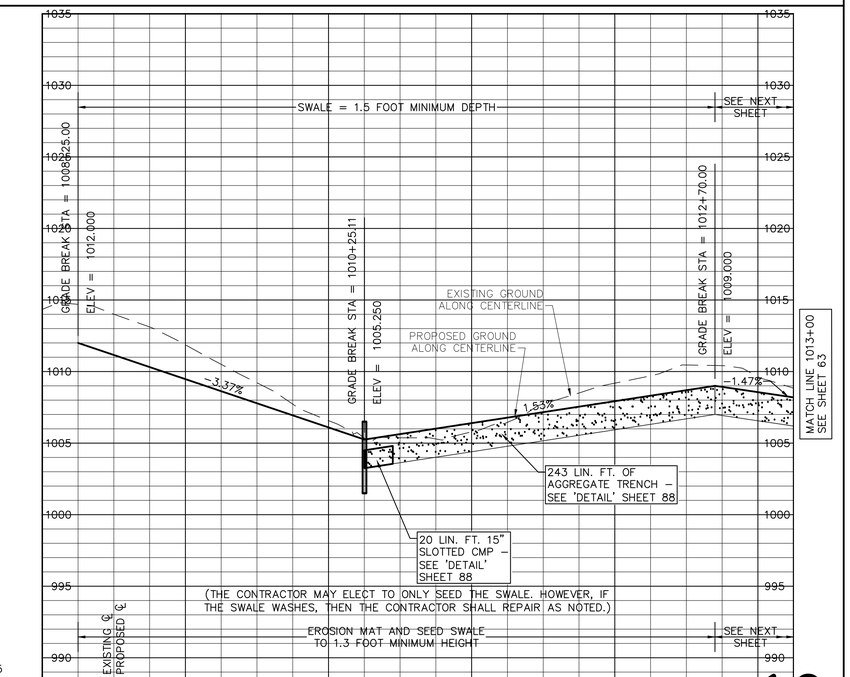


NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

SCALES:
1" = 50' HOR
1" = 5' VER





RECORD DRAWING

62

GLYNN VILLAGE PLAT 10 - EAST OUTLOT - GREENBELT

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP46.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 62 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

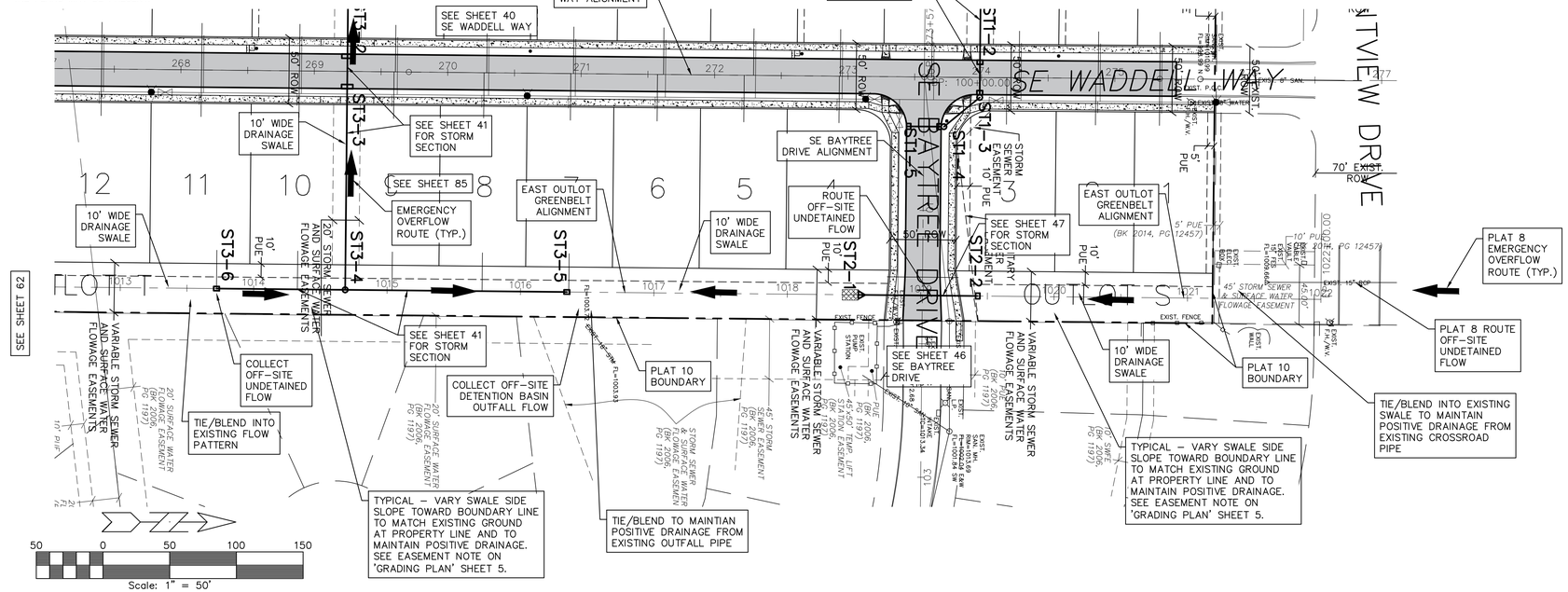
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP46.dwg, 10/19/2017 11:05:13 AM, PJV

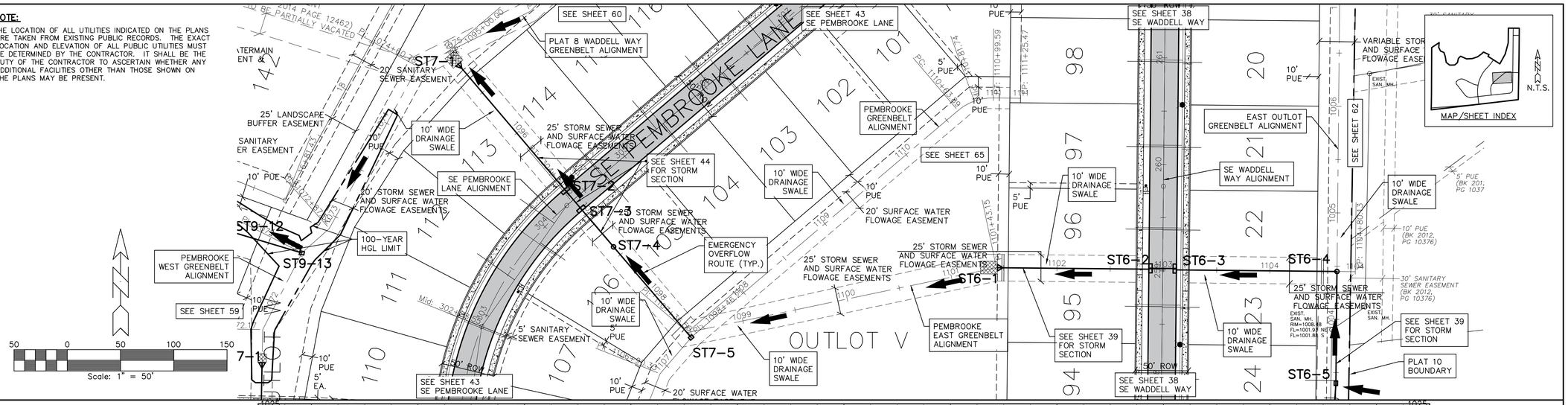
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.


SEE SHEET 40
SE WADDELL WAY
SE WADDELL WAY ALIGNMENT
SEE SHEET 42
FOR STORM
SECTION
SE WADDELL WAY
SE BAYTREE DRIVE
SE BAYTREE DRIVE ALIGNMENT
SOUTHVIEW DRIVE
70' EXIST. ROW
50' ROW
10' WIDE DRAINAGE SWALE
SEE SHEET 41
FOR STORM
SECTION
SEE SHEET 85
EMERGENCY OVERFLOW ROUTE (TYP.)
EAST OUTLOT GREENBELT ALIGNMENT
ROUTE OFF-SITE UNDETAINED FLOW
SEE SHEET 47
FOR STORM
SECTION
EAST OUTLOT GREENBELT ALIGNMENT
(BK 2014, PG 12457)
PLAT 8 EMERGENCY OVERFLOW ROUTE (TYP.)
PLAT 8 ROUTE OFF-SITE UNDETAINED FLOW
TIE/BLEND INTO EXISTING SWALE TO MAINTAIN POSITIVE DRAINAGE FROM EXISTING CROSSROAD PIPE
SEE SHEET 62
ST3-6
ST3-4
ST3-5
ST2-1
ST2-2
ST1-2
ST1-3
ST1-4
ST1-5
10' PUE
20' STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS
VARIABLE STORM SEWER AND SURFACE WATER FLOWAGE EASEMENTS
COLLECT OFF-SITE UNDETAINED FLOW
TIE/BLEND INTO EXISTING FLOW PATTERN
COLLECT OFF-SITE DETENTION BASIN OUTFALL FLOW
PLAT 10 BOUNDARY
SEE SHEET 46
SE BAYTREE DRIVE
10' WIDE DRAINAGE SWALE
TYPICAL - VARY SWALE SIDE SLOPE TOWARD BOUNDARY LINE TO MATCH EXISTING GROUND AT PROPERTY LINE AND TO MAINTAIN POSITIVE DRAINAGE. SEE EASEMENT NOTE ON 'GRADING PLAN' SHEET 5.
TIE/BLEND TO MAINTIAN POSITIVE DRAINAGE FROM EXISTING OUTFALL PIPE
STORM SEWER EASEMENT
45' STORM SEWER & SURFACE WATER FLOWAGE EASEMENT
20' SURFACE WATER FLOWAGE EASEMENT
45' X 40' TEMP. LIFT STATION EASEMENT
EXIST. FENCE
EXIST. WALL
EXIST. 15" RCP
EXIST. 8" SAN.
EXIST. P.A.C.
EXIST. WATER
EXIST. 12" W.V.
EXIST. 6" W.V.
EXIST. 8" W.V.
EXIST. 24" W.V.
EXIST. 30" W.V.
EXIST. 36" W.V.
EXIST. 48" W.V.
EXIST. 12" STORM
EXIST. 18" STORM
EXIST. 24" STORM
EXIST. 30" STORM
EXIST. 36" STORM
EXIST. 48" STORM
EXIST. 60" STORM
EXIST. 72" STORM
EXIST. 15" STORM
EXIST. 21" STORM
EXIST. 27" STORM
EXIST. 42" STORM
EXIST. 54" STORM
EXIST. 66" STORM
EXIST. 78" STORM
EXIST. 84" STORM
EXIST. 96" STORM
EXIST. 102" STORM
EXIST. 108" STORM
EXIST. 114" STORM
EXIST. 120" STORM
EXIST. 126" STORM
EXIST. 132" STORM
EXIST. 138" STORM
EXIST. 144" STORM
EXIST. 150" STORM
EXIST. 156" STORM
EXIST. 162" STORM
EXIST. 168" STORM
EXIST.

NOTE:

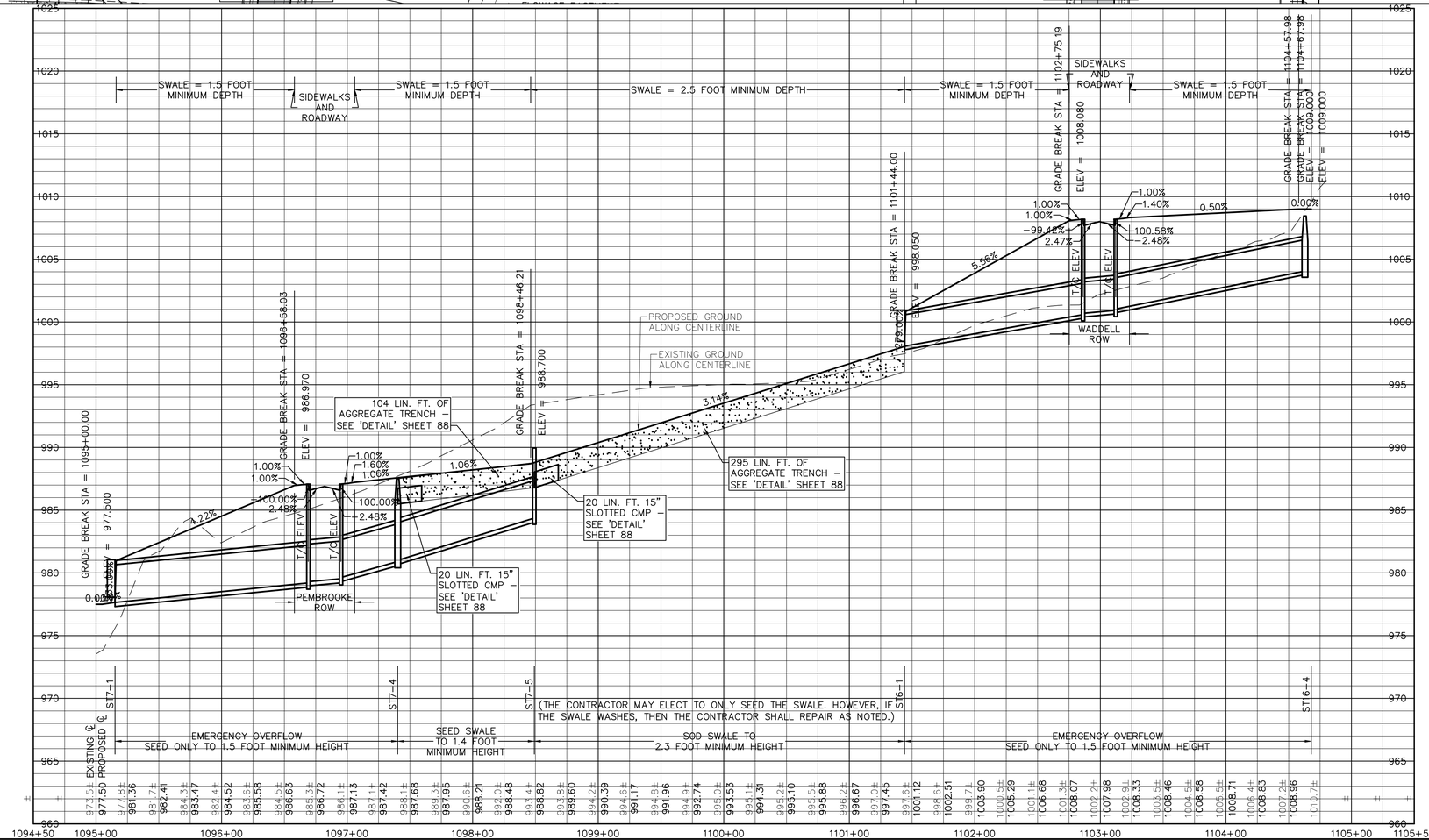
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.



64 RECORD DRAWING

GLYNN VILLAGE PLAT 10 - PEMBROOKE EAST - GREENBELT

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP40.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 64 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

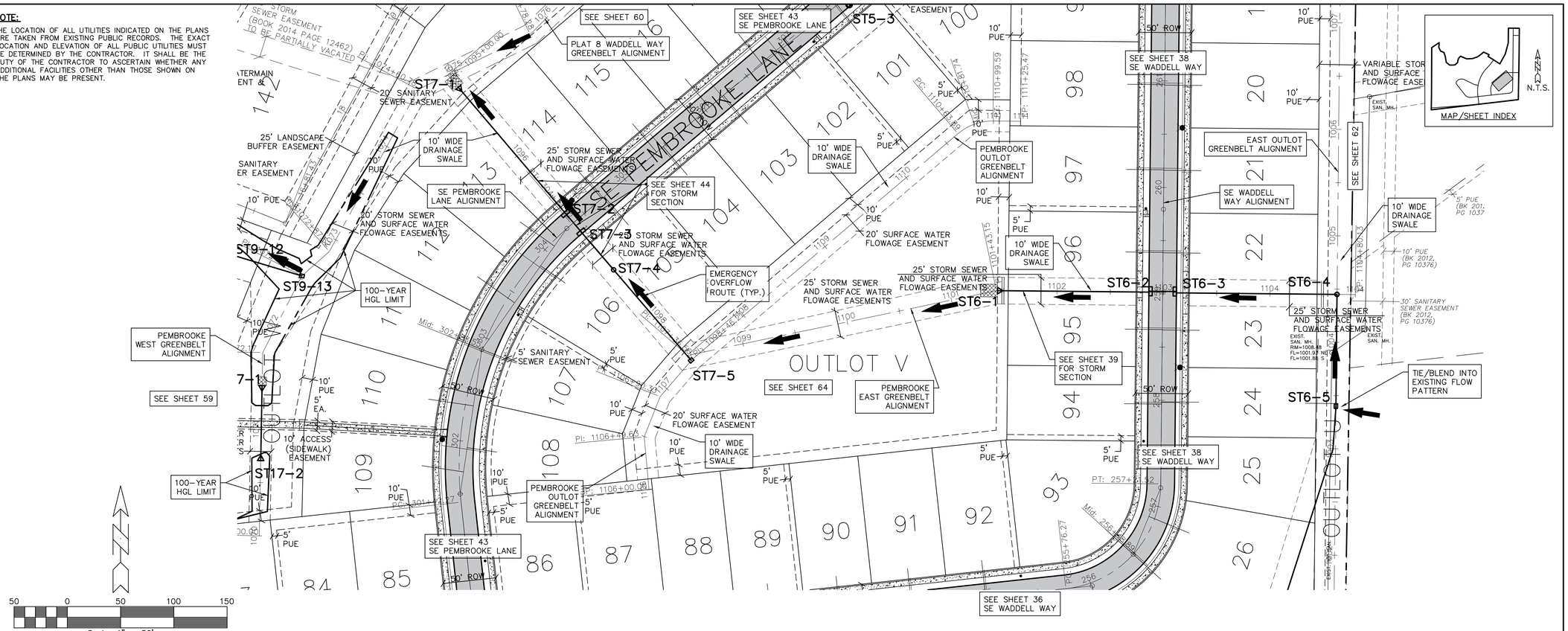
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

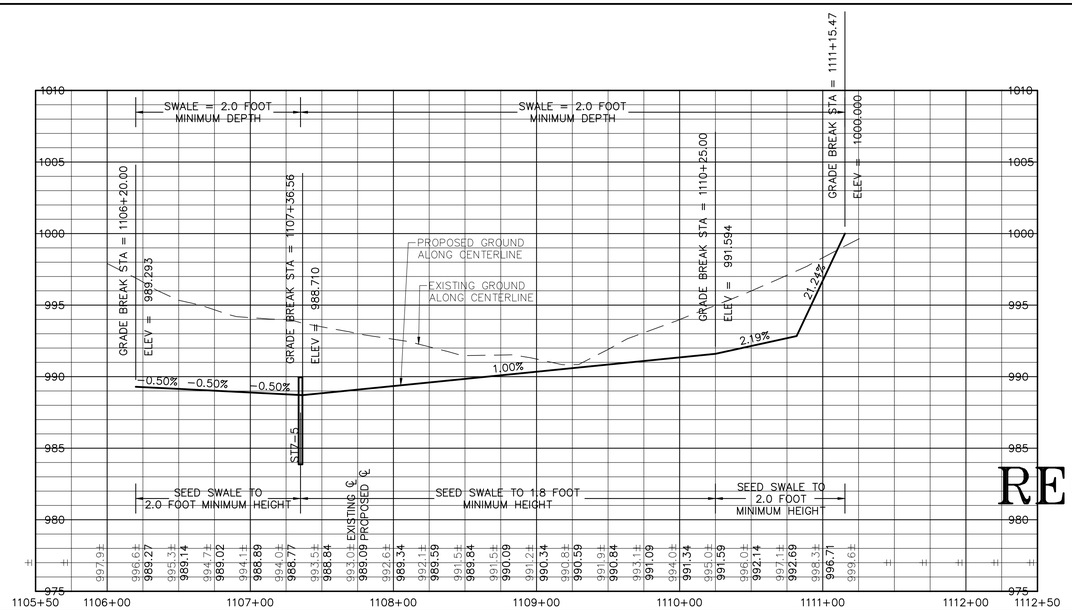
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP40.dwg, 10/19/2017 11:06:11 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER



NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

RECORD DRAWING

65

GLYNN VILLAGE PLAT 10 - PEMBROOKE - GREENBELT

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP48.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	65 OF 100
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

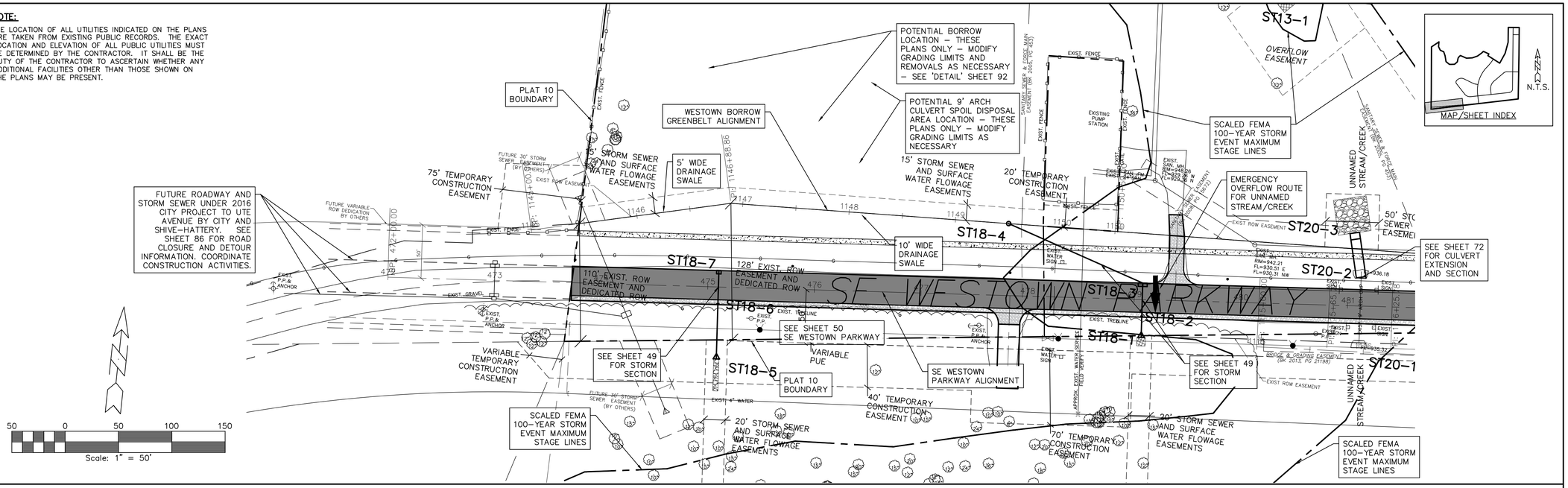
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP48.dwg, 10/19/2017 11:06:36 AM, PJV

NOTE:

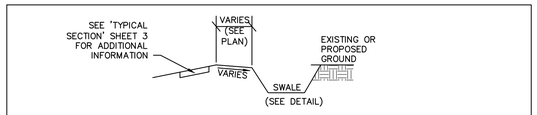
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

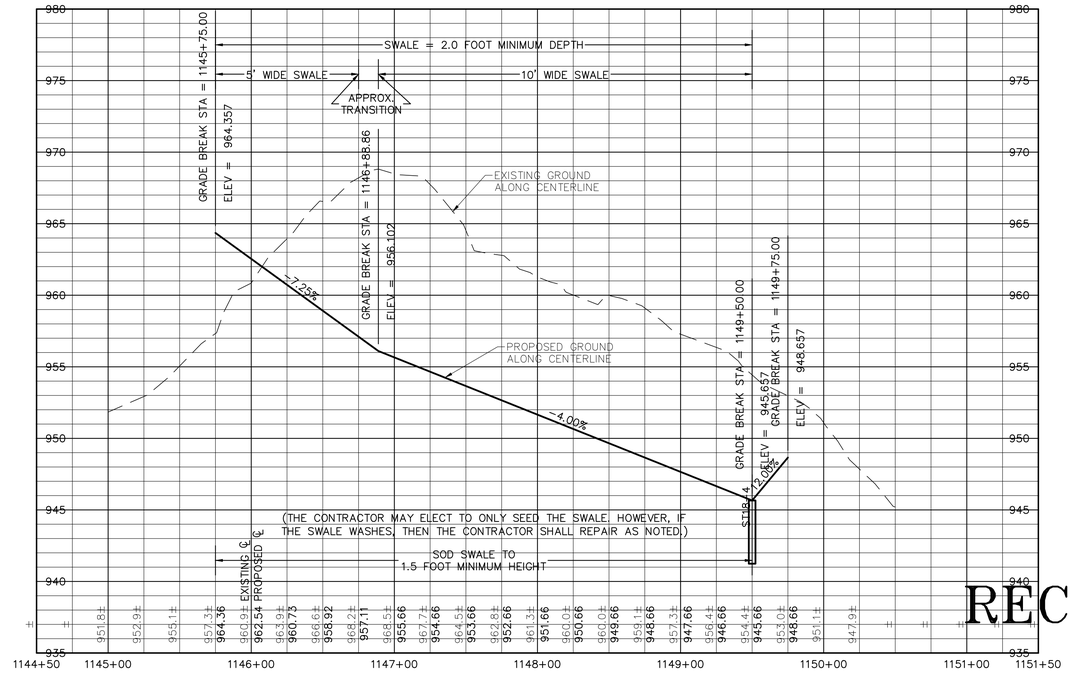
NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.



SE WESTOWN PARKWAY TYPICAL ROADWAY CROSS SECTION MODIFICATION

NOT TO SCALE



RECORD DRAWING

66

GLYNN VILLAGE PLAT 10 - WESTOWN BORROW - GREENBELT

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

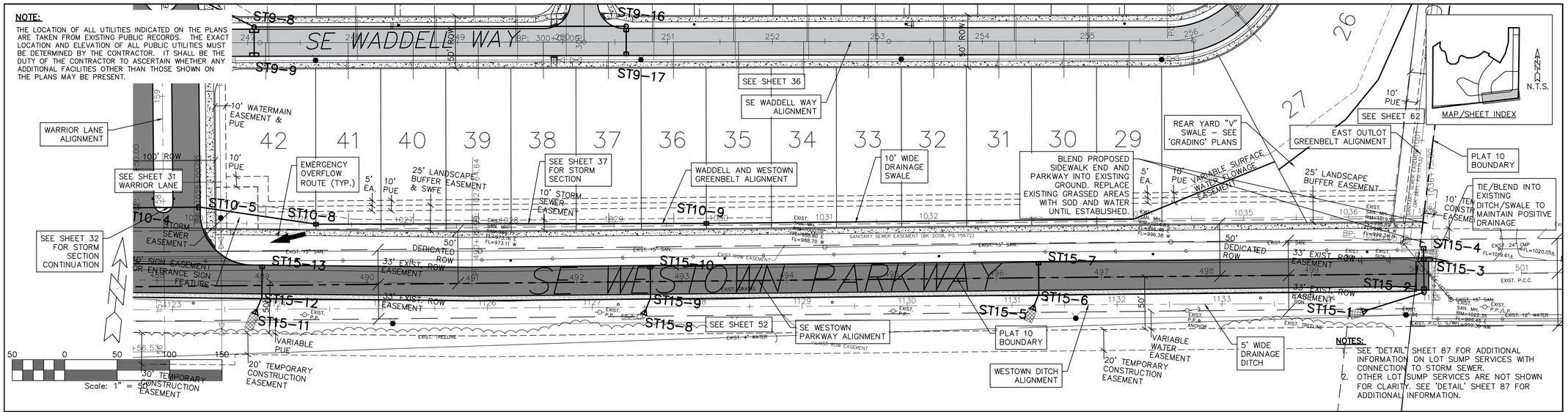
LOCATION:

SCALE:	1" = 50'	DESIGNED BY:	JRK
DWG:	15-013-PP50A.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	66 OF 100
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP50A.dwg, 10/19/2017 11:07:03 AM, PJV

NOTE:

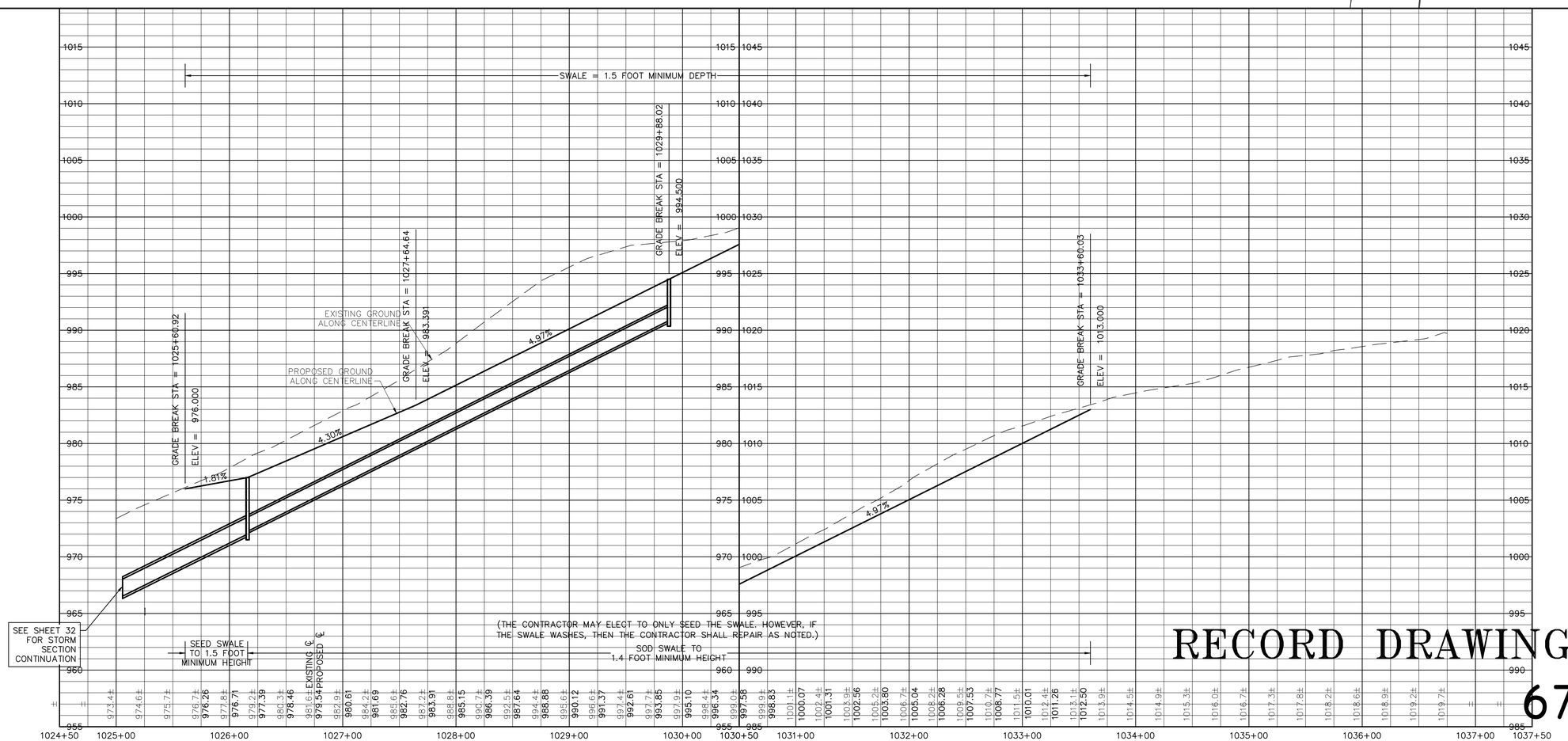
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



NOTES:

1. SEE "DETAIL" SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

SCALES:
1" = 50' HOR
1" = 5' VER



RECORD DRAWING

67

GLYNN VILLAGE PLAT 10 - WESTOWN AND WESTOWN - GREENBELT

SCALE:	1" = 50'
DWG:	15-013-PP49.dwg
FIELD BOOK:	
LOCATION:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	67 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

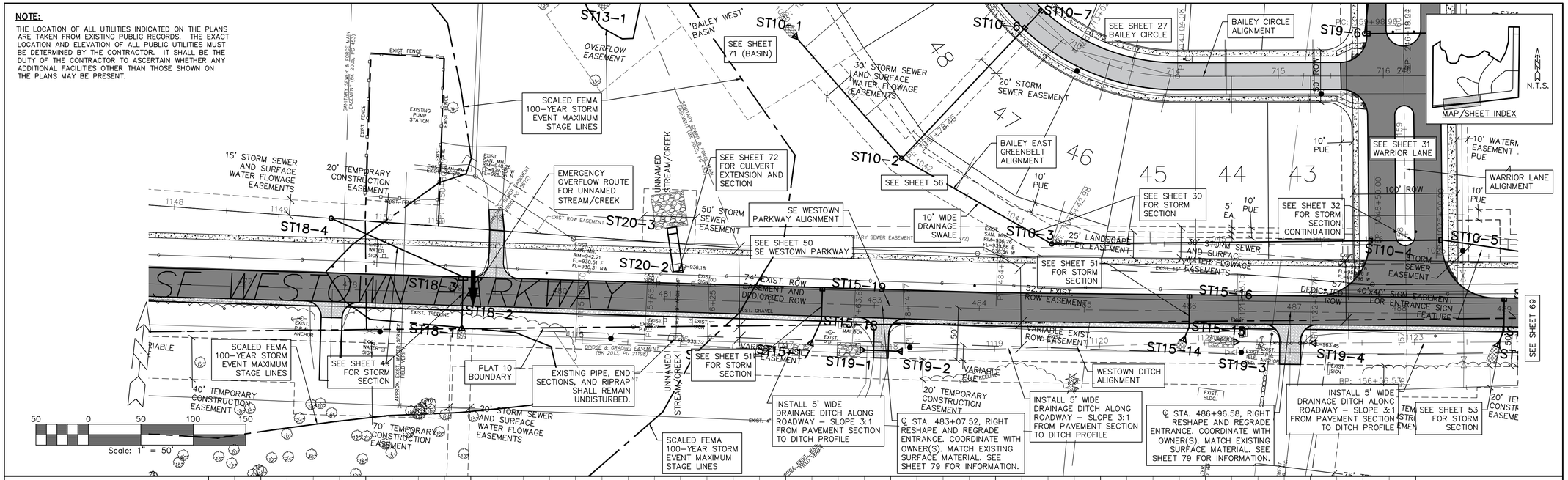
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP49.dwg, 10/19/2017 11:07:30 AM, PJV

NOTE:

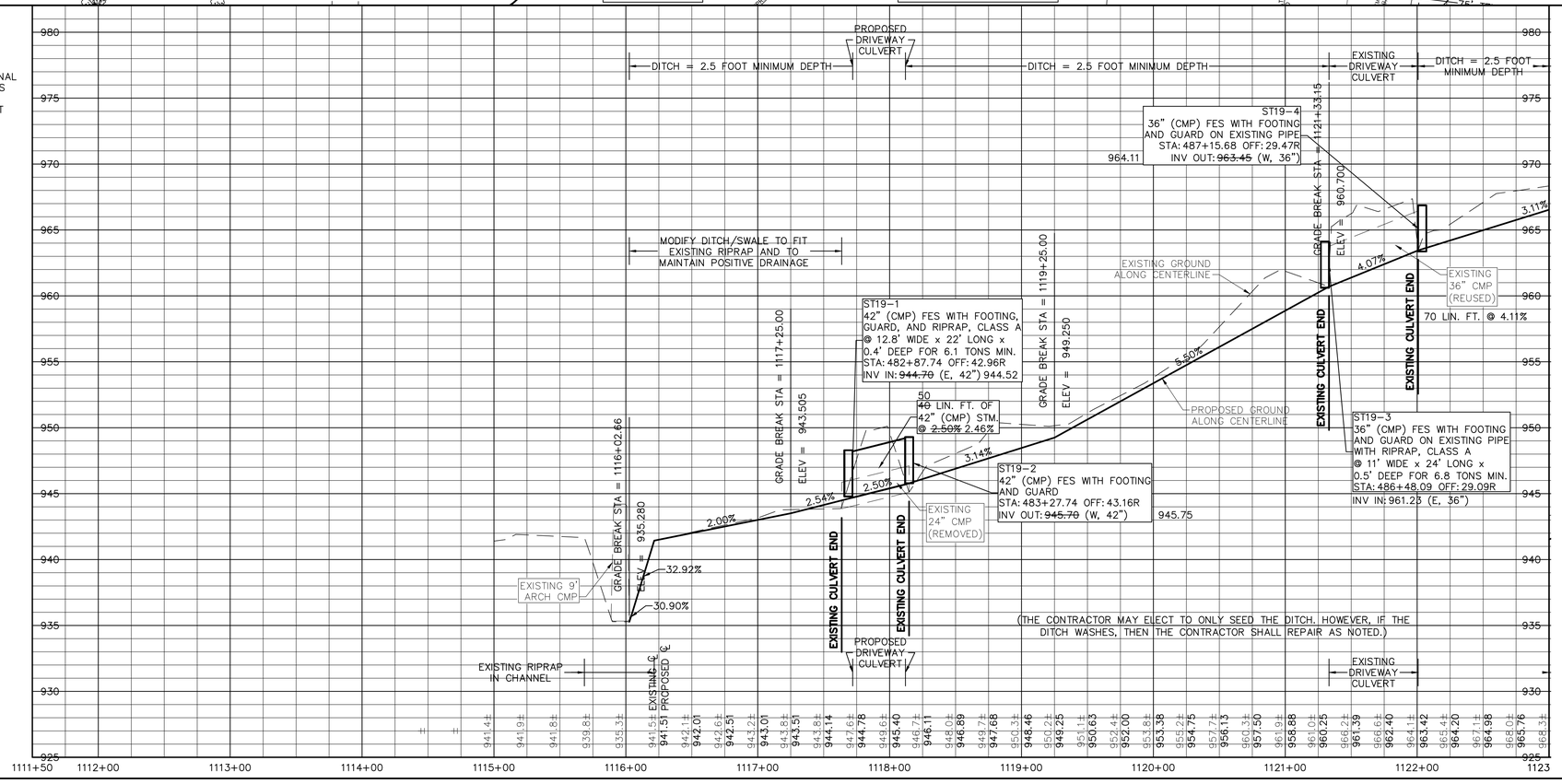
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SCALES:
1" = 50' HOR
1" = 5' VER

NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.



MATCHLINE 1123+00
SEE SHEET 69

68 RECORD DRAWING

GLYNN VILLAGE PLAT 10 - WESTOWN DITCH - GREENBELT I

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP50.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 68 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

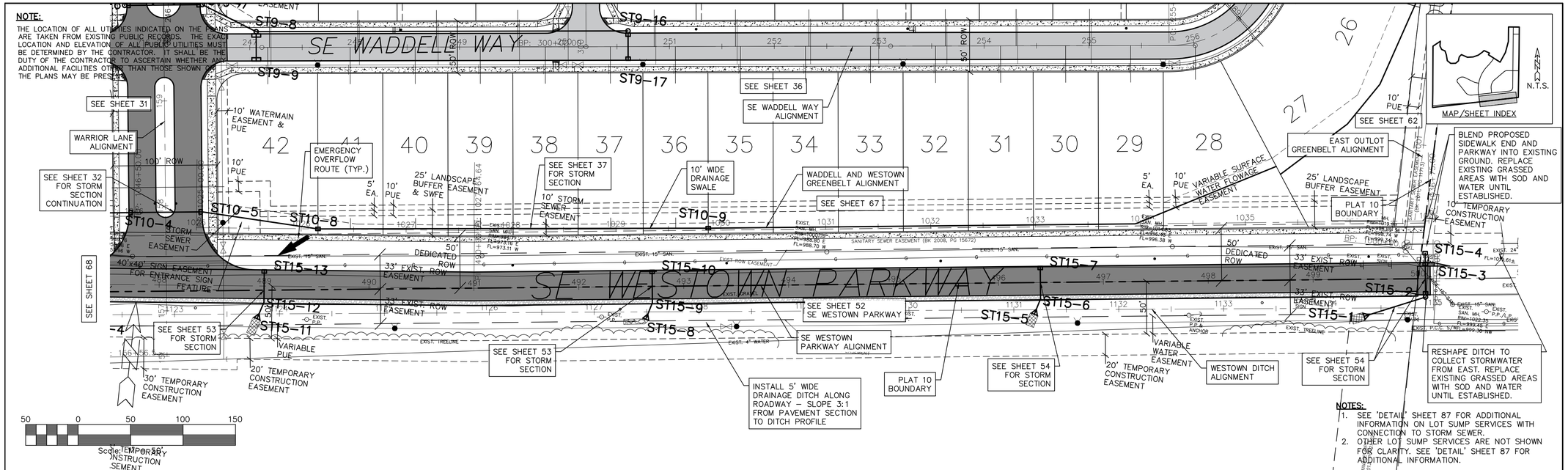
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP50.dwg, 10/19/2017 11:07:58 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



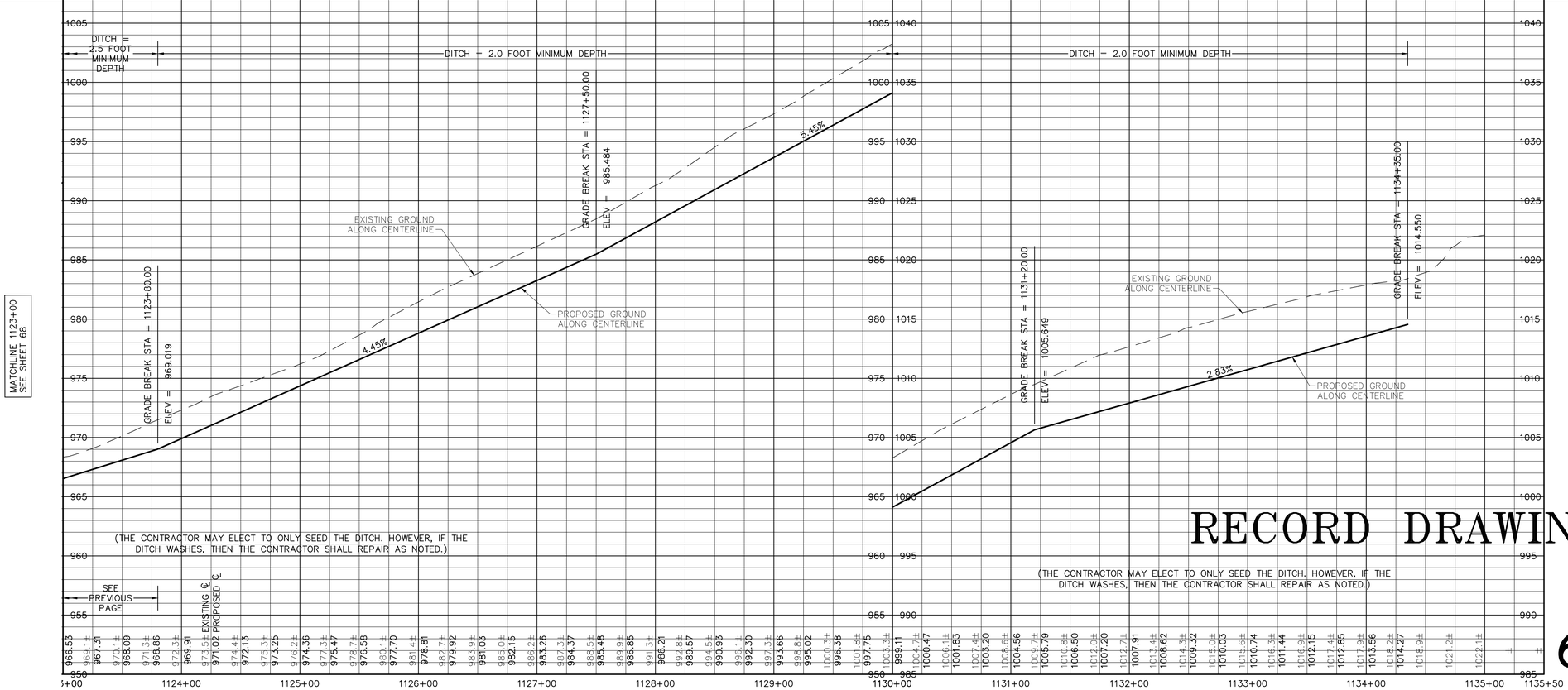
NOTES:

1. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION ON LOT SUMP SERVICES WITH CONNECTION TO STORM SEWER.
2. OTHER LOT SUMP SERVICES ARE NOT SHOWN FOR CLARITY. SEE 'DETAIL' SHEET 87 FOR ADDITIONAL INFORMATION.

50 0 50 100 150

Scale: 1" = 50'

SCALES:
1" = 50' HOR
1" = 5' VER



MATCHLINE 1123+00
SEE SHEET 68

MATCHLINE 1135+50
SEE SHEET 70

RECORD DRAWING

69

PLAT 10 - WESTOWN - GREENBELT

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-PP51.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	69 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

GLYNN VILLAGE PLAT

NO.	REVISION	DATE	BY	FOR:

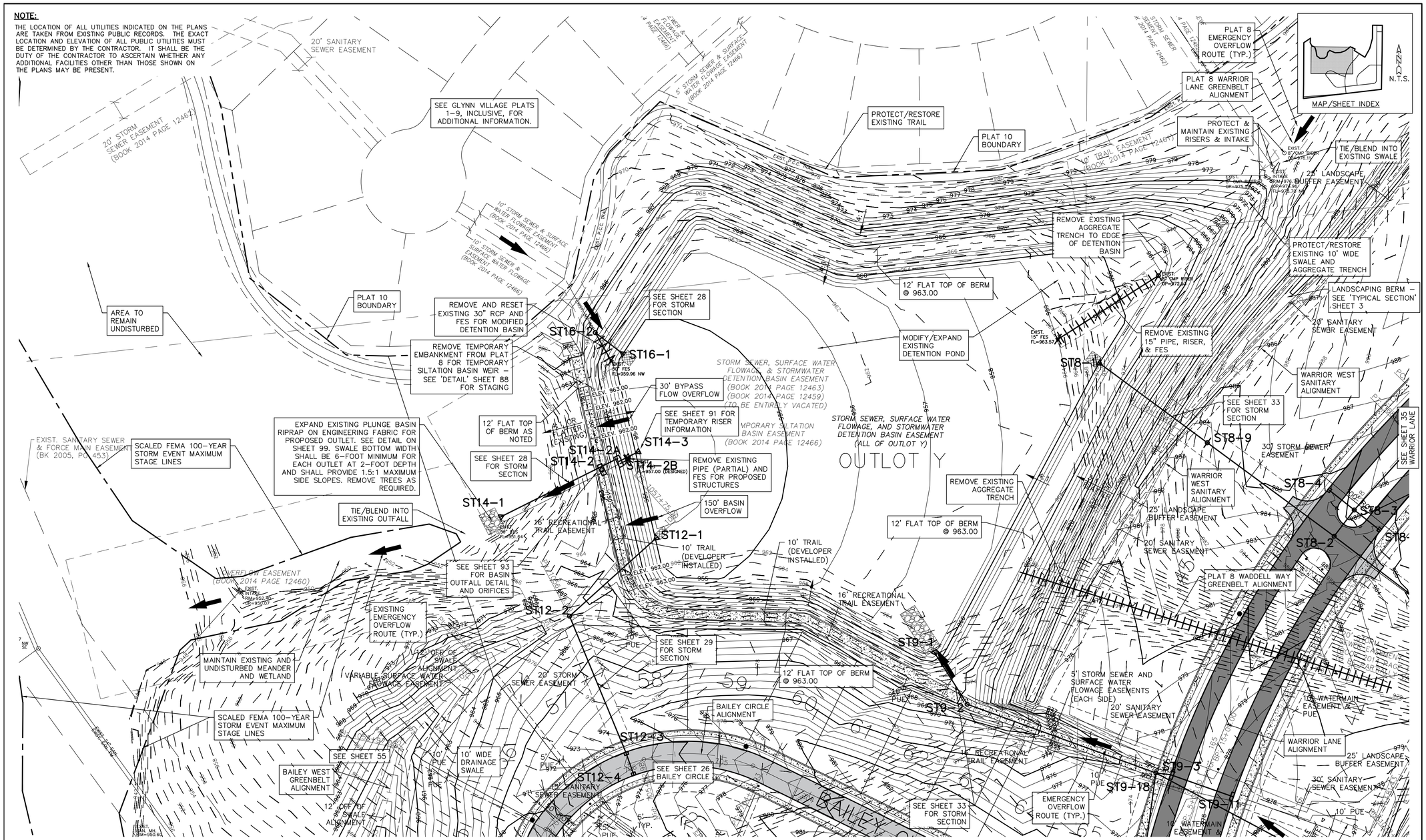
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP51.dwg, 10/19/2017 11:08:28 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



'EAST/8E' DETENTION BASIN

POND BOTTOM ELEVATION = 953.00
REQUIRED WQv VOLUME = 302,946.2 CU. FT. = 6.95 AC-FT
PROVIDED WQv VOLUME = 302,946.2 CU. FT. = 6.95 AC-FT
WQv DHWL = 957.14
REQUIRED 100-YEAR STORM VOLUME = 435,453.0 CU. FT. = 10.00 AC-FT
PROVIDED 100-YEAR STORM VOLUME = 837,131.6 CU. FT. = 19.22 AC-FT
100-YEAR STORM DHWL = 960.85
TOP OF BERM ELEVATION = 963.00
BULLETIN 71 10-YEAR DISCHARGE = 175.8 CFS
BULLETIN 71 100-YEAR DISCHARGE = 272.3 CFS

RECORD DRAWING

70

GLYNN VILLAGE PLAT 10 - 'EAST-8E' DETENTION BASIN - GRADING & STORM

LOCATION:	SCALE: 1" = 50'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-PP31.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 70 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

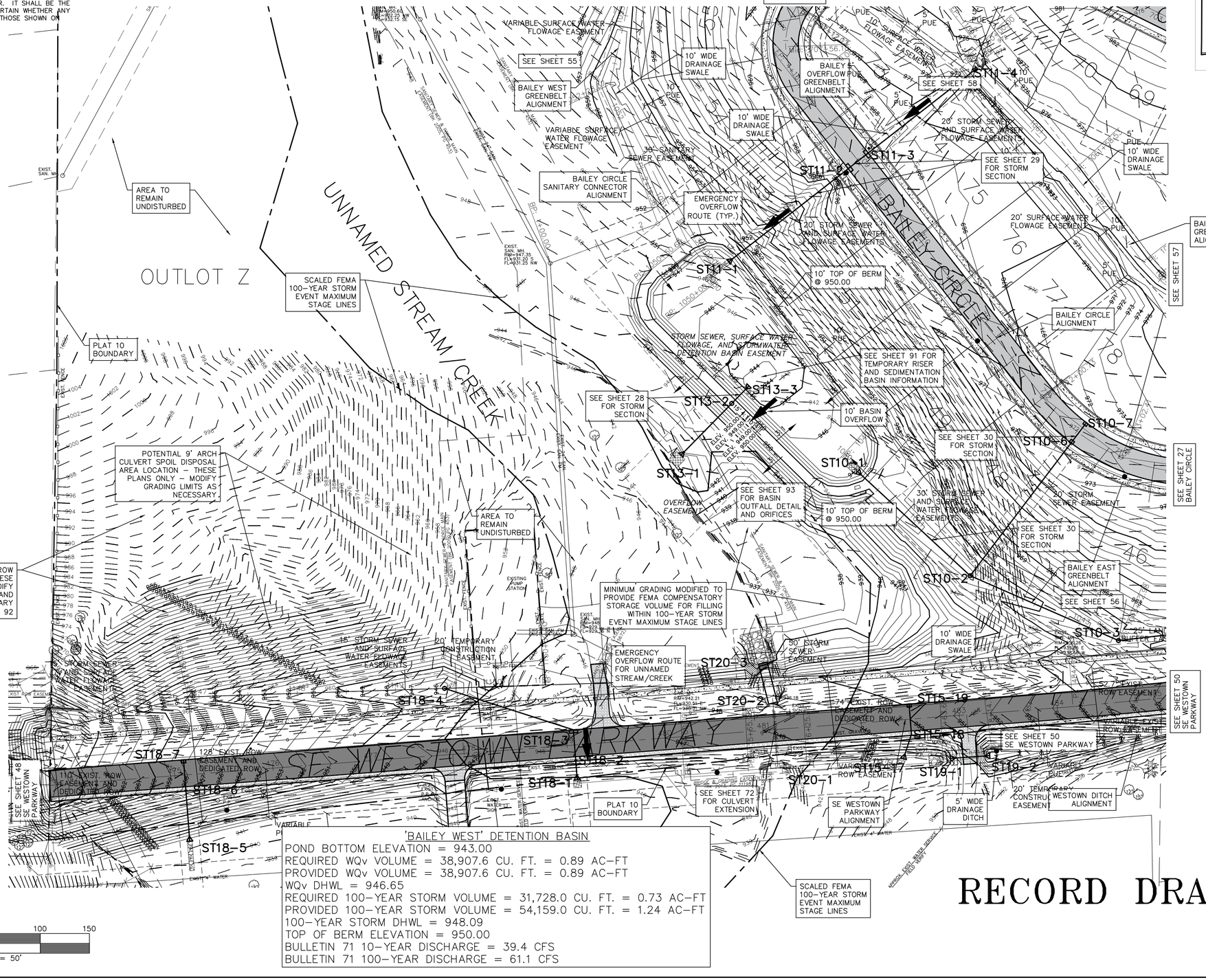
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP31.dwg, 10/19/2017 11:08:55 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



'BAILEY WEST' DETENTION BASIN

POND BOTTOM ELEVATION = 943.00
REQUIRED WQv VOLUME = 38,907.6 CU. FT. = 0.89 AC-FT
PROVIDED WQv VOLUME = 38,907.6 CU. FT. = 0.89 AC-FT
WQv DHWL = 946.65
REQUIRED 100-YEAR STORM VOLUME = 31,728.0 CU. FT. = 0.73 AC-FT
PROVIDED 100-YEAR STORM VOLUME = 54,159.0 CU. FT. = 1.24 AC-FT
100-YEAR STORM DHWL = 948.09
TOP OF BERM ELEVATION = 950.00
BULLETIN 71 10-YEAR DISCHARGE = 39.4 CFS
BULLETIN 71 100-YEAR DISCHARGE = 61.1 CFS

RECORD DRAWING

71

GLYNN VILLAGE PLAT 10 - 'BAILEY WEST' DETENTION BASIN - GRADING & STORM

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PP43.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 71 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

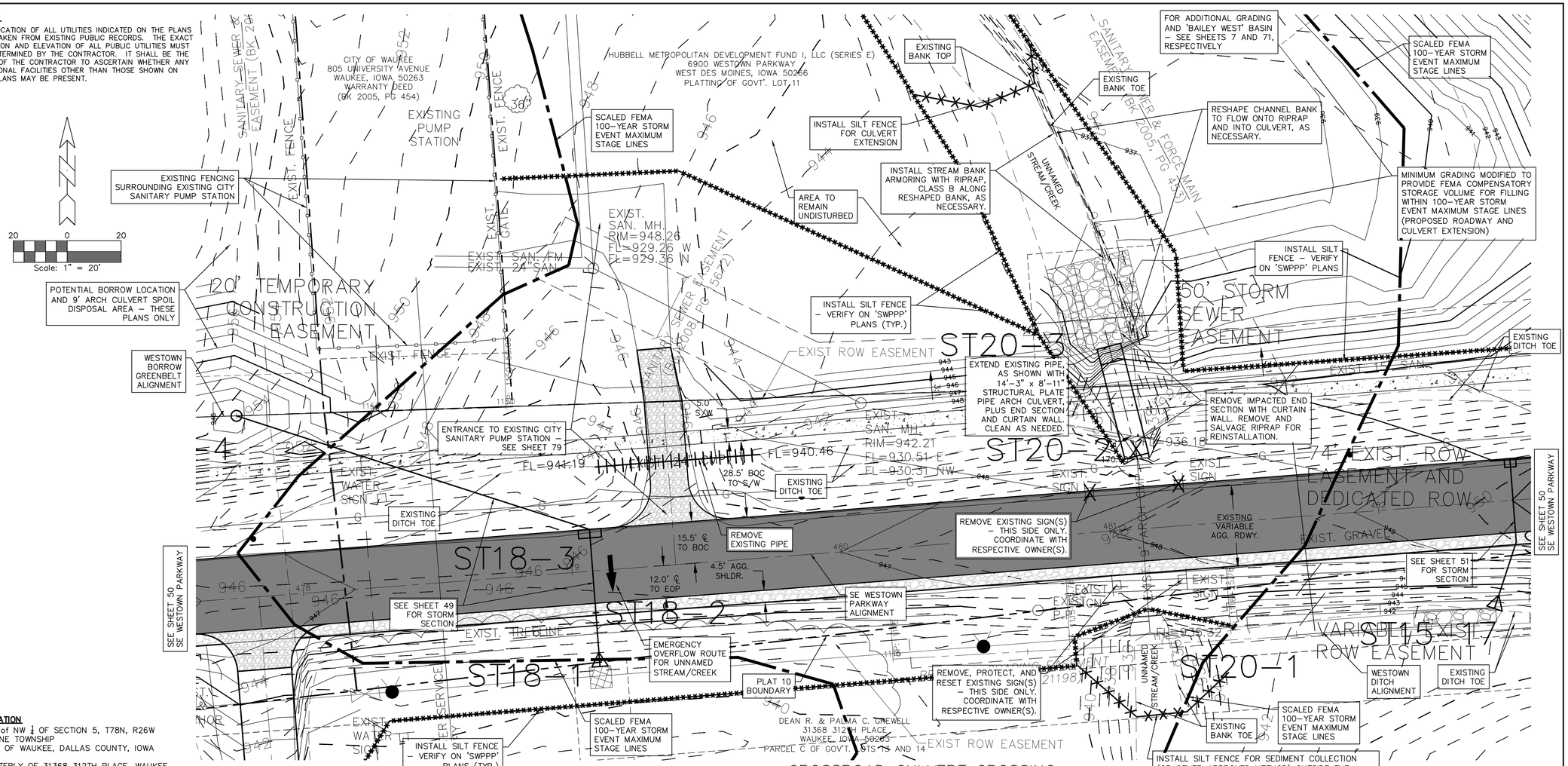
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

I:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PP43.dwg, 10/19/2017 11:09:21 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



CROSSROAD CULVERT CROSSING
SE WESTOWN PARKWAY STA. 481+12.06

LOCATION
E ½ of NW ¼ OF SECTION 5, T78N, R26W
BOONE TOWNSHIP
CITY OF WAUKEE, DALLAS COUNTY, IOWA

WESTERLY OF 31368 312TH PLACE, WAUKEE



LOCATION MAP
NOT TO SCALE

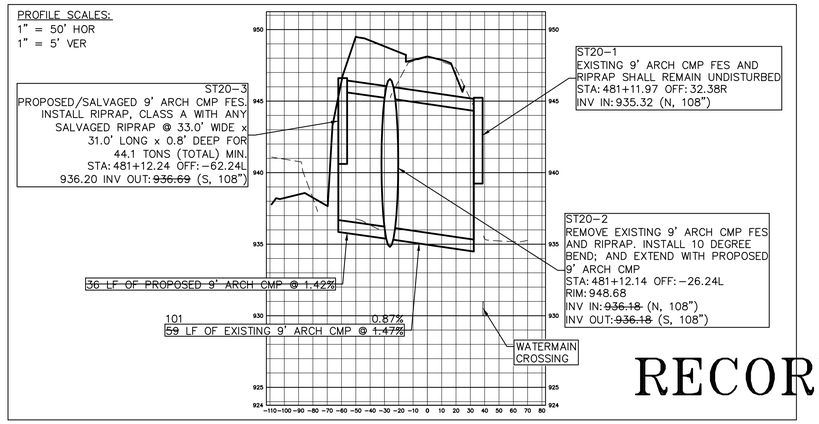
HYDRAULIC DATA FROM USACOE CEMVR-OD-P-2013-1066
(AND IDNR FP-2013-215)

DRAINAGE AREA = 4.5 SQ. MILES
DESIGN DISCHARGE = 1,600 CFS
ROAD GRADE OVERFLOW @ Q50 =550 CFS
DISCHARGE THROUGH CULVERT @ Q50 = 1,050 CFS
DESIGN HIGH WATER ELEVATION = 947.6
CHANNEL SLOPE = 0.00846 FT./FT.
BARREL SLOPE (DESIGN) = 0.0153 FT./FT.
Q25 = 1,300 CFS W/ STAGE ELEVATION = 947.0
Q50 = 1,600 CFS W/ STAGE ELEVATION = 947.6 (DESIGN)
Q100 = 1,900 CFS W/ STAGE ELEVATION = 948.0
Q500 = 2,600 CFS W/ STAGE ELEVATION = 948.6
EXISTING HIGH WATER ELEVATION = UNKNOWN

SECTION 404 PERMIT AND CONDITIONS
CONSTRUCT THIS SHEET ACCORDING TO THE REQUIREMENTS OF THE US ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT 14, PERMIT NO. 2013-1066 (CONTINUANCE), PER USACOE CORRESPONDENCE DATED NOVEMBER 09, 2015. SEE NOTES ON THIS SHEET.

SECTION 401 PERMIT AND CONDITIONS
CONSTRUCT THIS SHEET ACCORDING TO THE REQUIREMENTS OF THE IDNR FLOODPLAIN CONSTRUCTION PERMIT, PERMIT NO. FP-2013-215, PER IDNR CORRESPONDENCE DATED FEBRUARY 23, 2016. SEE NOTES ON THIS SHEET.

PER IDNR,
Q100 = 650 CFS (USGS WRIR 87-4132)
BFE = 943.52 (BASE FLOOD ELEVATION)
MPL = 944.52 (MAXIMUM PERMISSIBLE LEVEL)



NOTES:

1. ANY REFERENCES TO 9' ARCH CMP (OR 108") SHALL MEAN 14'-3" x 8'-11" STRUCTURAL PLATE PIPE ARCH CULVERT.
2. SEE PLAN SHEET 50 FOR ROADWAY PROFILE INFORMATION.
3. GRADING AND COMPACTION REQUIREMENTS SHALL BE PER THE GENERAL NOTES ON SHEETS 2 AND 5.
4. SEE SHEET 73 FOR ADDITIONAL NOTES AND DETAILS RELATING TO THIS CULVERT EXTENSION.
5. THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) AND/OR THE UNITED STATES ARMY CORPS OF ENGINEERS (USACOE, USCOE, OR COE) RESERVES THE RIGHT TO VISIT THE SITE WITHOUT PRIOR NOTICE.
6. A COPY OF IDNR AND/OR USACOE PERMITS ARE AVAILABLE FROM THE CITY OF WAUKEE PUBLIC WORKS DEPARTMENT.
7. INSTALL 'SEDIMENT BASIN' ON THE SOUTHERLY SIDE OF THE CULVERT TO COLLECT ANY DISTURBED MATERIAL RELATING FROM THE CULVERT EXTENSION ON THE NORTHERLY SIDE.

RECORD DRAWING 72

PLAT 10 - EXISTING 9' ARCH CMP CULVERT EXTENSION

GLYNN VILLAGE PLAT 10

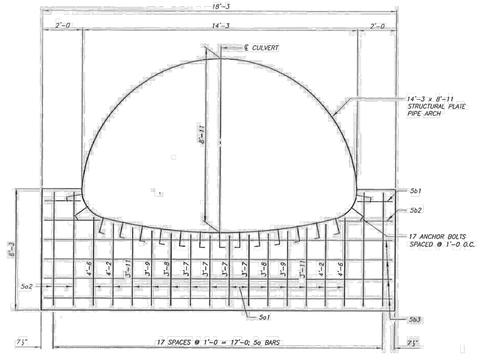
SCALE: AS NOTED | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-CULVERT.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 72 OF 100 | FILE NO.: 15-013
LOCATION: | FOR:

NO.	REVISION	DATE	BY	FOR:

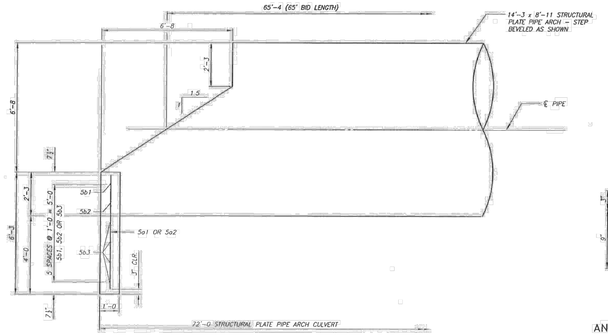
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

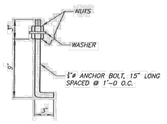
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-CULVERT.dwg, 10/19/2017 11:09:49 AM, PJV



END ELEVATION–CURTAIN WALL



ELEVATION–CURTAIN WALL



ANCHOR BOLT DETAIL
(34 REQUIRED)

REINFORCING BAR LIST – ONE(1) CURTAIN WALL					
BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
5a1	CURTAIN, VERTICAL		14	VARIES	57
5a2	CURTAIN, VERTICAL		4	5'-10	24
5b1	CURTAIN, HORIZONTAL		2	1'-9	4
5b2	CURTAIN, HORIZONTAL		2	3'-9	6
5b3	CURTAIN, HORIZONTAL		4	17'-11	75
				TOTAL (LBS.)	166

CONCRETE PLACEMENT QUANT. – CURTAIN WALLS		
LOCATION	UNIT	QUANTITY
CURTAIN WALL 2 @ 3.2' C.Y.	CU.YDS.	6.4
TOTAL	CU.YDS.	6.4

ESTIMATED QUANTITIES – CURTAIN WALLS		
ITEM	UNIT	QUANTITY
CONCRETE, STRUCTURAL	CU.YDS.	6.4
STEEL, REINFORCING	LBS.	332
EXCAVATION, CLASS 20	CU.YDS.	65

CURTAIN WALL NOTES

THE INTENT OF THIS DESIGN IS TO BUILD A 18'–3 x 6'–3 REINFORCED CONCRETE CURTAIN WALL STRUCTURE AT EACH END OF A 14'–3 x 8'–11 STRUCTURAL PLATE PIPE ARCH CULVERT. THE 14'–3 x 8'–11 STRUCTURAL PLATE PIPE ARCH CULVERT WILL BE PLACED AS DETAILED AND NOTED ELSEWHERE IN THESE PLANS.

THE STRUCTURAL PLATE PIPE IS TO BE ANCHORED WITH 1"ø x 1'–3 GALVANIZED ANCHOR BOLTS AS DETAILED, BEGINNING AT CENTER LINE FLOW LINE AND SPACED ON 12" CENTERS IN BOTH DIRECTIONS; 34 BOLTS ARE REQUIRED. COST OF ANCHOR BOLTS AND DRILLING 1¼"ø HOLES IN C.M.P. IS TO BE INCLUDED IN THE UNIT PRICE BID FOR "STRUCTURAL CONCRETE, CLASS 'C'".

THE SIDES OF THE CURTAIN WALL ARE TO BE FORMED TO INSURE CORRECT LINE AND GRADE. ALL EXPOSED CORNERS OF 90 DEGREE OF SHARPER ARE TO BE FILLETED WITH A 3" DRESSED AND BEVELED STRIP.

ALL REINFORCING IS TO BE SECURELY WIRED IN PLACE BEFORE THE CONCRETE IS POURED. ALL REINFORCING STEEL SHALL BE GRADE 60.

CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN. CLEARANCE TO THE BOTTOM ENDS OF VERTICAL BARS SHALL BE 3".

DE–WATERING PRESENTS A PROBLEM FOR PLACING THE CURTAIN WALL AS DETAILED. ALTERNATE METHODS SUCH AS STEEL SHEET PILE AND PRECAST CONCRETE WALLS MAY BE APPROVED BUT AT NO ADDITIONAL COST. THE CULVERT CONTRACTOR IS TO SUBMIT TO THE ENGINEER FOR APPROVAL, COMPLETE DRAWINGS OF THE PROPOSED CURTAIN WALL ALTERNATIVE BEFORE BEGINNING CONSTRUCTION.

14'–3 x 8'–11 x 72'–0
STRUCTURAL PLATE PIPE ARCH CULVERT

CURTAIN WALL DETAILS

STATION 14+65.00 0° SKEW
CITY OF WAUKEE, IOWA

CALHOUN–BURNS & ASSOCIATES, INC., CONSULTING ENGINEERS
WEST DES MOINES, IOWA 50266 (515)224–4344

JOB NO. 2013194

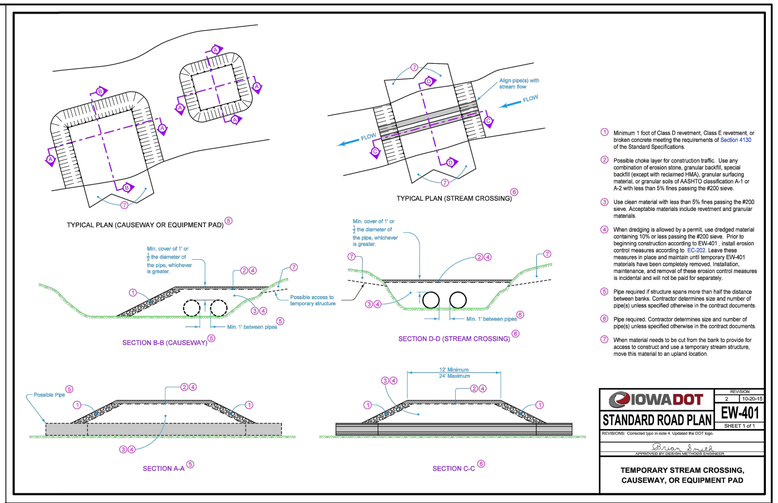
DESIGNED BY : JAL
DRAWN BY : JAL
CHECKED BY : TAC

DALLAS COUNTY

SHEET 6 OF 7

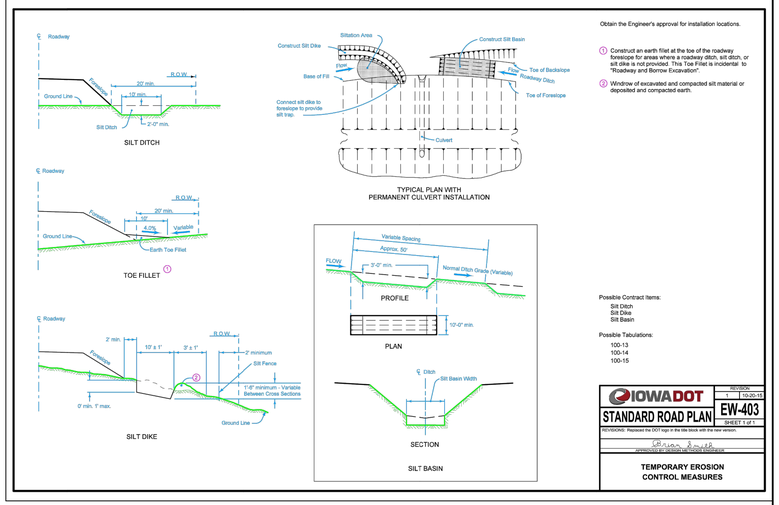
NOTES:

1. THE PERMITEE(S) AND ANY SUCCESSOR IN REAL ESTATE ON WHICH THE PERMITTED ACTIVITY IS LOCATED SHALL BE RESPONSIBLE FOR PROPER MAINTENANCE.
   - 1.1. UPON COMPLETION OF THE CULVERT EXTENSION AND RELATED ACTIVITIES, THE RESULTING STRUCTURE, ASSOCIATED APPROACH ROAD GRADES, ASSOCIATED EROSION CONTROL DEVICES, ETC. SHALL BE DEEMED THE PROPERTY AND THE RESPONSIBILITY OF THE CITY OF WAUKEE.
   - 1.2. THE NOTED PERMITS ARE ISSUED BASED ON THE APPROVED PLANS AND APPLICATIONS; AUTHORIZE ONLY THE USE, ARRANGEMENT, AND CONSTRUCTION SET FORTH IN SUCH APPROVED PLANS AND APPLICATIONS AND NO OTHER USE ARRANGEMENT, OR CONSTRUCTION; AND ADDITIONAL DOCUMENTATION AND/OR CERTIFICATIONS MAY BE REQUIRED AS NOTED IN THE PERMITS.
2. IDNR FORM 37, NOTIFICATION OF COMPLETION OF CONSTRUCTION, MUST BE COMPLETED AND RETURNED WITHIN 30 CALENDAR DAYS OF THE COMPLETION OF CONSTRUCTION.
3. USACOE "COMPLETED WORK CERTIFICATION" FORM MUST BE COMPLETED AND RETURNED WITHIN 30 CALENDAR DAYS OF THE COMPLETION OF CONSTRUCTION IN ACCORDANCE WITH GENERAL CONDITION NO. 30 OF THE NATIONWIDE PERMITS.
4. THE APPROACH ROAD GRADE ELEVATIONS FOR THE APPROVED PROJECT SHALL NOT BE ELEVATED OR OTHERWISE ALTERED WITHOUT PRIOR AUTHORIZATION FROM THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) AND/OR THE UNITED STATES ARMY CORPS OF ENGINEERS (USACOE, USCOE, OR COE).
5. ACCEPTABLE RIPRAP MATERIAL INCLUDES: FIELD STONE, QUARRY ROCK, AND BROKEN CONCRETE. IF ANY BROKEN CONCRETE IS USED, ALL EXPOSED REINFORCING STEEL MUST BE CUT OFF FLUSH WITH THE SURFACE OF THE CONCRETE PRIOR TO PLACING THE RIPRAP. ALSO, ANY CONCRETE PIECES LARGER THAN THREE (3') FEET ACROSS SHALL EITHER BE BROKEN INTO SMALLER PIECES PRIOR TO PLACEMENT, OR NOT USED AS RIPRAP MATERIAL. THE USE OF ASPHALT OR OTHER SOLID WASTE IS PROHIBITED.
   - 5.1. ALL BANK AND SHORELINE PROTECTION SHALL CONSIST OF SUITABLE CLEAN MATERIALS, FREE FROM DEBRIS, TRASH, AND OTHER DELETERIOUS MATERIALS.
   - 5.2. ALL BANK AND SHORELINE PROTECTION SHALL ALSO BE NON–FROZEN MATERIALS.
6. ALL EXCESS SPOIL MATERIAL RESULTING FROM THE PROJECT SHALL BE REMOVED FROM THE FLOODPLAIN; SPREAD THINLY (LESS THAN SIX (6") INCHES THICK) ON THE SURROUNDING GROUND; OR REMOVED FROM THE PROJECT AREA.
   - 6.1. IN ADDITION, SPOIL MATERIAL SHOULD NOT BE PLACED IN AND AREA THAT IS, OR COULD BE, CLASSIFIED AS A REGULATED WETLAND.
   - 6.2. SEE PLAN FOR RECOMMENDED LOCATION.
7. ALL RELATED CONSTRUCTION ACTIVITIES WILL BE CONDUCTED DURING PERIODS OF LOW FLOW.
8. THE CONTRACTOR(S) SHALL SUBMIT A PLAN FOR TEMPORARY STREAM DIVERSION (OR OTHER APPROVED METHOD OF REDUCING FLOW AND/OR DEWATERING) PRIOR TO STARTING CONSTRUCTION. THE PLAN IS TO BE REVIEWED AND APPROVED BY THE CITY AND THE ENGINEER.
9. ANY TEMPORARY CROSSINGS SHALL INCLUDE ENOUGH CULVERTS TO ACCOMMODATE LOW FLOWS AND MUST BE REMOVED AFTER COMPLETION OF WORK ON THIS PROJECT.
   - 9.1. TEMPORARY STREAM CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH IDOT STANDARD ROAD PLAN EW–401, ATTACHED.
   - 9.2. SEE ATTACHED IDOT STANDARD ROAD PLAN EW–403 FOR ADDITIONAL REQUIREMENTS.
10. THE CONTRACTOR(S) SHALL REMOVE ALL FILL MATERIAL USED FOR ANY TEMPORARY CROSSING, CAUSEWAY, WORK PAD, ETC. IN THEIR ENTIRETY TO AN UPLAND, NON–WETLAND SITE; RETURN THE AFFECTED AREA(S) OUTSIDE CONSTRUCTION LIMITS TO PRE–CONSTRUCTION ELEVATIONS; TO SEED ALL DISTURBED AREAS WITH NATIVE GRASSES; AND TO IMPLEMENT APPROPRIATE MEASURES TO ENSURE THAT SEDIMENTS ARE NOT INTRODUCED INTO WATER OF THE UNITED STATES DURING CONSTRUCTION OF THIS PROJECT.
11. EQUIPMENT FOR HANDLING AND CONVEYING MATERIALS DURING CONSTRUCTION SHALL BE OPERATED TO PREVENT DUMPING OR SPILLING THE MATERIAL INTO WATERBODIES, STREAMS, AND/OR WETLANDS – EXCEPT AS NOTED HEREIN.
12. CARE SHALL BE TAKEN TO PREVENT ANY PETROLEUM PRODUCTS, CHEMICALS, OR OTHER DELETERIOUS MATERIALS FROM ENTERING WATERBODIES, STREAMS, AND/OR WETLANDS.
13. CONSTRUCTION EQUIPMENT, ACTIVITIES, AND MATERIALS SHALL BE KEPT OUT OF THE WATERBODIES, STREAMS, AND/OR WETLANDS TO THE MAXIMUM EXTENT POSSIBLE.
14. WHEN DEWATERING PRESENTS A PROBLEM FOR PLACING THE ANY ITEMS AS DETAILED, ALTERNATE METHODS MAY BE APPROVED AFTER SUBMITTAL.
15. THE CONTRACTOR(S) SHALL BE RESPONSIBLE TO ENSURE COMPENSATORY STORAGE VOLUME IS PROVIDED TO THE MINIMUM LIMITS AND GRADES SHOWN. ADDITIONAL VOLUME IS BETTER WHILE STILL PROVIDING POSITIVE DRAINAGE.
16. THE CONTRACTOR(S) SHALL REMOVE ANY DEBRIS WITHIN ANY PERMITTED CULVERT, INCLUDING BUT NOT LIMITED TO EXISTING TREES/BRANCHES, EXISTING RIPRAP, EXISTING EARTH, OTHER EXISTING DEBRIS, AND ANY ITEMS RESULTING FROM RELATED CONSTRUCTION ACTIVITIES – EXCLUDE ANY ALGAE/MOSS, EXCEPT AS NECESSARY FOR ANY CONNECTIONS.
17. PER IDNR, THE SITE AREA HAS THE POTENTIAL OF INHABITATION FROM THE INDIANA BAT (MYOTIS SODALIS) AND THE NORTHERN LONG–EARED BAT (MYOTIS SEPTENTRIONALIS) – NO THOROUGH FIELD STUDIES WERE PERFORMED.
   - 17.1. IF EVIDENCE SHOULD BE FOUND OR SUSPECTED, CONTACT THE IDNR (ENDANGERED SPECIES COORDINATOR) AT 515/281–5918; AND THE US FISH AND WILDLIFE SERVICE (ROCK ISLAND FIELD OFFICE) AT 309/757–5800.
   - 17.2. NO TREE CUTTING SHALL BE ALLOWED BETWEEN APRIL 1 AND SEPTEMBER 30.



1. Minimum 1 foot of Class D revetment, Class E revetment, or broken concrete meeting the requirements of Section 4130 of the Standard Specifications.
2. Possible choke layer for construction traffic. Use any combination of erosion stone, granular backfill, special backfill (except with reclaimed HMA), granular surfacing material, or granular soils of AASHTO classification A-1 or A-2 with less than 5% fines passing the #200 sieve.
3. Use clean material with less than 5% fines passing the #200 sieve. Acceptable materials include revetment and granular materials.
4. When dredging is allowed by a permit, use dredged material containing 10% or less passing the #200 sieve. Prior to beginning construction according to EW-401 , install erosion control measures according to EC-202. Leave these measures in place and maintain until temporary EW-401 materials have been completely removed. Installation, maintenance, and removal of these erosion control measures is incidental and will not be paid for separately.
5. Pipe required if structure spans more than half the distance between banks. Contractor determines size and number of pipe(s) unless specified otherwise in the contract documents.
6. Pipe required. Contractor determines size and number of pipe(s) unless specified otherwise in the contract documents.
7. When material needs to be cut from the bank to provide for access to construct and use a temporary stream structure, move this material to an upland location.

IOWA DOT STANDARD ROAD PLAN — EW-401 — SHEET 1 of 1
REVISIONS: Corrected typ.# Note 4. Updated the DOT logo.
APPROVED BY A STATE OF IOWA PROFESSIONAL ENGINEER
TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD



Obtain the Engineer's approval for installation locations.

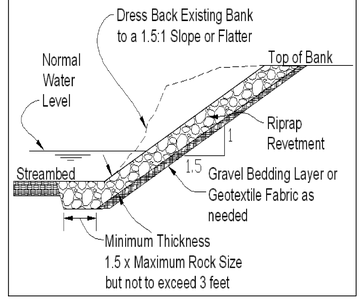
1. Construct an earth fillet at the toe of the roadway foreslope for areas where a roadway ditch, silt ditch, or silt dike is not provided. This Toe Fillet is incidental to "Roadway and Borrow Excavation".
2. Windrow of excavated and compacted silt material or deposited and compacted earth.

Possible Contract Items:
Silt Ditch
Silt Dike
Silt Basin

Possible Tabulations:
100-13
100-14
100-15

IOWA DOT STANDARD ROAD PLAN — EW-403 — SHEET 1 of 1
REVISIONS: Replaced the DOT logo in the title block with the new version.
APPROVED BY A STATE OF IOWA PROFESSIONAL ENGINEER
TEMPORARY EROSION CONTROL MEASURES

Typical Stream Bank Armoring Cross Section
NOT TO SCALE
IDNR FORM 542–1018 DETAIL



RECORD DRAWING 73

GLYNN VILLAGE PLAT 10 – EXISTING CULVERT EXTENSION NOTES & DETAILS

NO.	REVISION	DATE	BY

FOR:

LOCATION:
SCALE: AS NOTED
DWG: 15–013–CULVERT.dwg
FIELD BOOK:

DESIGNED BY: JRK
DRAWN BY: PJV
CHECKED BY: DJS
DATE: 02/24/2016
SHEET 73 OF 100
FILE NO.: 15–013

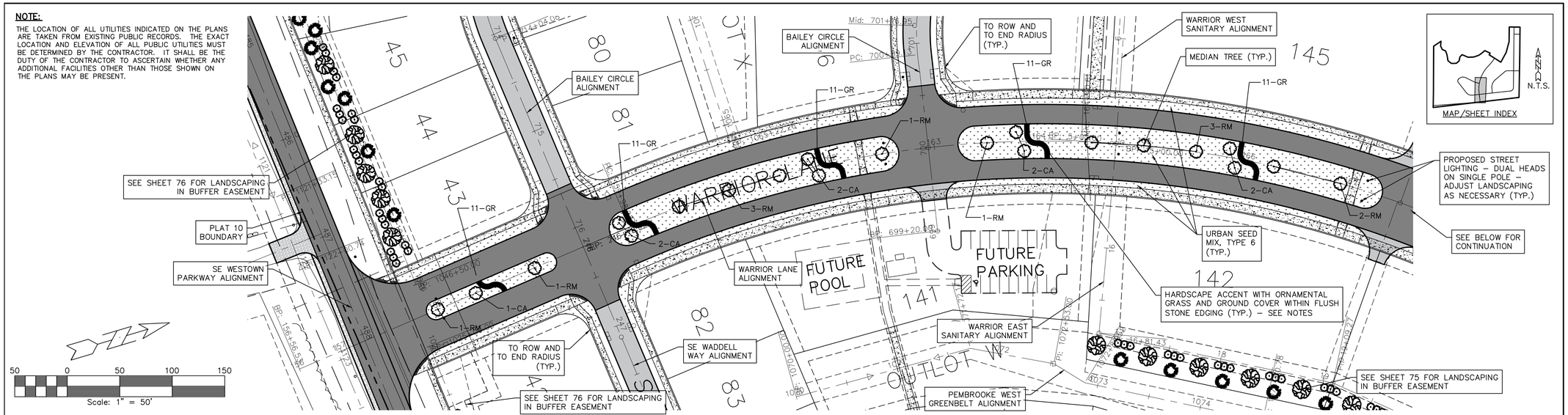
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288–4823

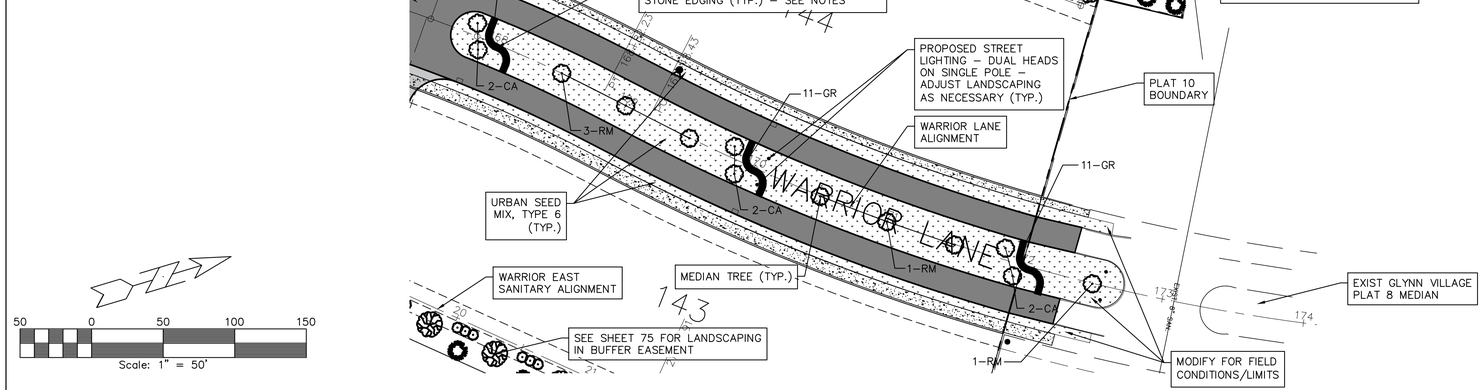
15–013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-CULVERT.dwg, 10/19/2017 11:10:01 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





PLANTING SCHEDULE:

Code	Common Name	Quantity	Planting Size
Deciduous Trees			
RM	Red Sunset Maple	19	1 1/2" B&B
CA	Ornamental CrabApple	15	1 1/2" B&B
Grass			
GR	Feather Reedgrass	86	2 gal. cont.

THE ABOVE SHOWN 'PLANTING SCHEDULE' QUANTITIES ARE DESIGN QUANTITIES FOR WARRIOR LANE MEDIAN ONLY – THIS SHEET ONLY.

LANDSCAPING/GROUND COVER NOTES:

1. SEE ADDITIONAL PLANTING AND SWPPP NOTES ON SWPPP SHEETS "A", "B", AND "C".
2. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL, OR THE STORAGE AND/OR DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL, OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF VEGETATION WITHIN THE FINAL MEDIAN AREA.
3. ALL WIRE, TWINE, AND BURLAP SHALL BE REMOVED FROM THE ROOTBALL OF ALL STREET TREES PRIOR TO PLANTING.
4. NO STAKING OF TREES IS ALLOWED.
5. ALL DISTURBED MEDIAN AREAS AND ROW AREAS NOT COVERED BY TREES AND/OR OTHER PERMANENT COVERINGS SHALL BE RESTORED WITH A MINIMUM OF SIX (6") INCHES OF TOPSOIL BEFORE PERMANENT (FINAL) SEEDING/SODDING OPERATIONS COMMENCE; AND THEN SEEDED WITH MULCH OR SODDED.
6. ALL DISTURBED AREAS PREVIOUSLY COVERED WITH ESTABLISHED GRASS SHALL BE SODDED AND WATERED UNTIL ESTABLISHED.
7. ALL NON–PAVED AREAS DISTURBED BY CONSTRUCTION, OR REQUIRED TO BE STABILIZED, SHALL BE RESTORED BY SEED AND MULCH.
8. ALL SEEDING SHALL BE DONE IN ACCORDANCE WITH SUDAS SPECIFICATION 9010 WITH ANY REFERENCED FIGURES AND SPECIFICATIONS.
9. ALL SODDING SHALL BE DONE IN ACCORDANCE WITH SUDAS SPECIFICATION 9020 WITH ANY REFERENCED FIGURES AND SPECIFICATIONS.
10. ALL PLANTINGS MATERIALS AND PLANTING SHALL BE DONE IN ACCORDANCE WITH SUDAS SPECIFICATION 9030 WITH ANY REFERENCED FIGURES AND SPECIFICATIONS.
11. TEMPORARY STABILIZATION SHALL BE WITH THE SUDAS EROSION CONTROL MIX.
12. FINAL STABILIZATION SHALL BE A SUDAS URBAN GRASS MIX ON A MINIMUM OF SIX (6") INCHES OF TOPSOIL.
13. PERMANENT STABILIZATION SHALL BE LIMITED TO THE SMF's AND WARRIOR LANE MEDIAN.
14. ALL MEDIAN TREES SHALL BE AN OVERHEAD DECIDUOUS VARIETY WITH A MINIMUM 1.5 INCH B&B, SINGLE STRAIGHT LEADER, AND MATCHED.
15. MEDIAN TREES SHALL BE SPACED AT APPROXIMATELY 50 FOOT SPACING, BUT MAINTAIN A MINIMUM OF TEN (10) FOOT BUFFER FROM ALL SANITARY OR STORM SEWERS, WATERMAINS, LIGHT POLES, AND SIDEWALKS/TRAILS.
16. HARDSCAPING ACCENTS, EDGING, GROUND COVER, AND PLANTINGS SHALL BE OF A SIMILAR MATERIALS AND CONSTRUCTED AS PROVIDED ON THE GLYNN VILLAGE PLAT 8 PORTIONS OF WARRIOR LANE (LOCATED IMMEDIATELY TO THE NORTH OF THE PROPOSED IMPROVEMENTS).
17. PLANTING BEDS SHALL BE SPACED AT APPROXIMATELY 200 FEET; SHALL BE FOUR (4) FEET WIDE; AND LANDSCAPING GRASSES SHALL BE PLANTED AT APPROXIMATELY FOUR (4) FEET RANDOM OFFSET SPACINGS.
18. CONTINUOUS STONE EDGING AROUND THE MEDIAN PLANTING BEDS SHALL BE SIX (6) TO EIGHT (8) INCHES WIDE; SHALL BE INSTALLED BETWEEN THE BACK OF CURBS OF THE MEDIANS; SHALL BE LAID FLUSH WITH THE FINISHED GRADE; PLACED ON BOTH SIDES OF PLANTING BED; AND SHALL UTILIZE AN APPROXIMATELY NINE (9) FOOT RADII FOR LAYOUT.
19. ALL SEEDING MIXTURES AND/OR SODDING SHALL ALSO INCLUDE, BUT NOT LIMITED TO: LOOSENING AND SMOOTHING TOPSOIL TO FINISHED GRADE, MULCH, FERTILIZER, WATERING, RE–SEEDING, CLEANUP AS NECESSARY UNTIL ACCEPTANCE OF FINAL STABILIZATION.
20. TREE PLANTING SUBSTITUTIONS – THE DEVELOPER MAY SUBSTITUTE TREE SPECIES TO ADD VARIETY AND PROVIDE MORE DISEASE AND PEST RESISTANCE.
    - 20.1. ALL TREE PLANTING SUBSTITUTIONS SHALL BE APPROVED BY THE CITY OF WAUKEE PRIOR TO PLANTING/ORDERING.
    - 20.2. THE DEVELOPER MAY SUBSTITUTE OVERSTORY TREES WITH THE FOLLOWING:
        - 20.2.1. SKYLINE AND IMPERIAL LOCUST
        - 20.2.2. HOMESTEAD
        - 20.2.3. PATRIOT
        - 20.2.4. PROSPECTOR ELM
    - 20.3. THE DEVELOPER MAY SUBSTITUTE UNDERSTORY TREES WITH THE FOLLOWING:
        - 20.3.1. THORNLESS COCKSPUR
        - 20.3.2. WINTERKING HAWTHORN
        - 20.3.3. CHANTICLEER
        - 20.3.4. CLEVELAND SELECT
        - 20.3.5. ARISTOCRAT PEAR
21. SHOWN QUANTITIES AND SPACINGS ARE FOR DESIGN BASIS. INSTALLER(S) SHALL ENSURE PROPER SPACING FOR MATURE SIZES.

RECORD DRAWING

74

GLYNN VILLAGE PLAT 10 - WARRIOR LANE - MEDIAN GROUND COVER PLAN

LOCATION:

SCALE:	1" = 50'
DWG:	15-013-PLANTINGS.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
DRAWN BY:	PJV
CHECKED BY:	DJS
DATE:	02/24/2016
SHEET	74 OF 100
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

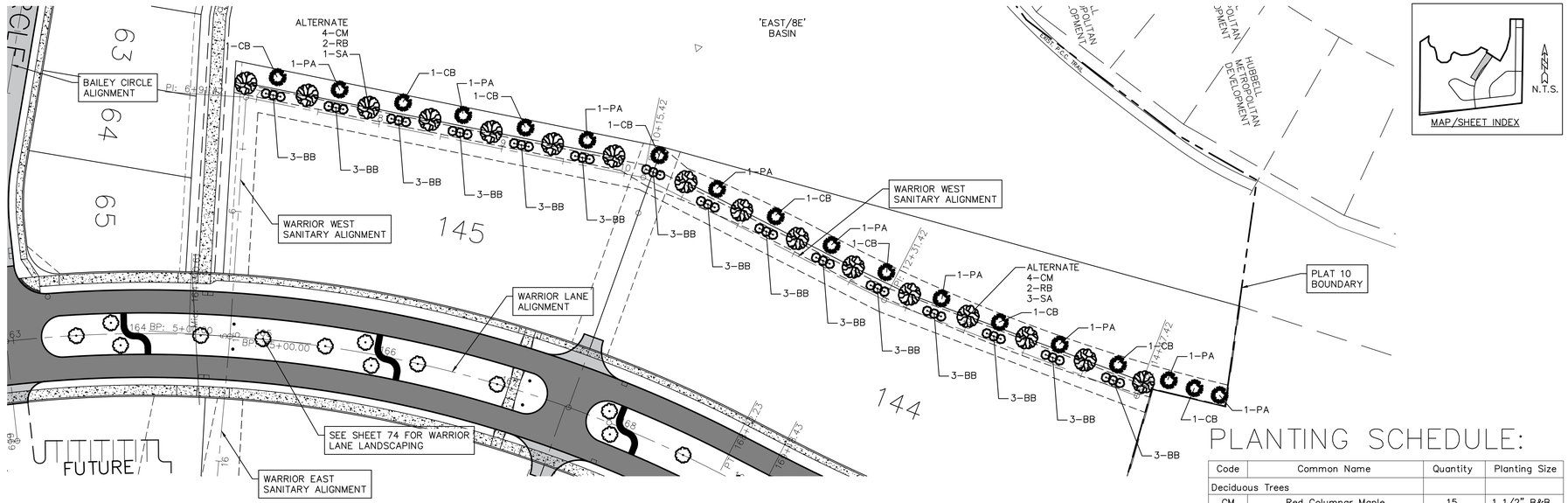
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

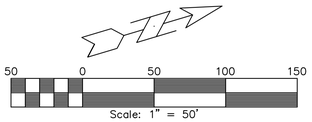
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PLANTINGS.dwg, 10/19/2017 11:10:19 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





LANDSCAPING NOTES:

1. SEE SHEET 74 FOR ADDITIONAL NOTES AND INFORMATION.
2. SHOWN PLANTINGS SHALL BE INSTALLED WITH THE RESPECTIVE DEVELOPMENT(S) OF LOTS 145 AND 144. THE BERM SHALL BE INSTALLED UNDER THE CURRENT DEVELOPMENT.
3. UPDATED LANDSCAPING PLANS SHALL BE PROVIDED AT THE TIME OF RESPECTIVE DEVELOPMENT(S).

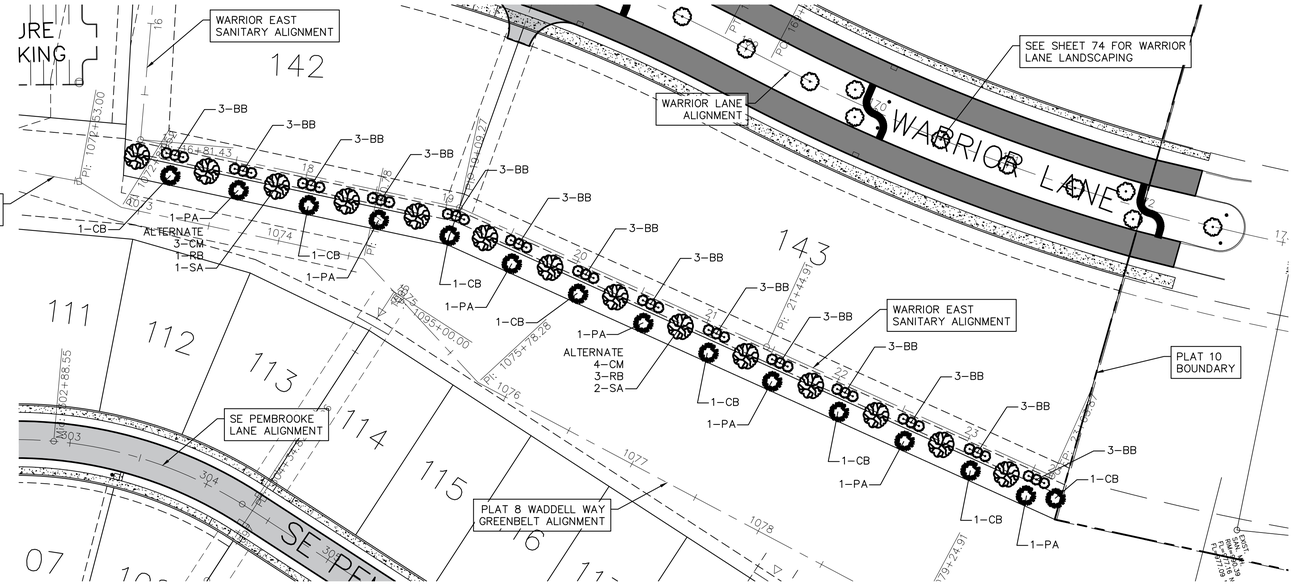
PLANTING SCHEDULE:

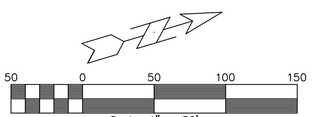
Code	Common Name	Quantity	Planting Size
Deciduous Trees			
CM	Red Columnar Maple	15	1 1/2" B&B
SA	Swamp Oak	8	1 1/2" B&B
RB	River Birch	7	1 1/2" B&B
Evergreen Trees			
CB	Colorado Blue Spruce	17	6' Height
PA	Norway Spruce	16	6' Height
Shrubs/Bushes			
BB	Dwarf Burning Bush	87	3 Gal.

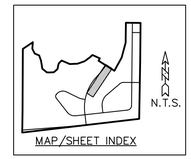
THE ABOVE SHOWN 'PLANTING SCHEDULE' QUANTITIES ARE DESIGN QUANTITIES FOR FUTURE PLANTINGS ON BOTH LANDSCAPING BERMS ONLY – THIS SHEET ONLY.

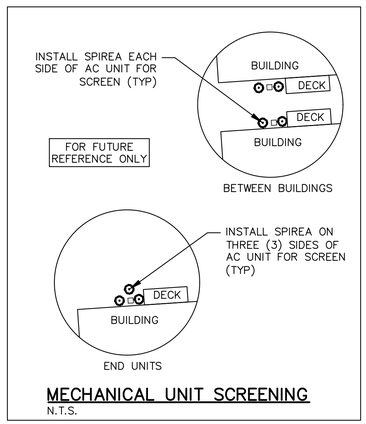
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.









LANDSCAPING NOTES:

1. SEE SHEET 74 FOR ADDITIONAL NOTES AND INFORMATION.
2. SHOWN PLANTINGS SHALL BE INSTALLED WITH THE RESPECTIVE DEVELOPMENT(S) OF LOTS 142 AND 143. THE BERM SHALL BE INSTALLED UNDER THE CURRENT DEVELOPMENT.
3. UPDATED LANDSCAPING PLANS SHALL BE PROVIDED AT THE TIME OF RESPECTIVE DEVELOPMENT(S).

MECHANICAL UNIT SCREENING
N.T.S.

RECORD DRAWING 75

GLYNN VILLAGE PLAT 10-WARRIOR OUTLOTS - LANDSCAPING BUFFER PLAN

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE: 1" = 50'
DWG: 15-013-PLANTINGS.dwg
FIELD BOOK:

DESIGNED BY: JRK
CHECKED BY: DJS
SHEET 75 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

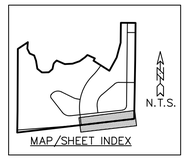
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PLANTINGS.dwg, 10/19/2017 11:10:28 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



MAP/SHEET INDEX



50 0 50 100 150

Scale: 1" = 50'

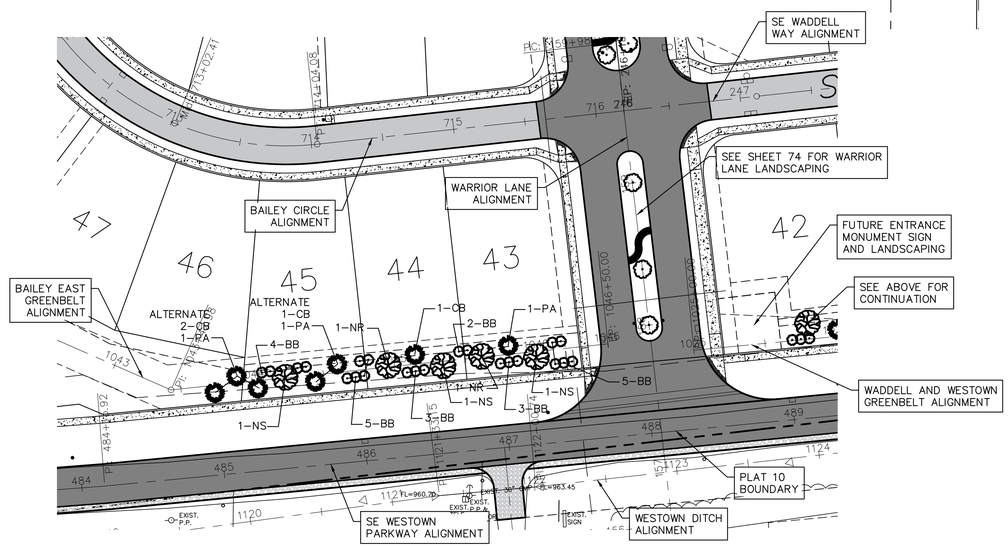
PLANTING SCHEDULE:

Code	Common Name	Quantity	Planting Size
Deciduous Trees			
NS	Norwegian Sunset Maple	17	1 1/2" B&B
NR	Northern Red Oak	18	1 1/2" B&B
Evergreen Trees			
CB	Colorado Blue Spruce	15	6' Height
PA	Norway Spruce	15	6' Height
Shrubs/Bushes			
BB	Dwarf Burning Bush	80	3 Gal.

THE ABOVE SHOWN 'PLANTING SCHEDULE' QUANTITIES ARE DESIGN QUANTITIES FOR THE LANDSCAPE BUFFER (WITHOUT A BERM) ALONG SE WESTOWN PARKWAY ONLY – THIS SHEET ONLY.

LANDSCAPING NOTES:

1. SEE SHEET 74 FOR ADDITIONAL NOTES AND INFORMATION.
2. THE FUTURE ENTRANCE MONUMENT SIGN AND LANDSCAPING SHALL BE SUBMITTED SEPARATELY AND AT A LATER DATE.



76 RECORD DRAWING

GLYNN VILLAGE PLAT 10 - WESTOWN LANDSCAPE BUFFER PLAN

LOCATION:

SCALE: 1" = 50' | DESIGNED BY: JRK | DRAWN BY: PJV

DWG: 15-013-PLANTINGS.dwg | CHECKED BY: DJS | DATE: 02/24/2016

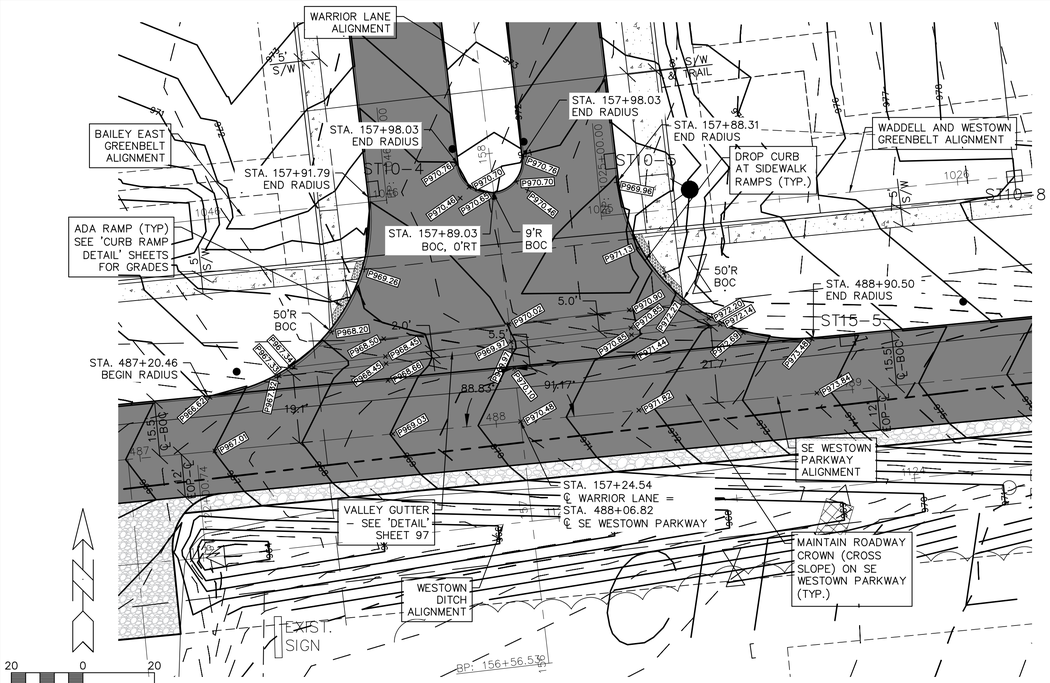
FIELD BOOK: | SHEET 76 OF 100 | FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

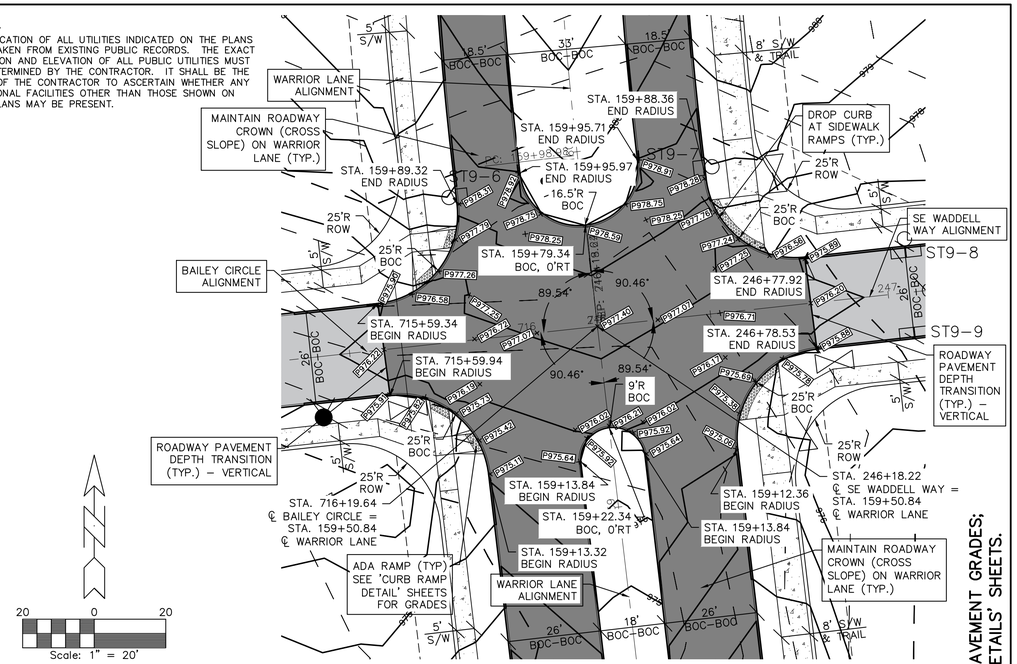
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-PLANTINGS.dwg, 10/19/2017 11:10:38 AM, PJV



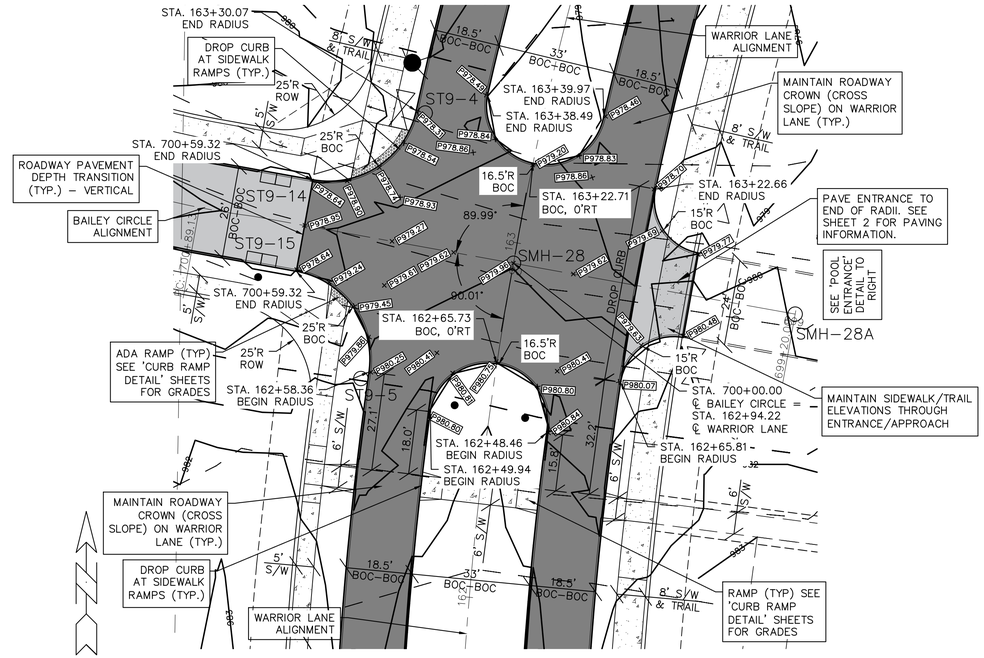
WARRIOR LANE & SE WESTOWN PARKWAY
INTERSECTION DETAILS

NOTE:
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

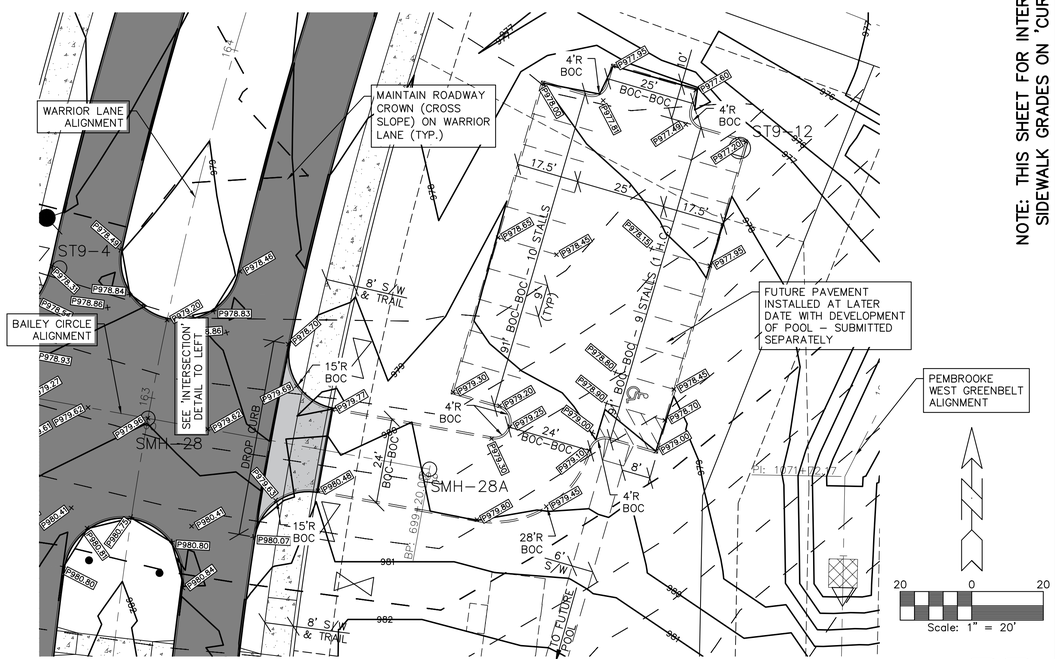


WARRIOR LANE & BAILEY CIRCLE/SE WADDELL WAY
INTERSECTION DETAILS

NOTE:
MAINTAIN SHOWN SIDEWALK AND/OR TRAIL WIDTHS THROUGH THE SIDEWALK AND PARKWAY TRANSITIONS – SEE 'CURB RAMP DETAILS' SHEETS FOR ADDITIONAL INFORMATION.



WARRIOR LANE & BAILEY CIRCLE
INTERSECTION DETAILS



POOL ENTRANCE AND
FUTURE PARKING LOT DETAILS

NOTE: THIS SHEET FOR INTERSECTION PAVEMENT GRADES; SIDEWALK GRADES ON 'CURB RAMP DETAILS' SHEETS.

GLYNN VILLAGE PLAT 10 - INTERSECTION DETAILS I

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE:	1" = 20'	DESIGNED BY:	JRK
DWG:	15-013-INT-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	77 OF 100

DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

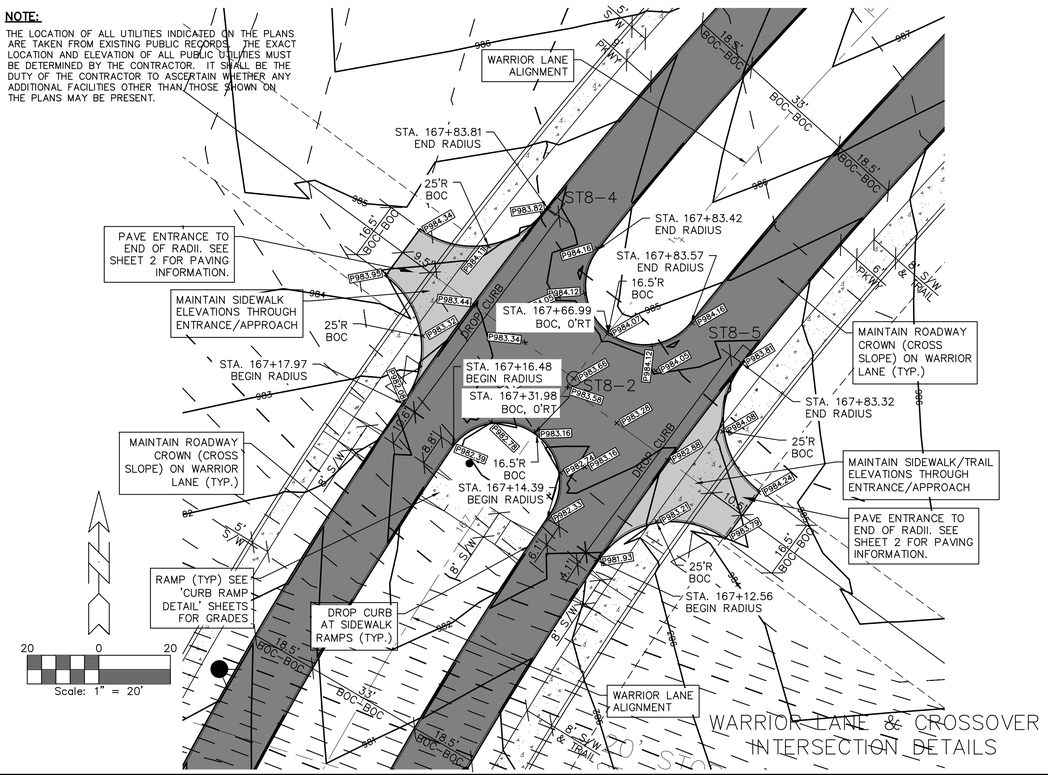
RECORD DRAWING

77

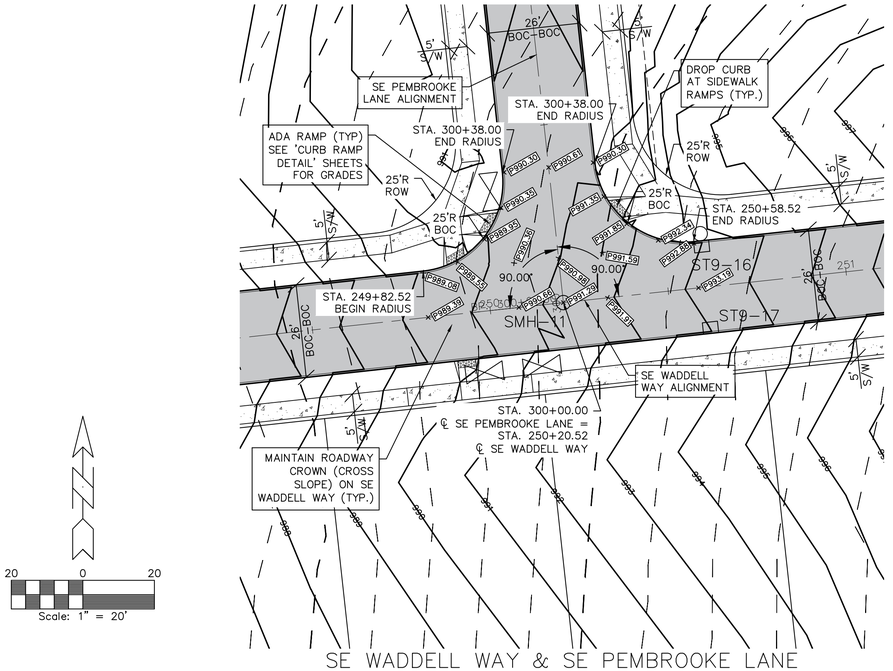
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-INT-1.dwg, 10/19/2017 11:11:06 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



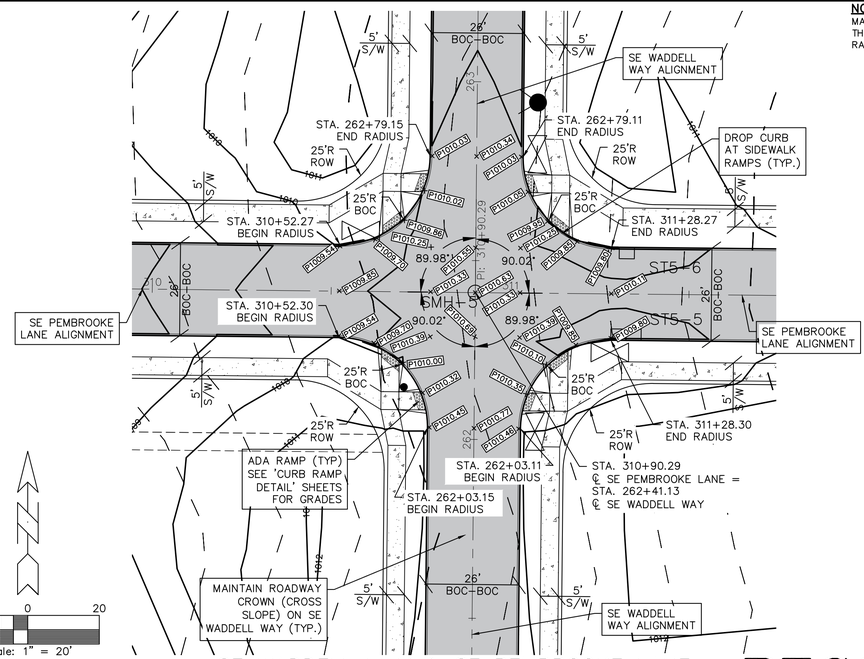
WARRIOR LANE & CROSSOVER INTERSECTION DETAILS



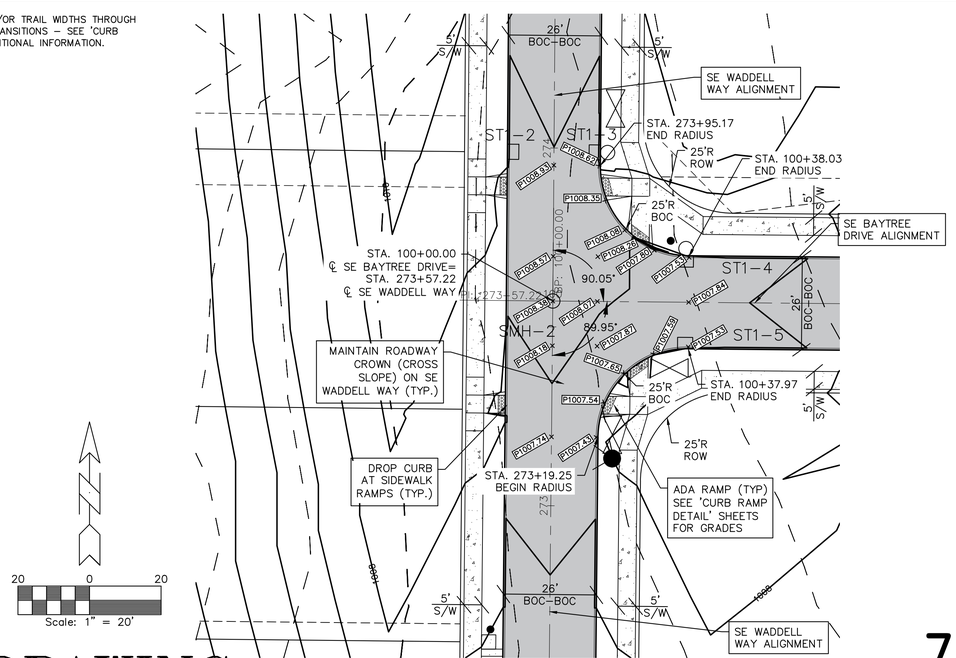
SE WADDELL WAY & SE PEMBROOKE LANE INTERSECTION DETAILS

NOTE:

MAINTAIN SHOWN SIDEWALK AND/OR TRAIL WIDTHS THROUGH THE SIDEWALK AND PARKWAY TRANSITIONS – SEE 'CURB RAMP DETAILS' SHEETS FOR ADDITIONAL INFORMATION.



SE WADDELL WAY & SE PEMBROOKE LANE INTERSECTION DETAILS



SE WADDELL WAY & SE BAYTREE DRIVE INTERSECTION DETAILS

NOTE: THIS SHEET FOR INTERSECTION PAVEMENT GRADES; SIDEWALK GRADES ON 'CURB RAMP DETAILS' SHEETS.

GLYNN VILLAGE PLAT 10 - INTERSECTION DETAILS 2

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

LOCATION:			
SCALE:	1" = 20'	DESIGNED BY:	JRK
DWG:	15-013-INT-2.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	78 OF 100
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

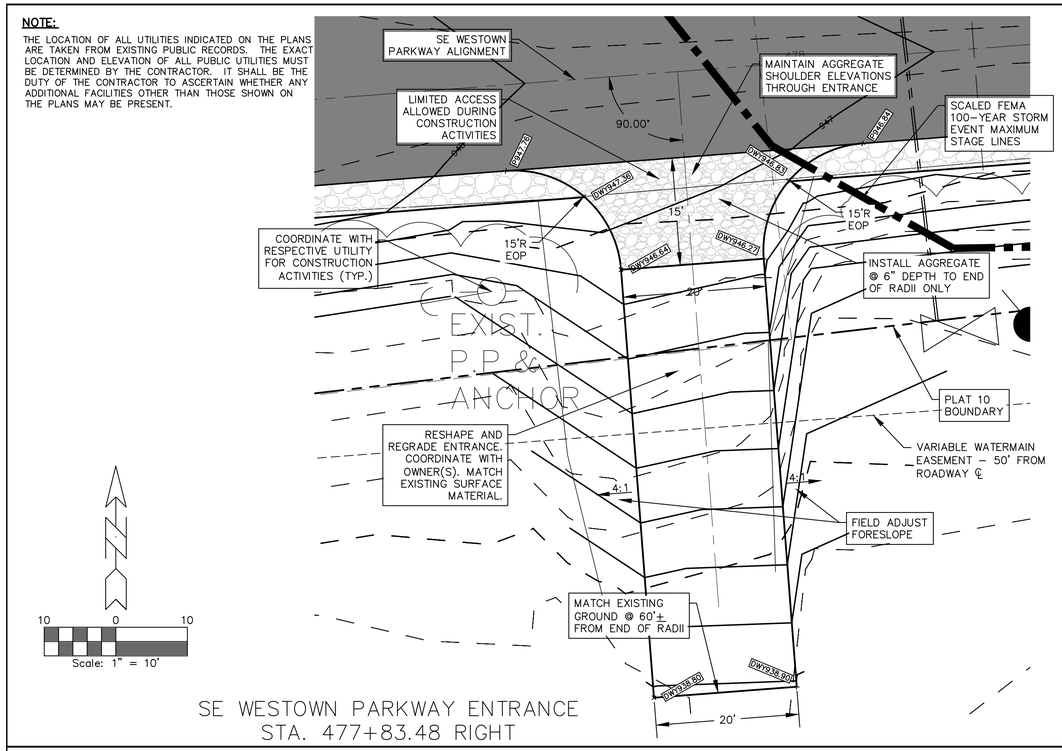
RECORD DRAWING

78

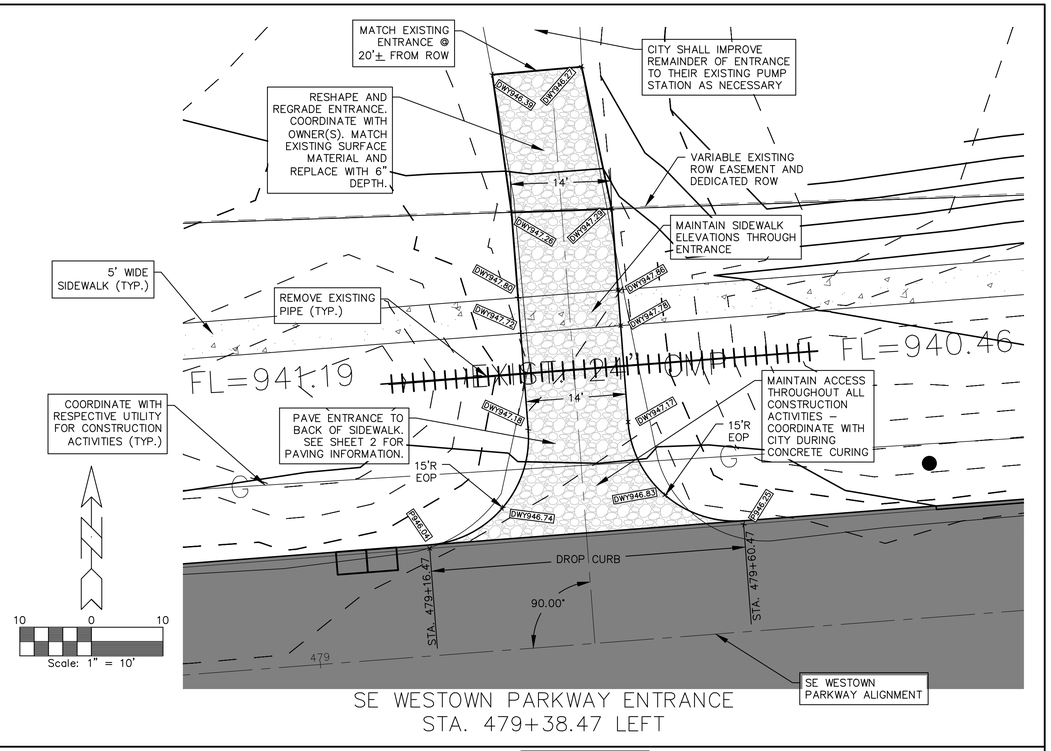
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-INT-2.dwg, 10/19/2017 11:11:40 AM, PJV

NOTE:

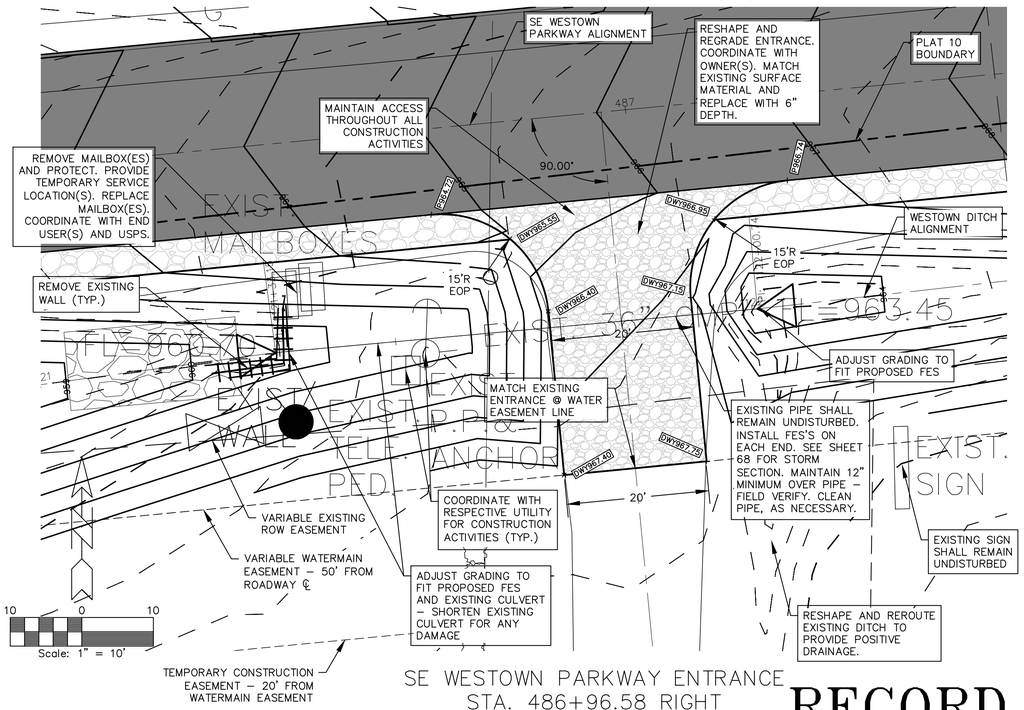
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SE WESTOWN PARKWAY ENTRANCE
STA. 477+83.48 RIGHT

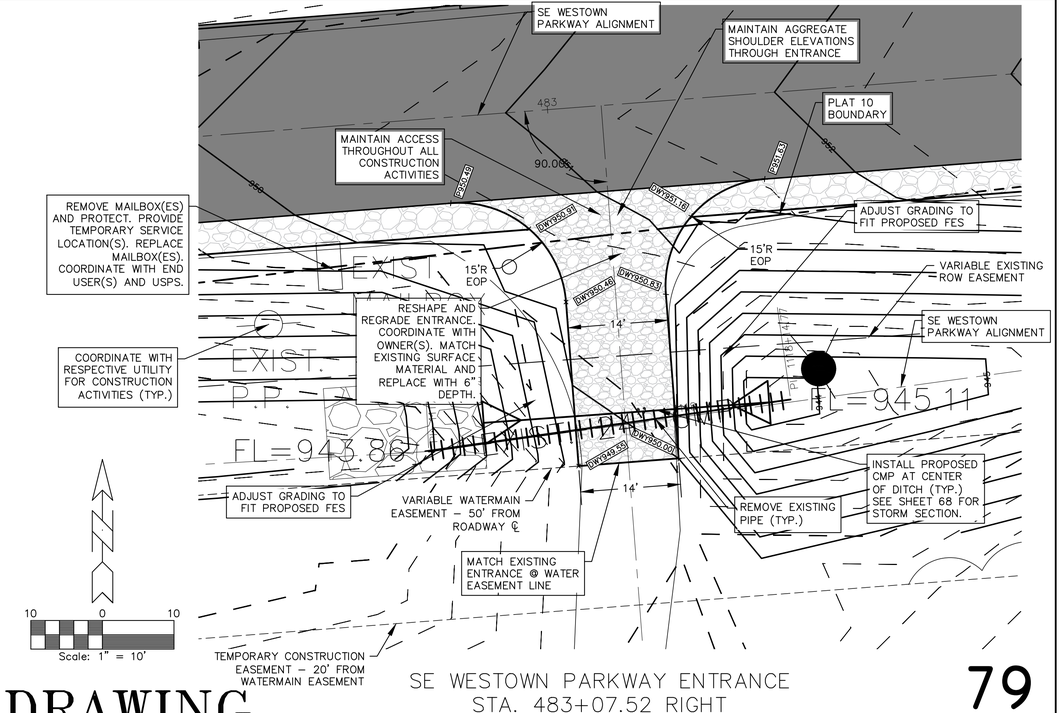


SE WESTOWN PARKWAY ENTRANCE
STA. 479+38.47 LEFT



SE WESTOWN PARKWAY ENTRANCE
STA. 486+96.58 RIGHT

RECORD



SE WESTOWN PARKWAY ENTRANCE
STA. 483+07.52 RIGHT

DRAWING

79

PLAT 10 - INTERSECTION DETAILS 3

LOCATION:	SCALE: 1" = 20'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-INT-3.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 79 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

GLYNN VILLAGE PLAT 10

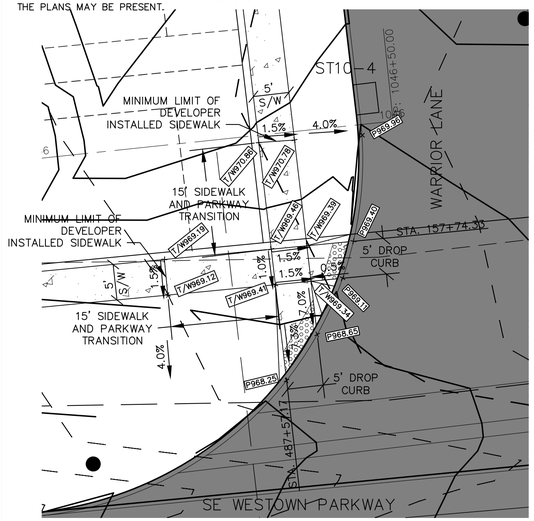
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

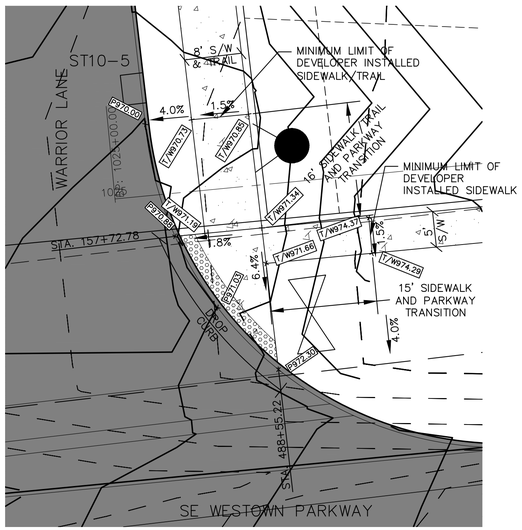
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-INT-3.dwg, 10/19/2017 11:12:15 AM, PJV

NOTE:

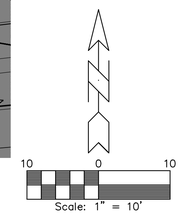
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



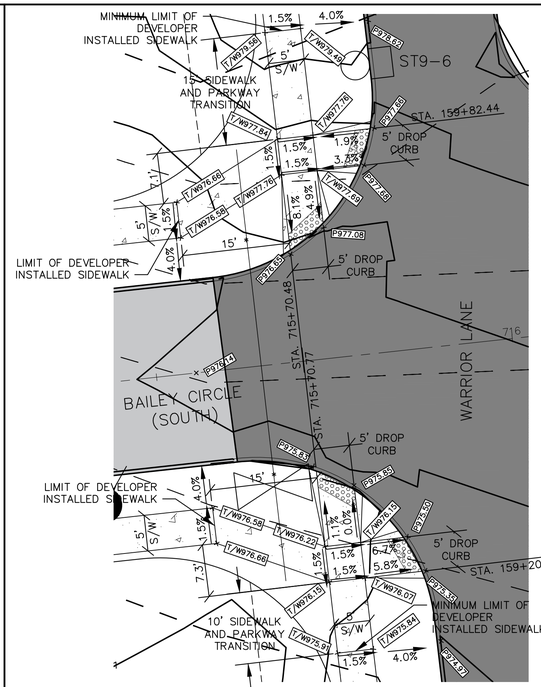
NORTHWEST QUADRANT

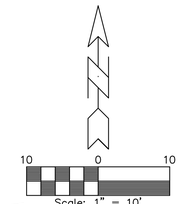


NORTHEAST QUADRANT

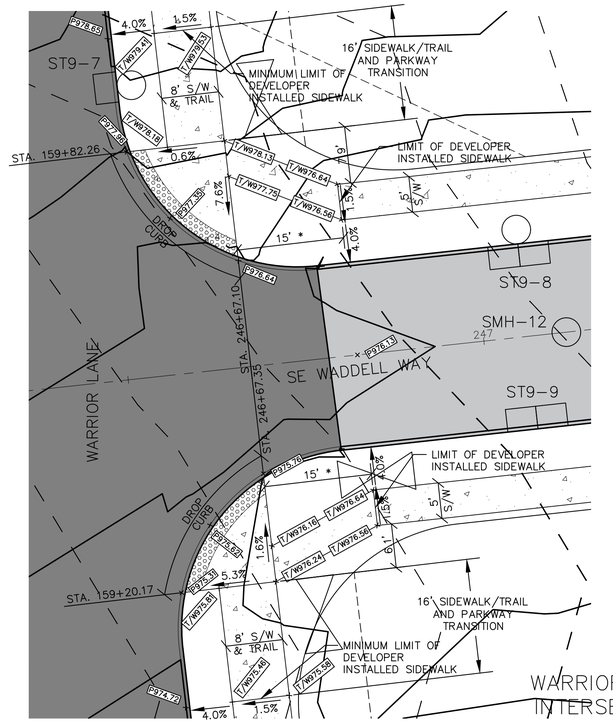


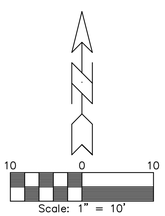
WARRIOR LANE & SE WESTOWN PARKWAY
INTERSECTION CURB RAMP DETAILS





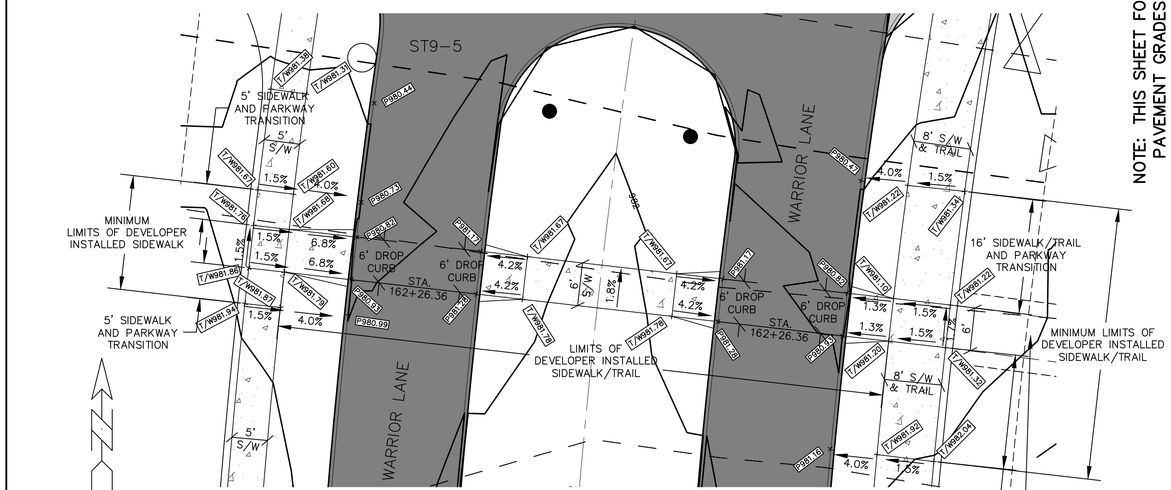
WARRIOR LANE & BAILEY CIRCLE
(SOUTH) INTERSECTION CURB RAMP DETAILS

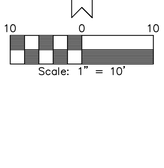




WARRIOR LANE & SE WADDELL WAY
INTERSECTION CURB RAMP DETAILS

* MAINTAIN SHOWN SIDEWALK AND/OR TRAIL WIDTHS THROUGH THE SIDEWALK AND PARKWAY TRANSITIONS – SEE 'INTERSECTION DETAILS' SHEETS FOR ADDITIONAL INFORMATION.





WARRIOR LANE STA. 162+29.31
CROSSOR CURB RAMP DETAILS

RECORD DRAWING 80

NOTE: THIS SHEET FOR CITY APPROVED CURB RAMP GRADES; PAVEMENT GRADES ON 'INTERSECTION DETAILS' SHEETS.

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS I

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 10' | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-RAMP-1.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 80 OF 100 | FILE NO.: 15-013

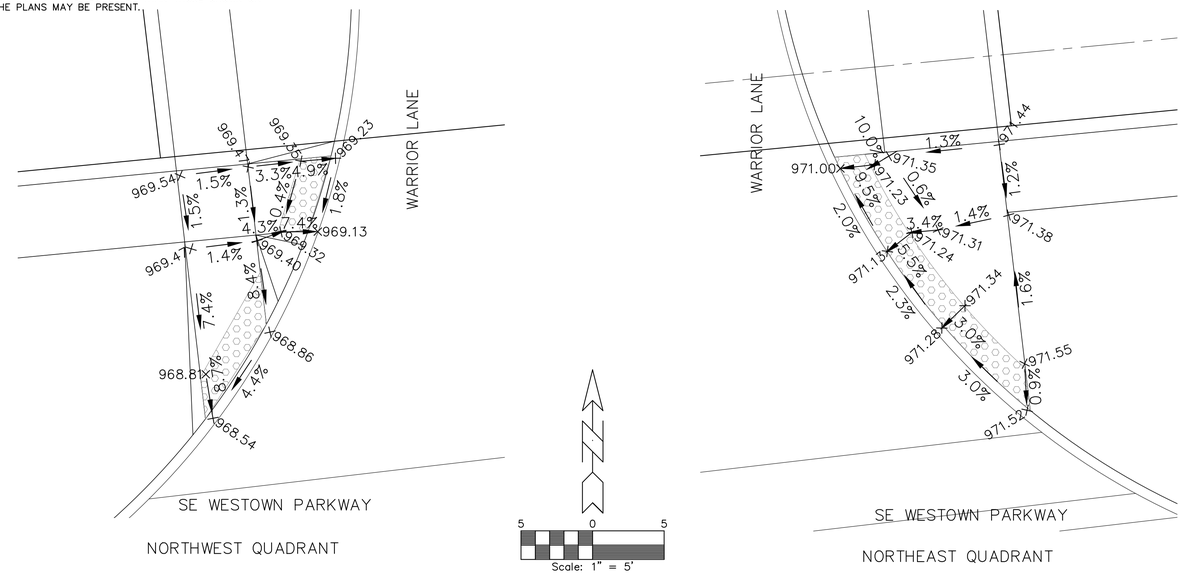
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

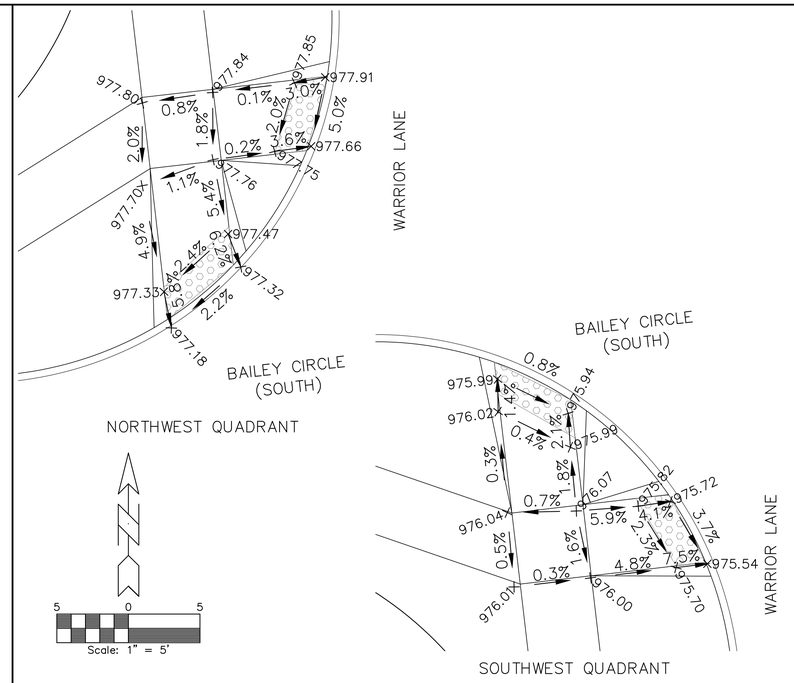
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-1.dwg, 10/19/2017 11:12:55 AM, PJV

NOTE:

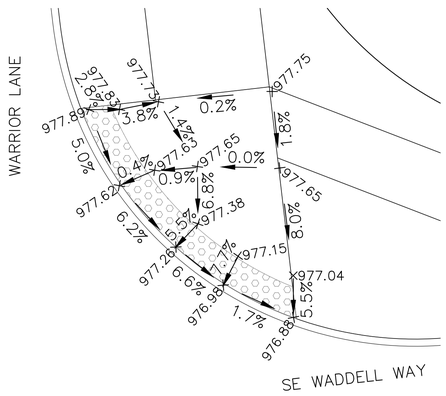
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

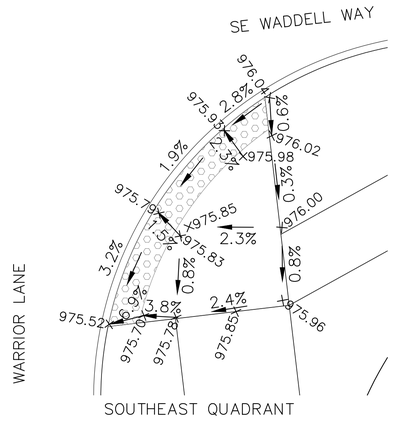


WARRIOR LANE & SE WESTOWN PARKWAY
INTERSECTION CURB RAMP DETAILS



WARRIOR LANE & BAILEY CIRCLE
(SOUTH) INTERSECTION CURB RAMP DETAILS





WARRIOR LANE & SE WADDELL WAY
INTERSECTION CURB RAMP DETAILS

RECORD DRAWING 80A

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS I

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE: 1" = 5' | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-RAMP-1A.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 80A OF 100 | FILE NO.: 15-013

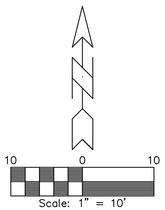
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

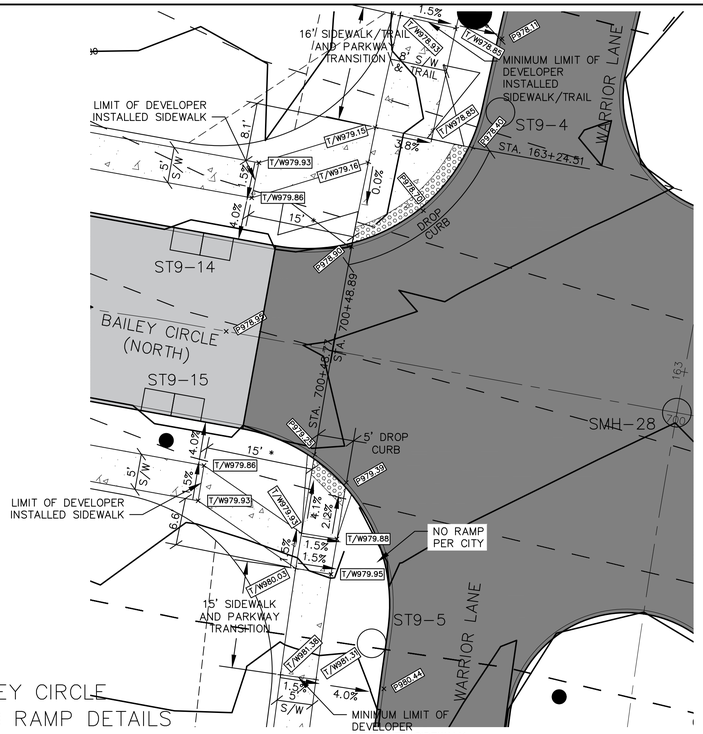
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-1A.dwg, 10/19/2017 11:13:36 AM, PJV

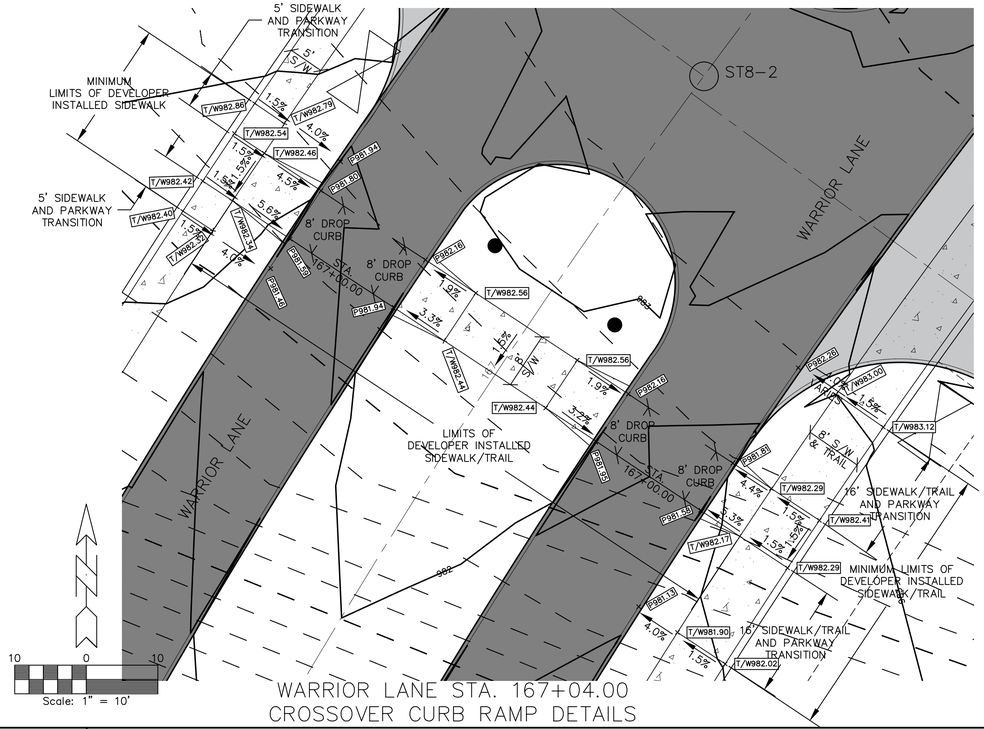
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



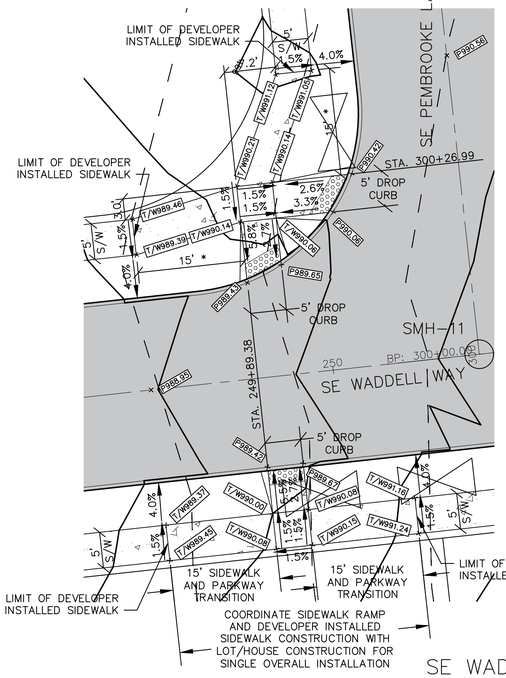


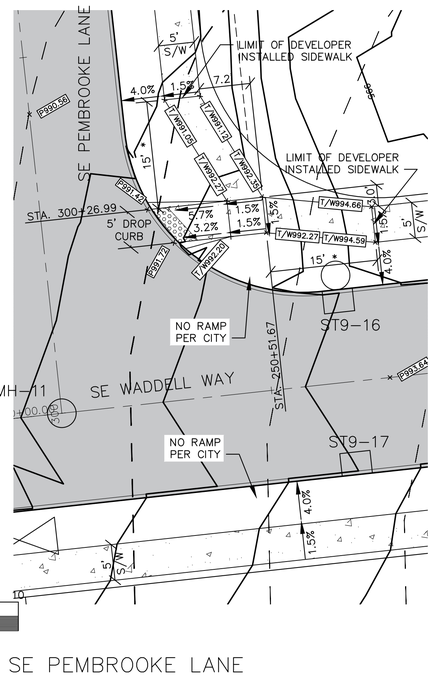
WARRIOR LANE & BAILEY CIRCLE (NORTH) INTERSECTION CURB RAMP DETAILS

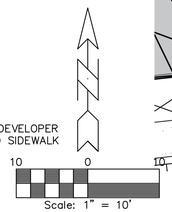


WARRIOR LANE STA. 167+04.00 CROSSOVER CURB RAMP DETAILS

NOTE: THIS SHEET FOR CITY APPROVED CURB RAMP GRADES; PAVEMENT GRADES ON 'INTERSECTION DETAILS' SHEETS.







SE WADDELL WAY & SE PEMBROOKE LANE INTERSECTION CURB RAMP DETAILS

* MAINTAIN SHOWN SIDEWALK AND/OR TRAIL WIDTHS THROUGH THE SIDEWALK AND PARKWAY TRANSITIONS – SEE 'INTERSECTION DETAILS' SHEETS FOR ADDITIONAL INFORMATION.

RECORD DRAWING

81

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS 2

LOCATION:	SCALE: 1" = 10'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-RAMP-2.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 81 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

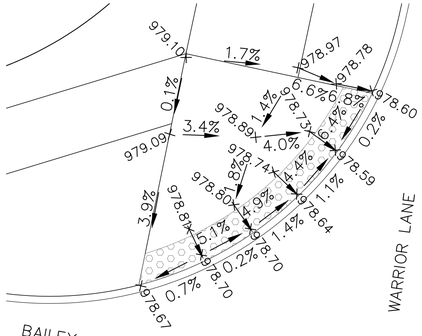
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

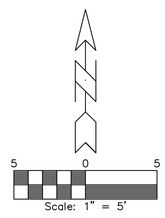
15-013

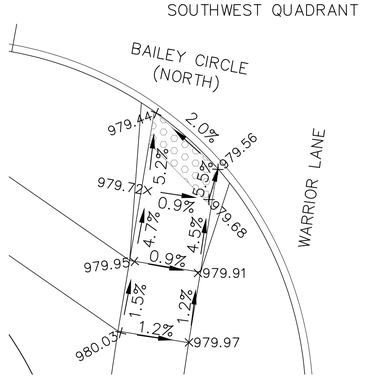
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-2.dwg, 10/19/2017 11:14:11 AM, PJV

NOTE:

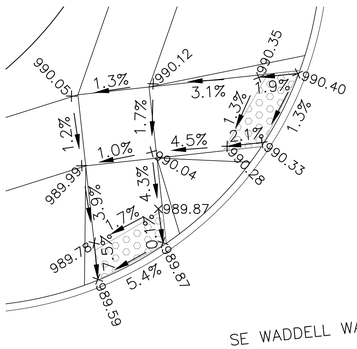
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

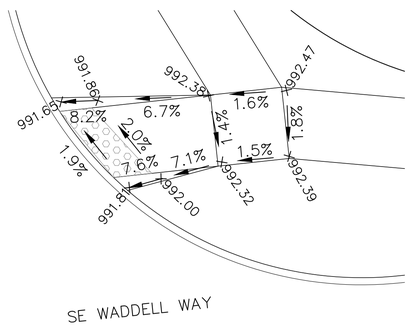


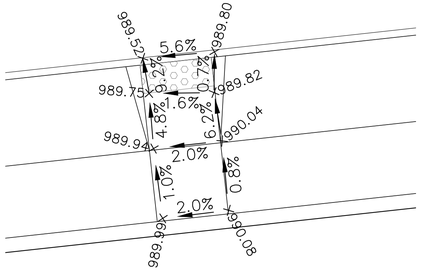


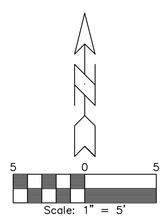


WARRIOR LANE & BAILEY CIRCLE
(NORTH) INTERSECTION CURB RAMP DETAILS

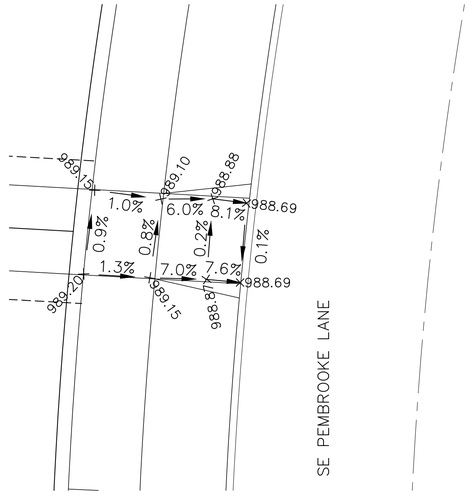








SE WADDELL WAY & SE PEMBROOKE LANE
INTERSECTION CURB RAMP DETAILS



SE PEMBROOKE LANE STA. 302+06.00
ACCESS CURB RAMP DETAILS

RECORD DRAWING

81A

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS 2

NO.	REVISION	DATE	BY

FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

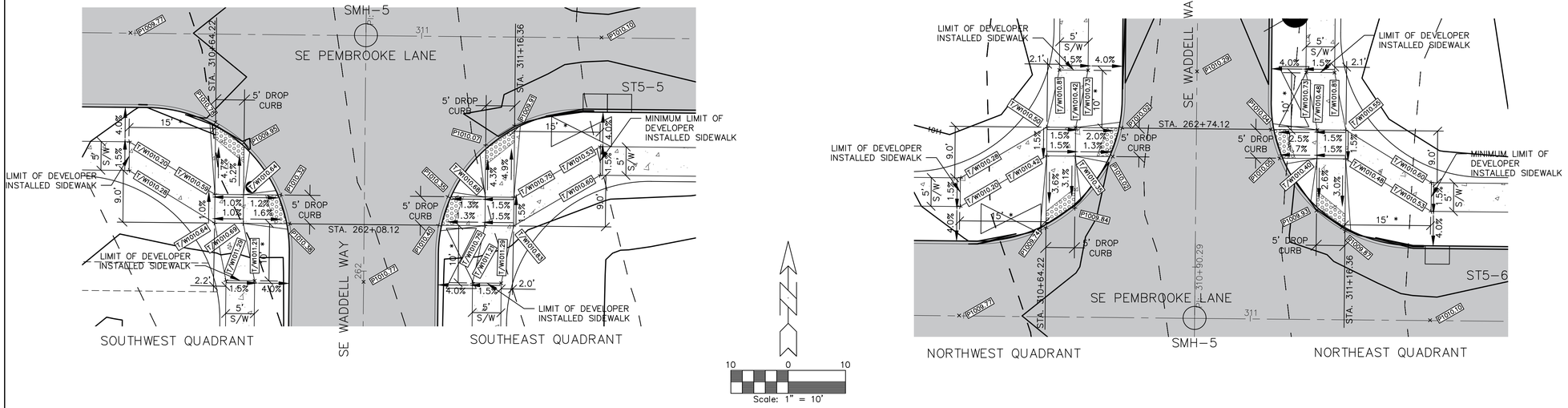
15-013

LOCATION:	SCALE: 1" = 5'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-RAMP-2A.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 81A OF 100	FILE NO.: 15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-2A.dwg, 10/19/2017 11:14:47 AM, PJV

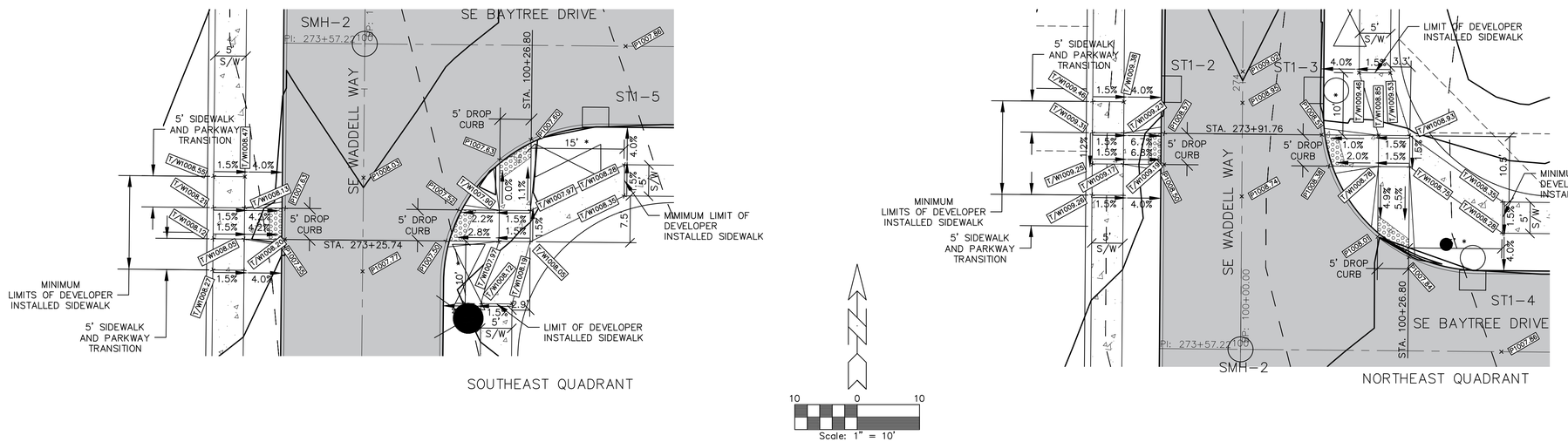
NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SE WADDELL WAY & SE PEMBROOKE LANE
INTERSECTION CURB RAMP DETAILS

* MAINTAIN SHOWN SIDEWALK AND/OR TRAIL WIDTHS THROUGH THE SIDEWALK AND PARKWAY TRANSITIONS – SEE 'INTERSECTION DETAILS' SHEETS FOR ADDITIONAL INFORMATION.



SE WADDELL WAY & SE BAYTREE DRIVE
INTERSECTION CURB RAMP DETAILS

NOTE: THIS SHEET FOR CITY APPROVED CURB RAMP GRADES; PAVEMENT GRADES ON 'INTERSECTION DETAILS' SHEETS.

RECORD DRAWING

82

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS 3

NO.	REVISION	DATE	BY	FOR:

LOCATION:

SCALE:	1" = 10'	DESIGNED BY:	JRK
DWG:	15-013-RAMP-3.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	82 OF 100
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

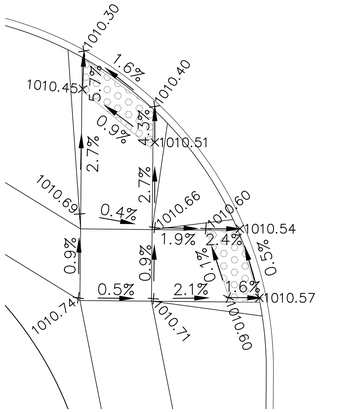
ERG
Engineering Resources Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-3.dwg, 10/19/2017 11:15:27 AM, PJV

NOTE:

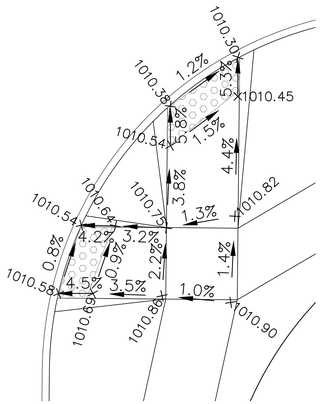
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



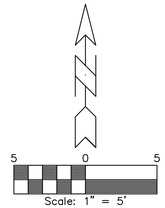
SOUTHWEST QUADRANT

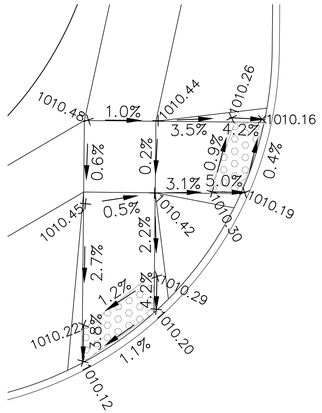
SE PEMBROOKE LANE

SE WADDELL WAY



SOUTHEAST QUADRANT

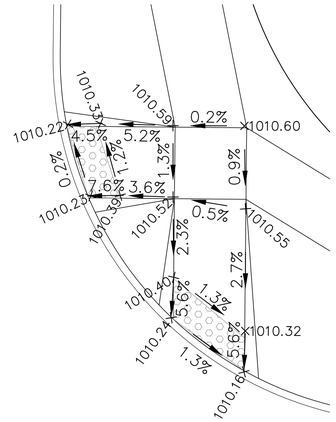




NORTHWEST QUADRANT

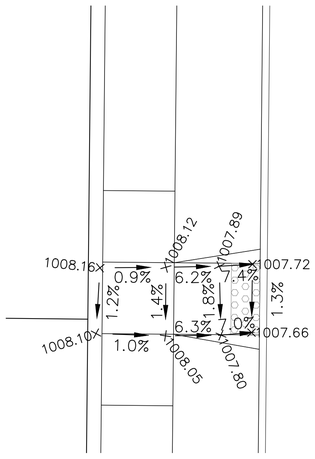
SE WADDELL WAY

SE PEMBROOKE LANE



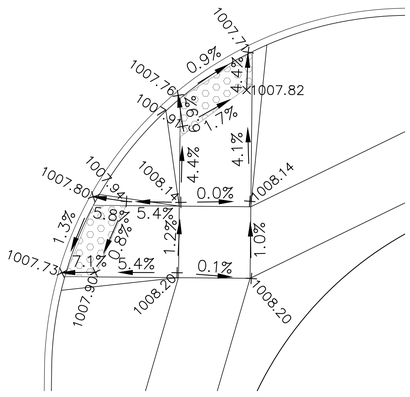
NORTHEAST QUADRANT

SE WADDELL WAY & SE PEMBROOKE LANE
INTERSECTION CURB RAMP DETAILS

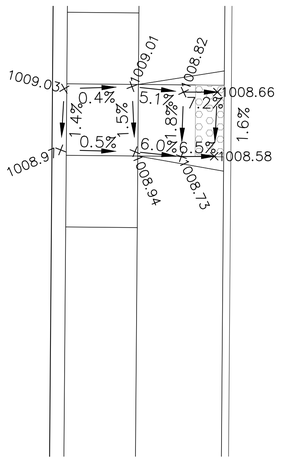


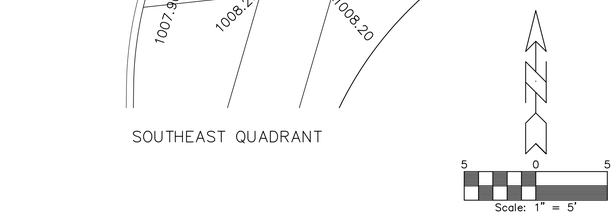
SE WADDELL WAY

SE BAYTREE DRIVE



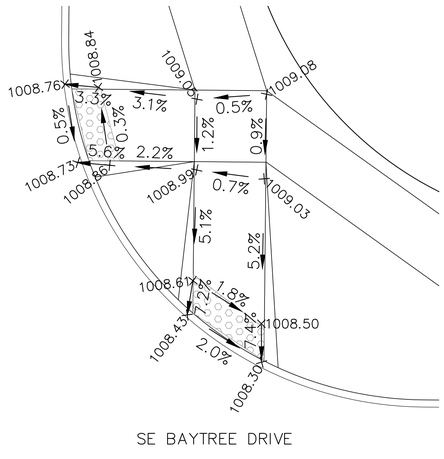
SOUTHEAST QUADRANT





SE WADDELL WAY & SE BAYTREE DRIVE
INTERSECTION CURB RAMP DETAILS

SE WADDELL WAY



SE BAYTREE DRIVE

NORTHEAST QUADRANT

RECORD DRAWING

82A

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS 3

NO.	REVISION	DATE	BY

FOR:

LOCATION:	SCALE: 1" = 5'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-RAMP-3A.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 82 OF 100	FILE NO.: 15-013

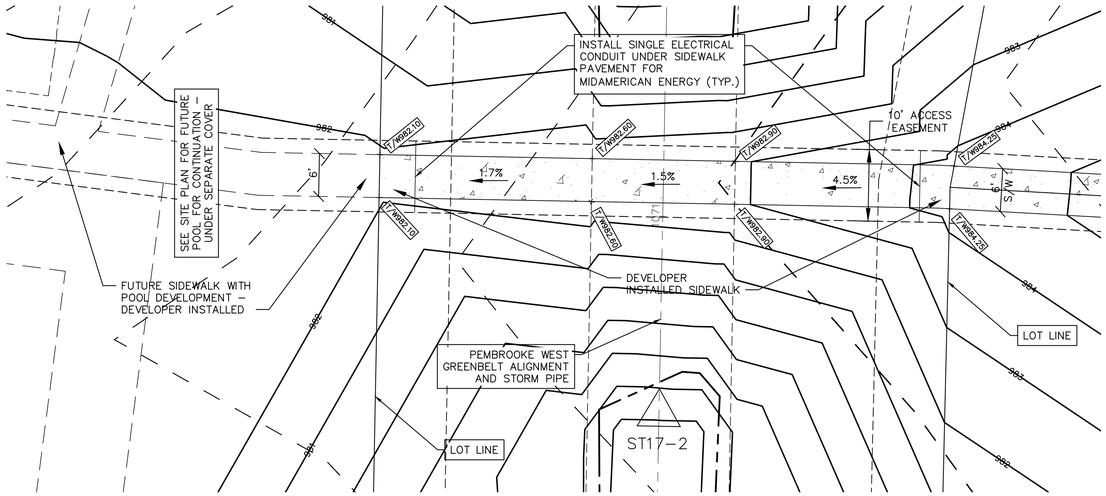
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

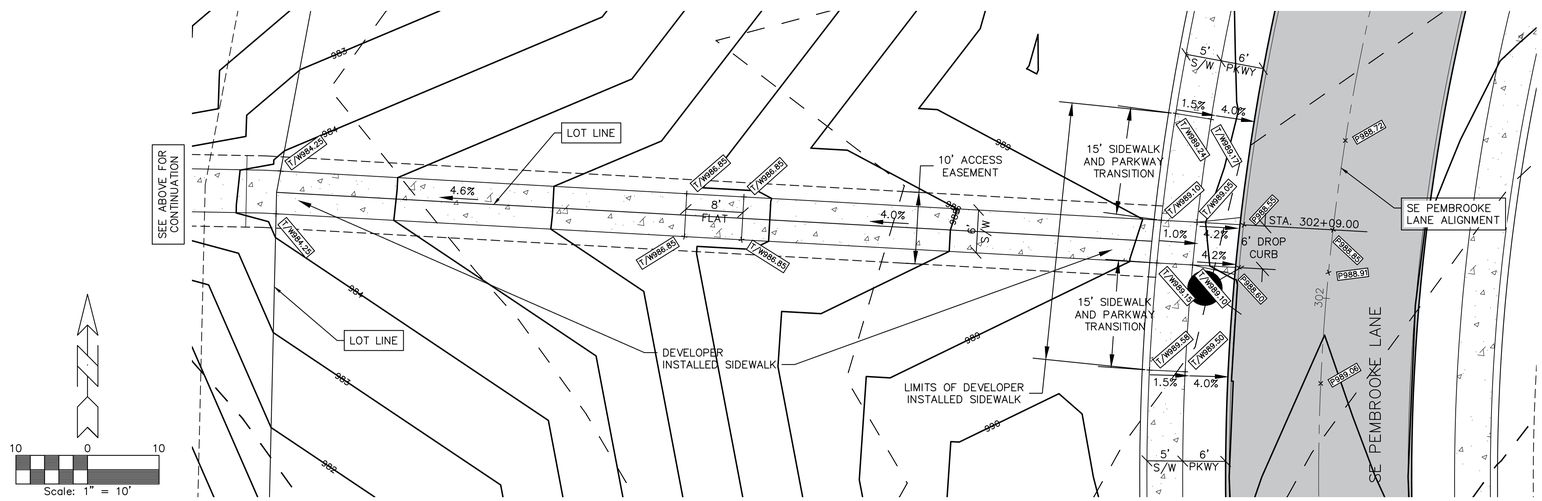
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-3A.dwg, 10/19/2017 11:15:58 AM, PJV

NOTE:

THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





NOTE: THIS SHEET FOR CITY APPROVED CURB RAMP GRADES; PAVEMENT GRADES ON 'INTERSECTION DETAILS' SHEETS.

RECORD DRAWING

SE PEMBROOKE LANE STA. 302+06.00
ACCESS CURB RAMP DETAILS

83

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS 4 - POOL ACCESS

LOCATION:	SCALE: 1" = 10'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-RAMP-4.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 83 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

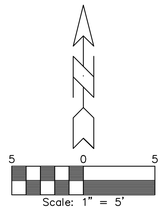
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

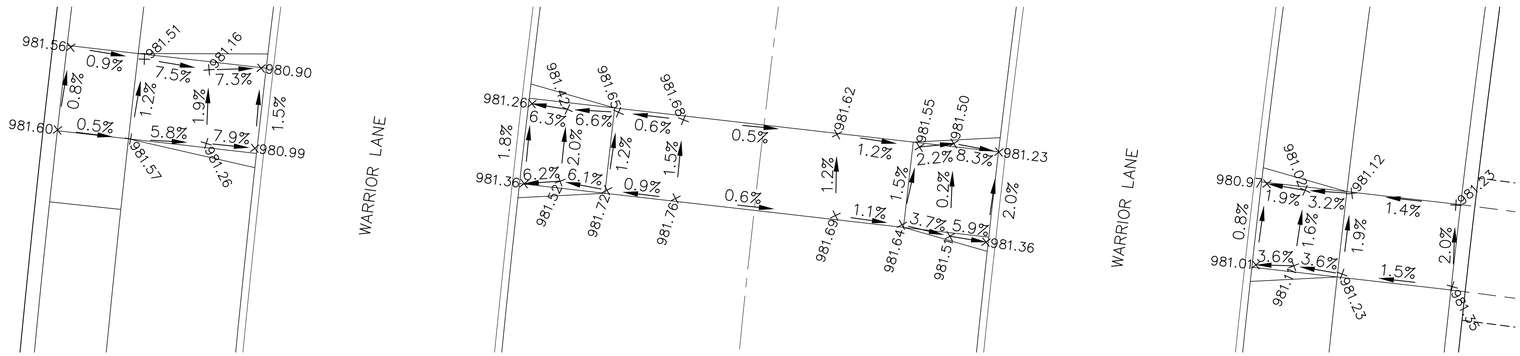
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-4.dwg, 10/19/2017 11:16:25 AM, PJV

NOTE:

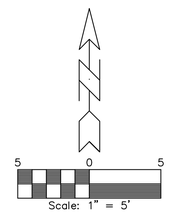
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.





WARRIOR LANE STA. 162+29.31
CROSSOVER CURB RAMP DETAILS





WARRIOR LANE STA. 167+04.00
CROSSOVER CURB RAMP DETAILS

RECORD DRAWING

83A

GLYNN VILLAGE PLAT 10 - CURB RAMP DETAILS 4

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 5'	DESIGNED BY:	JRK
DWG:	15-013-RAMP-4A.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	83A OF 100
DRAWN BY:	PJV		
DATE:	02/24/2016		
FILE NO.:	15-013		

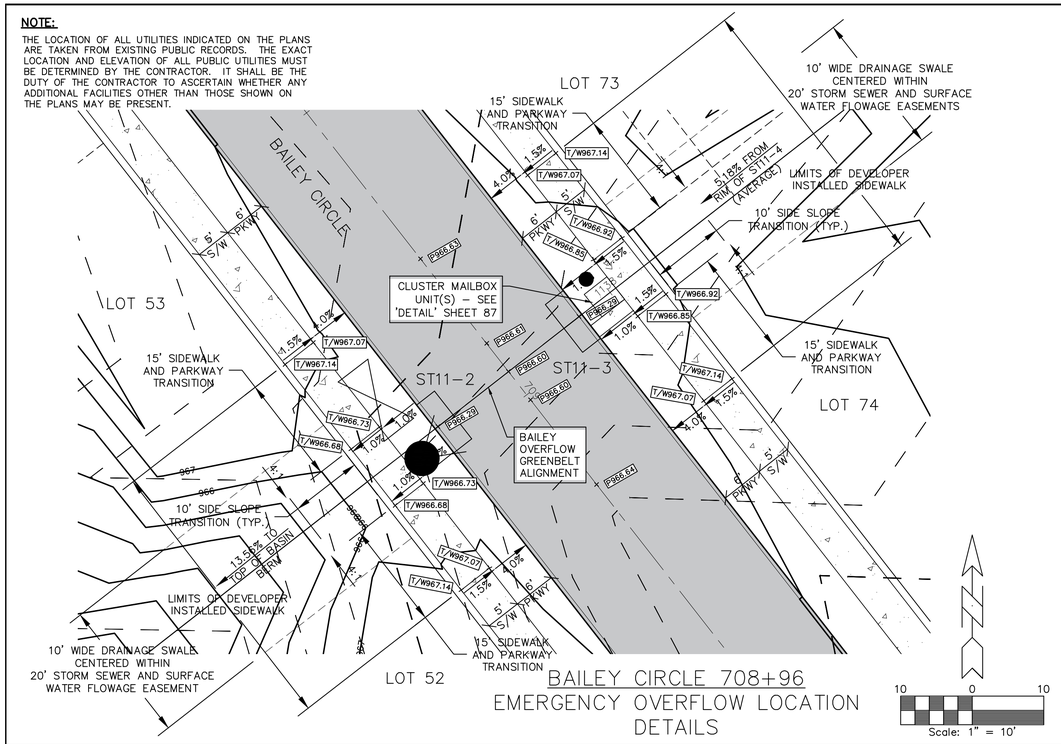
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

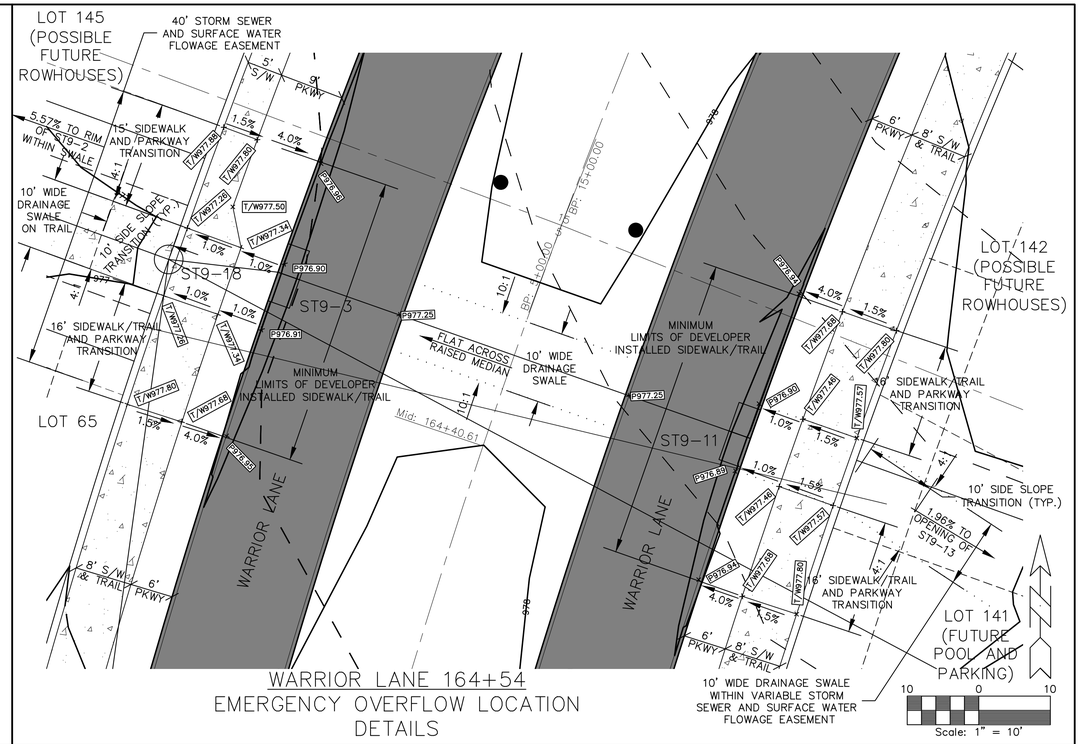
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RAMP-4A.dwg, 10/19/2017 11:16:49 AM, PJV

NOTE:

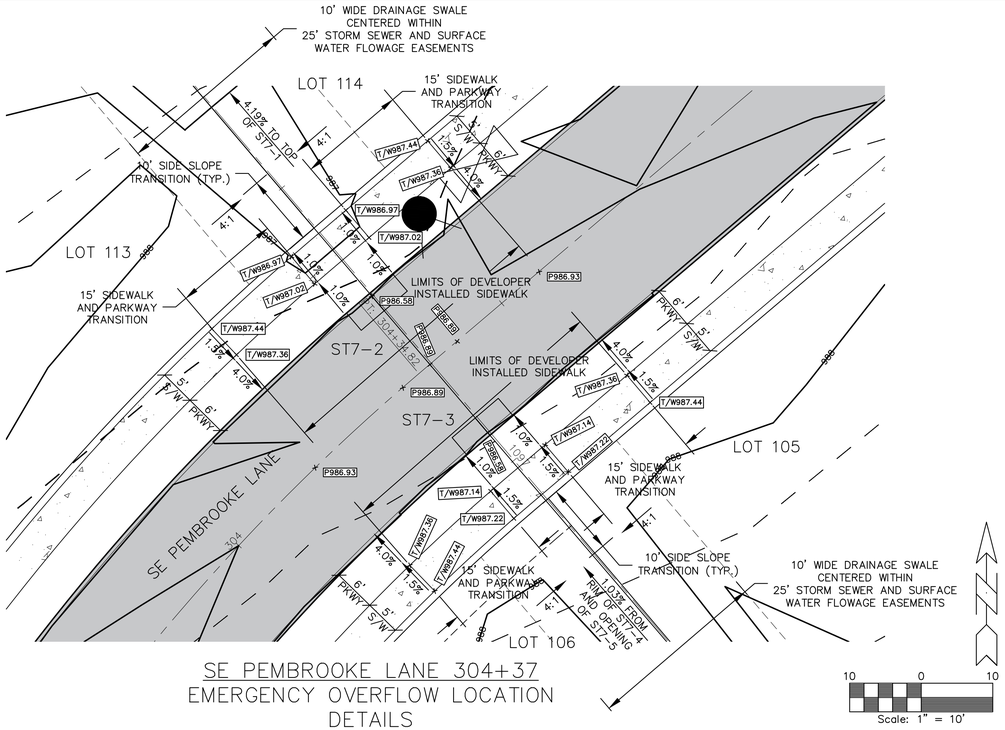
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



BAILEY CIRCLE 708+96
EMERGENCY OVERFLOW LOCATION DETAILS



WARRIOR LANE 164+54
EMERGENCY OVERFLOW LOCATION DETAILS



SE PEMBROOKE LANE 304+37
EMERGENCY OVERFLOW LOCATION DETAILS

NOTE: ALL OVERFLOW SWALES SHALL BE 1.5 FOOT MINIMUM DEPTH, UNLESS OTHERWISE NOTED.

RECORD DRAWING

84

GLYNN VILLAGE PLAT 10 - EMERGENCY OVERFLOW LOCATION DETAILS I

NO.	REVISION	DATE	BY

FOR:

LOCATION:

SCALE:	1" = 10'	DESIGNED BY:	JRK
DWG:	15-013-EOFR-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	84 OF 100
DRAWN BY:	PJV		
DATE:	02/24/2016		
FILE NO.:	15-013		

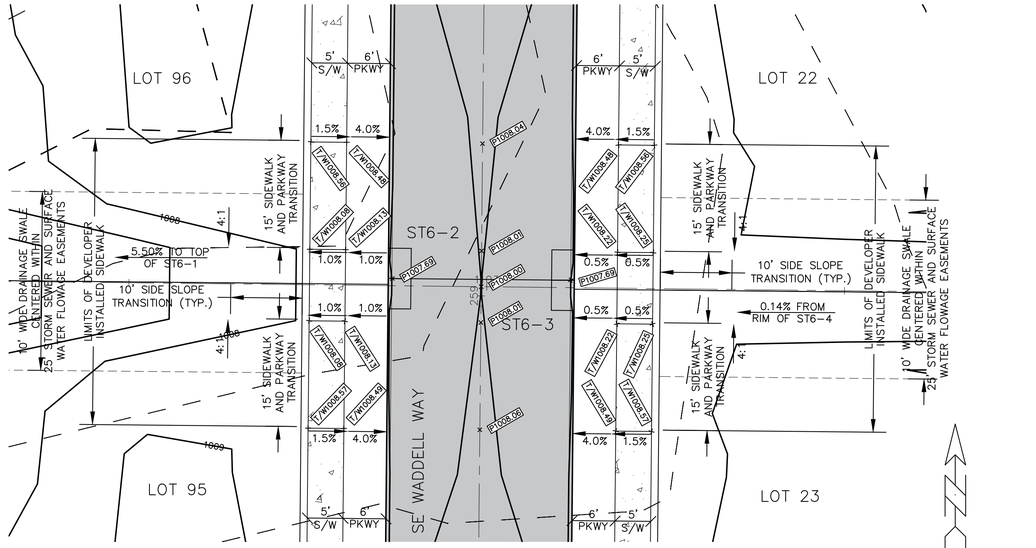
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

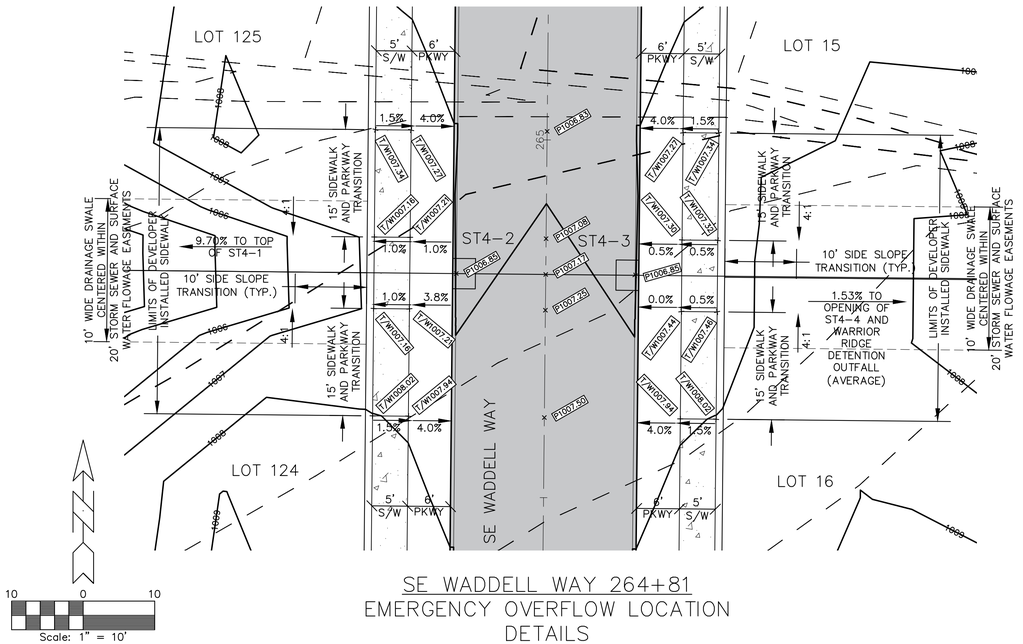
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-EOFR-1.dwg, 10/19/2017 11:17:14 AM, PJV

NOTE:

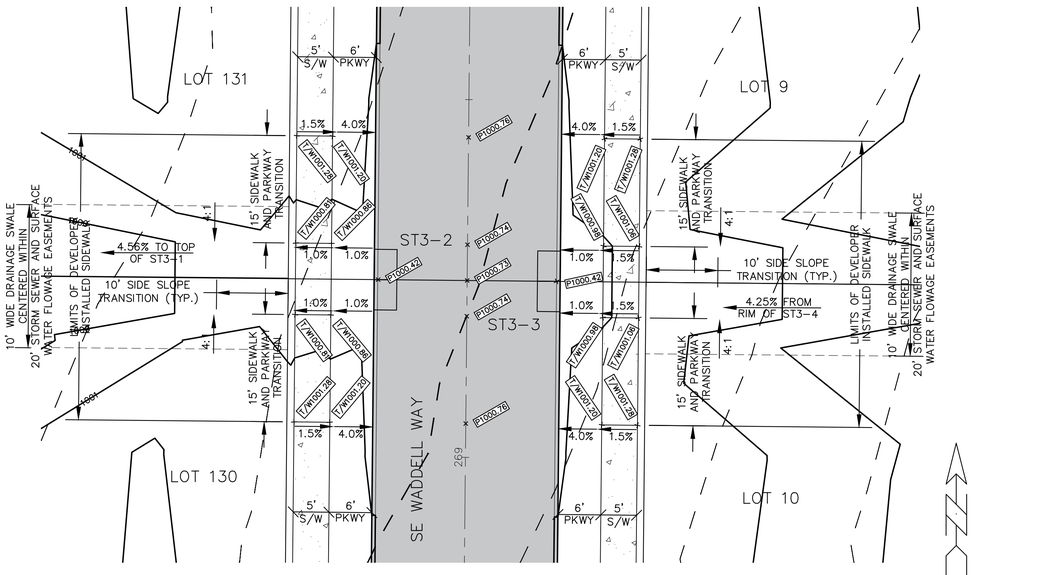
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.



SE WADDELL WAY 259+02
EMERGENCY OVERFLOW LOCATION DETAILS



SE WADDELL WAY 264+81
EMERGENCY OVERFLOW LOCATION DETAILS



SE WADDELL WAY 269+25
EMERGENCY OVERFLOW LOCATION DETAILS

NOTE: ALL OVERFLOW SWALES SHALL BE 1.5 FOOT MINIMUM DEPTH, UNLESS OTHERWISE NOTED.

RECORD DRAWING

85

GLYNN VILLAGE PLAT 10 - EMERGENCY OVERFLOW LOCATION DETAILS 2

LOCATION:	SCALE: 1" = 10'	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-EOFR-2.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 85 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-EOFR-2.dwg, 10/19/2017 11:17:43 AM, PJV

NOTE:

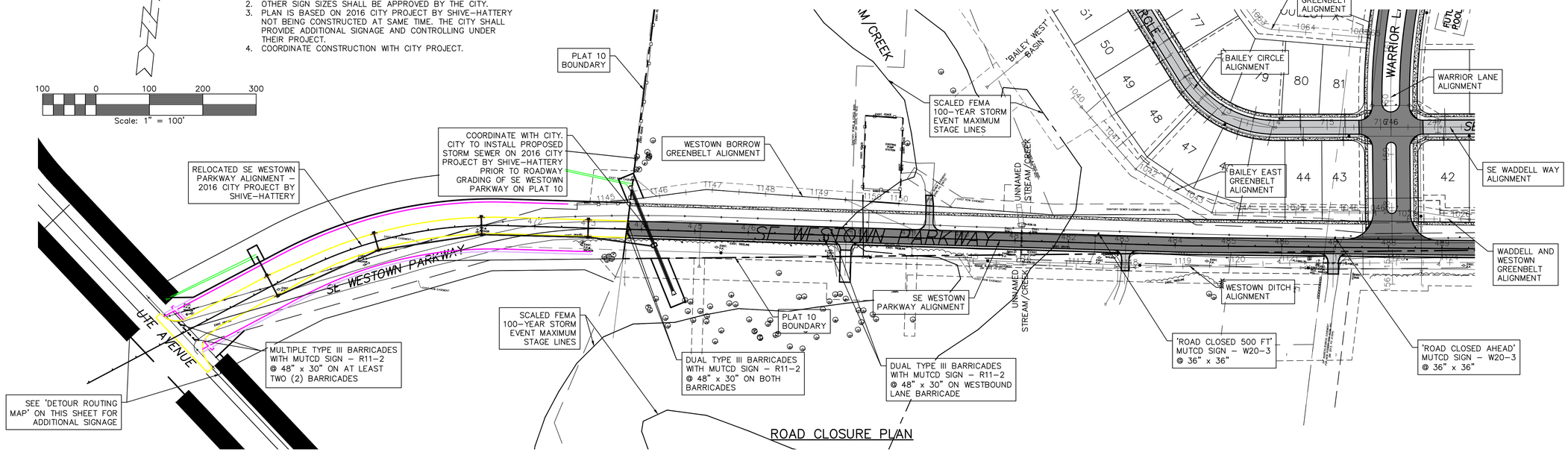
THE LOCATION OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

ROAD CLOSURE NOTES:

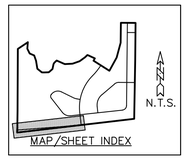
1. SHOWN SIGN SIZES ARE 'CONVENTIONAL' MUTCD SIZES.
2. OTHER SIGN SIZES SHALL BE APPROVED BY THE CITY.
3. PLAN IS BASED ON 2016 CITY PROJECT BY SHIVE–HATTERY NOT BEING CONSTRUCTED AT SAME TIME. THE CITY SHALL PROVIDE ADDITIONAL SIGNAGE AND CONTROLLING UNDER THEIR PROJECT.
4. COORDINATE CONSTRUCTION WITH CITY PROJECT.

100 0 100 200 300

Scale: 1" = 100'



ROAD CLOSURE PLAN

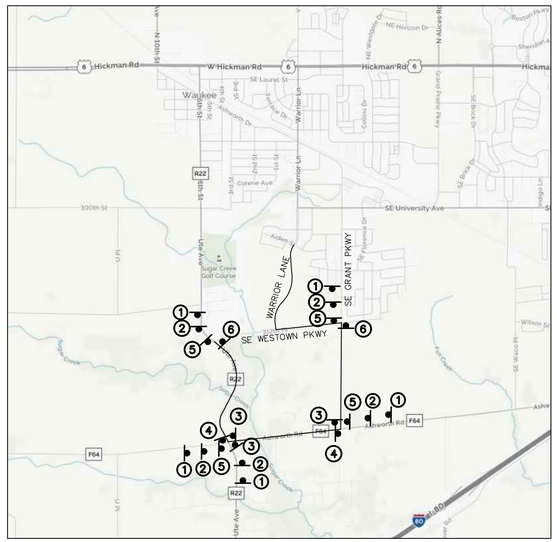


DETOUR MAP NUMBER AND SIGNAGE INFORMATION

①	DETOUR AHEAD 312TH PL SE WESTOWN PKWY	MUTCD SIGN – W20–2 36" x 36" BLACK ON ORANGE MUTCD SIGN – SPECIAL 5" HIGH LETTERING ½" BORDER BLACK ON ORANGE
②	ROAD CLOSED 500FT	MUTCD SIGN – W20–3 36" x 36" BLACK ON ORANGE
③	DETOUR 312TH PL SE WESTOWN PKWY	MUTCD SIGN – M4–9R 30" x 24" BLACK ON ORANGE MUTCD SIGN – SPECIAL 5" HIGH LETTERING ½" BORDER BLACK ON ORANGE
④	DETOUR 312TH PL SE WESTOWN PKWY	MUTCD SIGN – M4–9L 30" x 24" BLACK ON ORANGE MUTCD SIGN – SPECIAL 5" HIGH LETTERING ½" BORDER BLACK ON ORANGE
⑤	DETOUR 312TH PL SE WESTOWN PKWY	MUTCD SIGN – M4–9S 30" x 30" (SPECIAL) BLACK ON ORANGE MUTCD SIGN – SPECIAL 5" HIGH LETTERING ½" BORDER BLACK ON ORANGE
⑥	END DETOUR	MUTCD SIGN – M4–8a 24" x 18" BLACK ON ORANGE

OPTIONAL DETOUR SIGNAGE

MUTCD SIGN – W1–6 24" x 12" BLACK ON ORANGE	DETOUR ←	MUTCD SIGN – M4–8 24" x 12" BLACK ON ORANGE
MUTCD SIGN – W1–6 24" x 12" BLACK ON ORANGE	DETOUR →	MUTCD SIGN – M4–8 24" x 12" BLACK ON ORANGE
MUTCD SIGN – W1–6 24" x 12" BLACK ON ORANGE	DETOUR ↑	MUTCD SIGN – M4–8 24" x 12" BLACK ON ORANGE
MUTCD SIGN – M4–8 24" x 12" BLACK ON ORANGE	END DETOUR	MUTCD SIGN – M4–8b 24" x 12" BLACK ON ORANGE



DETOUR ROUTING MAP
NOT TO SCALE

DETOUR NOTES:

1. SEE 'GENERAL NOTES' ON SHEET 2 FOR ADDITIONAL INFORMATION.
2. SHOWN SIGN SIZES ARE 'CONVENTIONAL' MUTCD SIZES.
3. OTHER SIGN SIZES SHALL BE APPROVED BY THE CITY.
4. PER MUTCD, PROVIDE 500 FOOT SPACINGS BETWEEN SIGN ASSEMBLIES #1 AND #2; AND BETWEEN SIGN ASSEMBLIES #2 AND #3 OR #5 – NEAR INTERSECTION OF SE WESTOWN PARKWAY AND UTE AVENUE.
5. THE CONTRACTOR(S) SHALL ADD, MODIFY, AND/OR REMOVE SIGNAGE AS DIRECTED BY THE CITY, THE COUNTY, AND/OR IDOT.
6. THE CONTRACTOR(S) SHALL ADJUST DETOUR ROUTING AS GLYNN VILLAGE PLAT 10 PROJECT PROGRESSES.
7. PLAN IS BASED ON 2016 CITY PROJECT BY SHIVE–HATTERY NOT BEING CONSTRUCTED AT SAME TIME. THE CITY SHALL PROVIDE ADDITIONAL AND CONTROLLING MAPPING AND SIGNAGE UNDER THEIR PROJECT.
8. COORDINATE CONSTRUCTION WITH CITY PROJECT.

RECORD DRAWING 86

PLAT 10 - ROAD CLOSURE AND DETOUR DETAILS

SCALE: AS NOTED | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-RD_CLOSURE.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 86 OF 100 | FILE NO.: 15-013
LOCATION:

PREPARED FOR:

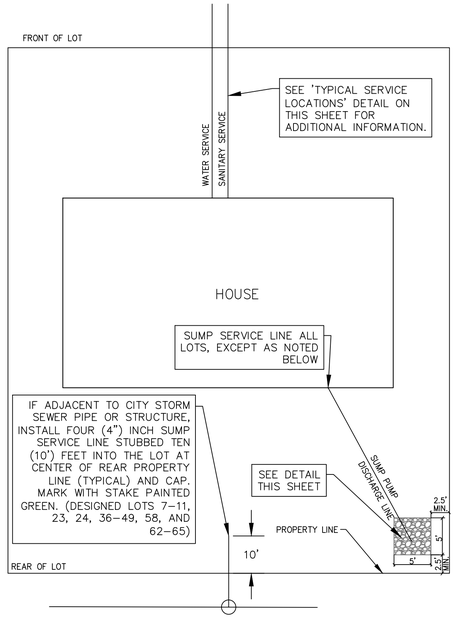
GLYNN VILLAGE PLAT

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

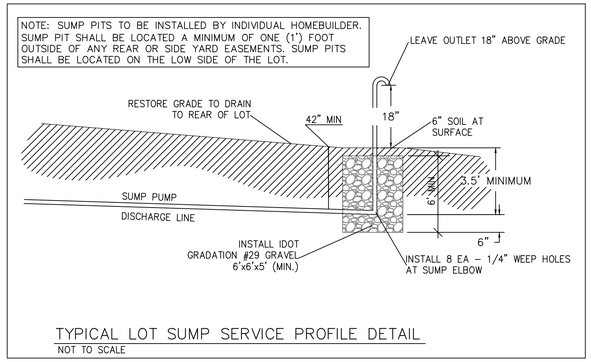
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-RD_CLOSURE.dwg, 10/19/2017 11:18:12 AM, PJV



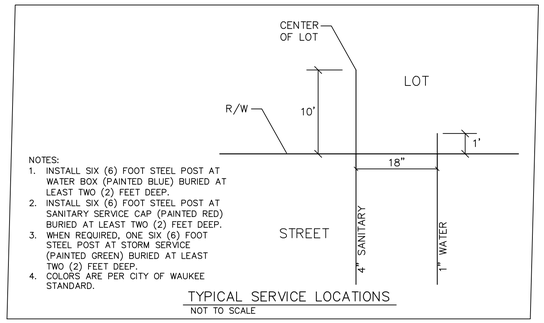
TYPICAL LOT SUMP SERVICE PLAN DETAIL

NOT TO SCALE



TYPICAL LOT SUMP SERVICE PROFILE DETAIL

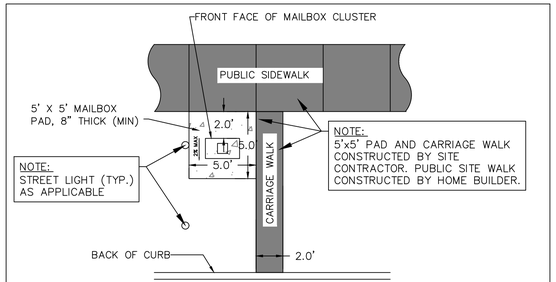
NOT TO SCALE



NOTES:
1. INSTALL SIX (6) FOOT STEEL POST AT WATER BOX (PAINTED BLUE) BURIED AT LEAST TWO (2) FEET DEEP.
2. INSTALL SIX (6) FOOT STEEL POST AT SANITARY SERVICE CAP (PAINTED RED) BURIED AT LEAST TWO (2) FEET DEEP.
3. WHEN REQUIRED, ONE SIX (6) FOOT STEEL POST AT STORM SERVICE (PAINTED GREEN) BURIED AT LEAST TWO (2) FEET DEEP.
4. COLORS ARE PER CITY OF WAUKEE STANDARD.

TYPICAL SERVICE LOCATIONS

NOT TO SCALE



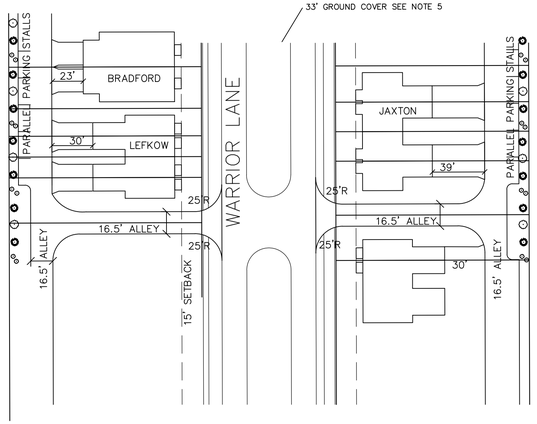
NOTES:

1. Cluster Mailbox to be located on the no parking/street light side of street.
2. Do not locate at intersection.
3. Locate near shared property line per approved plan.
4. Determine sidewalk side of mailbox pad elevation assuming constant 4% slope from back of curb to sidewalk side of mailbox pad. Resulting slope from back of curb to street side of mailbox pad will be greater than 4%. For example, for a 29' wide pavement with a 60' wide R.O.W. and a 2% mailbox pad cross slope, the resulting slope from the back of curb to the street side of mailbox pad is 6.2%.

CITY OF WAUKEE
CLUSTER MAILBOX PAD DETAIL
STD.DWG.NO.28

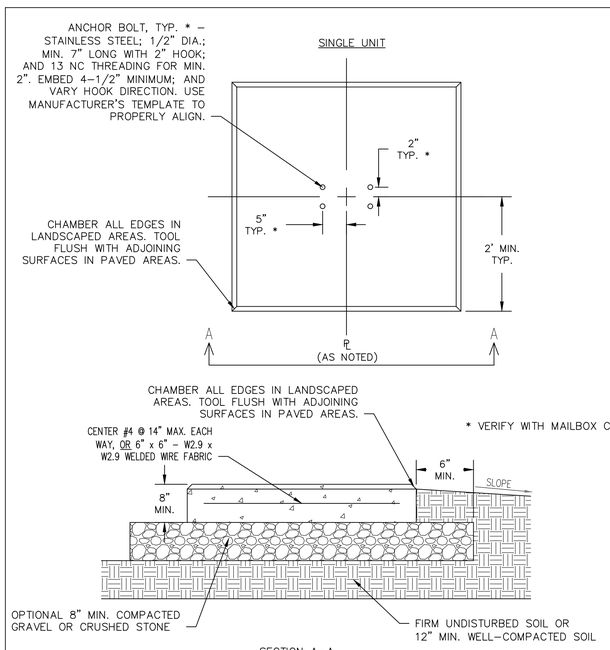
NOTES:

1. BUILDING NAMES, CONFIGURATIONS, AND LAYOUT PATTERN ALONG WARRIOR LANE ARE SUBJECT TO CHANGE.
2. NOT TO SCALE.
3. FIGURE IS TYPICAL AND DOES NOT SHOW ANY SPECIFIC AREA IN DETAIL.
4. 7–FEET GROUND COVER BUFFER WILL GENERALLY CONTAIN A BERM AND TREES. THE PERMIT TREE PLANTINGS PROVIDED IN CITY DESIGNATED 25–FEET BUFFER SHALL CONSIST OF: 1 OVERSTORY, 2 EVERGREENS AND 2 ORNAMENTAL TREES FOR EVERY 50–FEET OF BUFFER LENGTH FOR TRANSITION FROM R–4 TO R–1 ZONING. INITIAL TREES SIZES SHALL ALL BE PROVIDED IN ACCORDANCE WITH THE CITY LANDSCAPE REQUIREMENTS. IN ACCORDANCE WITH CITY CODE, PLANTINGS AND BERM GRADING SHALL BE SHIFTED OR ADJUSTED TO AVOID BLOCKING AND ALLOWING MAINTENANCE ON DRAINAGE WAYS, MANHOLES, AND OTHER CITY UTILITIES/FACILITIES.
5. PROPOSED PLAT 10 WARRIOR LANE MEDIAN GROUND COVER AND VEGETATION TO MATCH EXISTING GLYNN VILLAGE WARRIOR LANE MEDIAN GROUND COVER AND VEGETATION TO THE NORTH. SEE PREVIOUSLY APPROVED PLATS 1–9, INCLUSIVE, CONSTRUCTION PLANS FOR ACTUAL LAYOUT.
6. FUTURE ROWHOUSE DEVELOPMENT SIDEWALK AND TRAIL WILL BE CONSTRUCTED WITH ROW HOUSE UNITS AND ARE SUBJECT TO ADJUSTMENT WITH FUTURE PLAT.



TYPICAL WARRIOR LANE LAYOUT

NTS



SECTION A–A

* VERIFY WITH MAILBOX CLUSTER MANUFACTURER.

CLUSTER MAILBOX (CMB) NOTES:

1. CMB SHALL BE PROVIDED AT LOCATION(S) AS NOTED IN 'CMB TABLE A' AND MOUNTED ON PCC PAD WITH MINIMUM REQUIRED NUMBER OF UNITS, PLUS ASSOCIATED PARCEL BOX(S) – MINIMUM OF TWO (2).
2. CMB SHALL BE LOCATED ON THE SIDE OF THE LOT (PROPERTY) LINE WITH A HIGHER ELEVATION, UNLESS OTHERWISE NOTED. DOORS OF CMB SHALL FACE SOUTH OR EAST TO LIMIT IMPACTS OF SNOW AND ICE DURING WINTER WHERE POSSIBLE. MIRROR OR SHIFT TYPICAL LAYOUT AS REQUIRED.
3. ADJUST SLOPE OF ADJACENT FIVE (5) FOOT SIDEWALK PARALLEL TO ROADWAY AT ALL MAILBOX LOCATIONS TO PROVIDE AN ADA COMPLIANT TURNING AREA AND CMB PAD AT 1.5 PERCENT DESIGN SLOPE IN ALL DIRECTIONS.
4. DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND ALL CONSTRUCTION REQUIRED FOR PROPER CMB INSTALLATION.
5. IF DISTANCE FROM BACK OF CURB TO MAILBOX PAD IS 18 INCHES OR LESS, THEN INCREASE MAILBOX PAD TO BACK OF CURB.
6. THE LOCATION AND NUMBER OF CLUSTER MAILBOX UNITS WILL BE COORDINATED AND FINALIZED WITH THE CITY AND USPS.
7. PER THE CITY, ALL CMU'S WILL BE ORDERED AND SUPPLIED BY THE USPS; AND INSTALLED AT CITY DEFINED LOCATIONS.

CMB TABLE A:

Shared Lot Line	Min. No. Units
68/69	SEE NOTE 7
73/74	SEE NOTE 7
79/80	SEE NOTE 7
83/84	SEE NOTE 7
89/90	SEE NOTE 7
96/97	SEE NOTE 7
101/102	SEE NOTE 7
106/107	SEE NOTE 7
123/124	SEE NOTE 7
129/130	SEE NOTE 7
135/136	SEE NOTE 7

NOTES:

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60; MINIMUM 3" CLEARANCE; AND BE DEFORMED, UNLESS NOTED OTHERWISE.
2. CONCRETE SHALL BE C–4 MIX WITH MINIMUM 4,000 PSI @ 28 DAYS; 4–6% AIR ENTRAINMENT; AND 3–1/2 TO 4–1/2 INCHES OF SLUMP.
3. PROVIDE SEALED 1/2" EXPANSION/ISOLATION JOINT ALONG ADJOINING PAVED SURFACES, OR AS DIRECTED.
4. BROOM FINISH CONCRETE, TYPICAL; OR MATCH ADJOINING PAVED SURFACES.
5. SEE PLANS FOR ADDITIONAL GRADING INFORMATION.

MAILBOX CLUSTER DETAIL

NTS

GLYNN VILLAGE PLAT 10 - DETAILS I

SCALE:	AS NOTED	DESIGNED BY:	JRK
DWG:	15-013-DTL-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	87 OF 100
LOCATION:		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

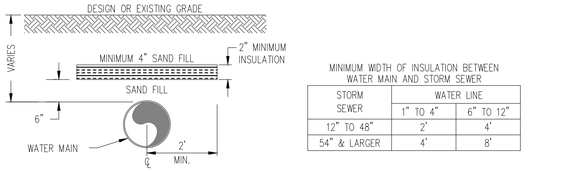
RECORD DRAWING

87

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

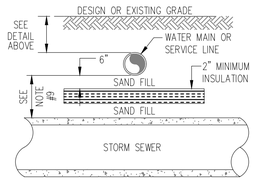
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:18:26 AM, PJV



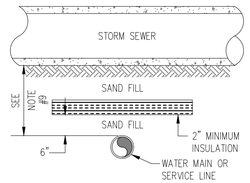
SHALLOW BURY CONDITIONS
NO SCALE

MINIMUM WIDTH OF INSULATION BETWEEN WATER MAIN AND STORM SEWER

STORM SEWER	WATER LINE	
	1" TO 4"	6" TO 12"
12" TO 48"	2'	4'
54" & LARGER	4'	8'



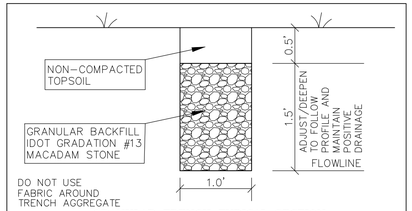
STORM SEWER CROSSING BELOW
NO SCALE



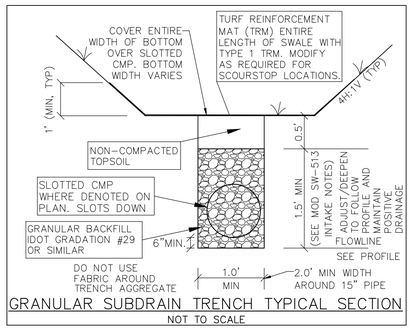
STORM SEWER CROSSING ABOVE
NO SCALE

NOTES:
1. INSULATION SHALL BE CENTERED ON THE PIPE.
2. RIGID, EXTRUDED POLYSTYRENE BOARD INSULATION, CLOSED CELL (DOW CHEMICAL) OR APPROVED EQUAL.
3. THERMAL RESISTANCE (R): 5.0.
4. MINIMUM THICKNESS: 2 INCHES.
5. BOARD SIZE: 48"x96".
6. COMPRESSIVE STRENGTH: MINIMUM 25 psi.
7. WATER ABSORPTION IN ACCORDANCE WITH ANSI/ASTM D2842: 0.1 PERCENT BY VOLUME, MAXIMUM.
8. EDGES: SQUARE.
9. ALL STORM SEWER CONFLICTS OR INTERSECTIONS SHALL BE INSULATED AS APPROVED BY FIELD ENGINEER TO EQUATE TO 7 FEET OF MINIMUM COVER (1 INCH CLOSED CELL INSULATION = 1 FOOT OF SOIL).
10. INSULATION LENGTH ALONG WATER LINE SHALL BE A MINIMUM OF 4 FEET GREATER THAN THE OUTSIDE DIAMETER OF THE STORM SEWER PIPE.

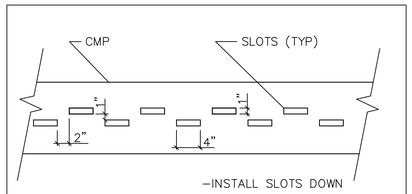
INSULATION DETAIL
N.T.S.



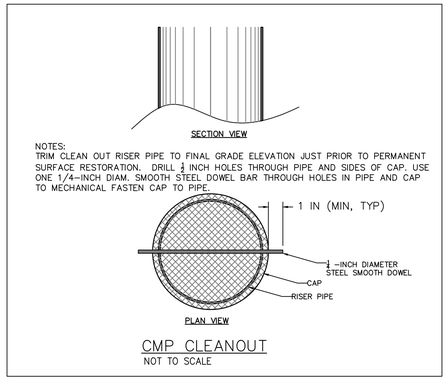
GRANULAR TRENCH TYPICAL SECTION
NOT TO SCALE



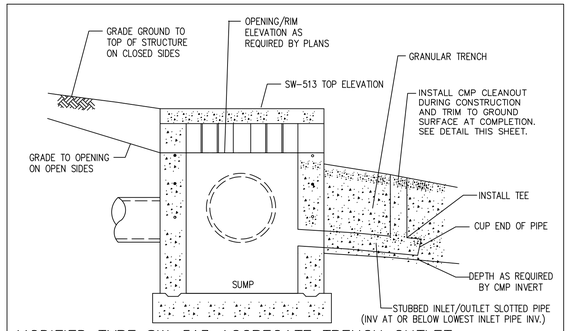
GRANULAR SUBDRAIN TRENCH TYPICAL SECTION
NOT TO SCALE



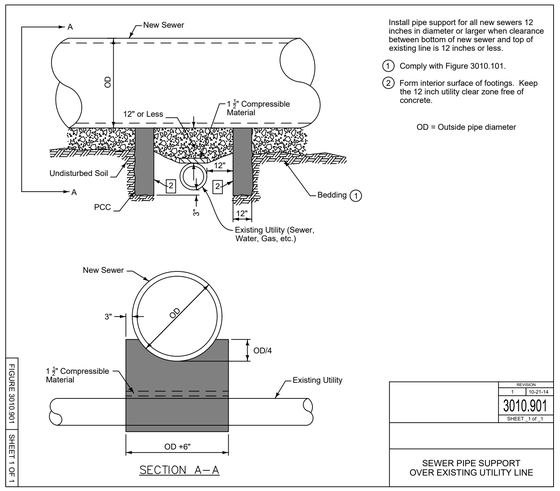
SLOTTED PIPE DETAIL
NOT TO SCALE



CMP CLEANOUT
NOT TO SCALE



MODIFIED TYPE SW-513 AGGREGATE TRENCH OUTLET
(F.K.A. AREA TYPE "M-G" OUTLET)
NOT TO SCALE



SECTION A-A

Install pipe support for all new sewers 12 inches in diameter or larger when clearance between bottom of new sewer and top of existing line is 12 inches or less.

(1) Comply with Figure 3010.101.

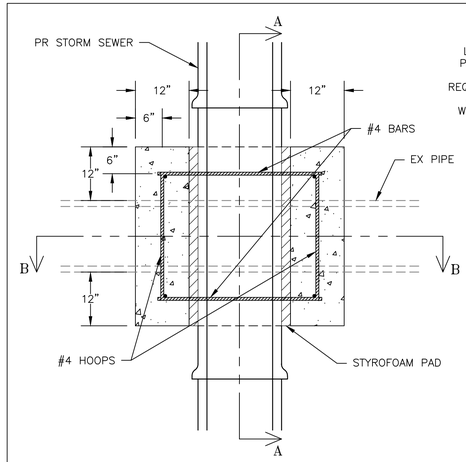
(2) Form interior surface of footings. Keep the 12 inch utility clear zone free of concrete.

OD = Outside pipe diameter

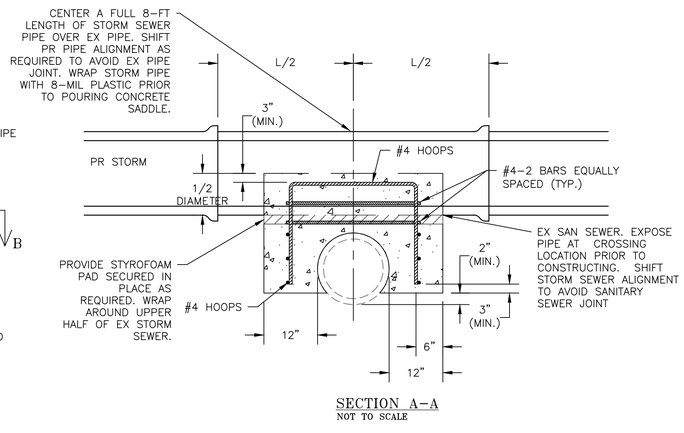
FIGURE 3010.901 SHEET 1 OF 1

REVISION
1 10-21-14
3010.901
SHEET 1 of 1

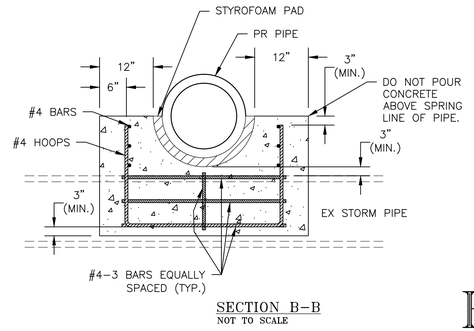
SEWER PIPE SUPPORT OVER EXISTING UTILITY LINE



PLAN
NOT TO SCALE

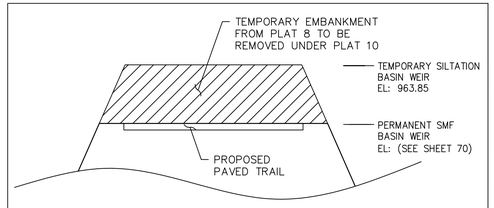


SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

PIPE CROSSING – CONCRETE
NOT TO SCALE



SMF 'EAST/8E' PLAT 8
WEIR EMBANKMENT SECTION
NOT TO SCALE

NOTES:
1. SEE SWPPP FOR ADDITIONAL INFORMATION.
2. CONSTRUCTION SEQUENCE
   - 2.1. ADD NEW OUTFALL PIPING AND STRUCTURES.
   - 2.2. RESHAPE/MODIFY EXISTING DETENTATION BASIN TO FINAL CONDITIONS.
   - 2.3. REMOVE TEMPORARY EMBANKMENT TO FINAL GRADE.
   - 2.4. CONSTRUCT AND PAVE TRAIL.
   - 2.5. INSTALL SLOPE TRM WHEN CONVERTING SILTATION BASIN TO SMF.
3. MINIMUM WEIR LENGTH AT EACH ELEVATION – 120'
4. COVER UNPAVED EMBANKMENT WITH TRM.

RECORD DRAWING

88

GLYNN VILLAGE PLAT 10 - DETAILS 2

NO.	REVISION	DATE	BY	FOR:

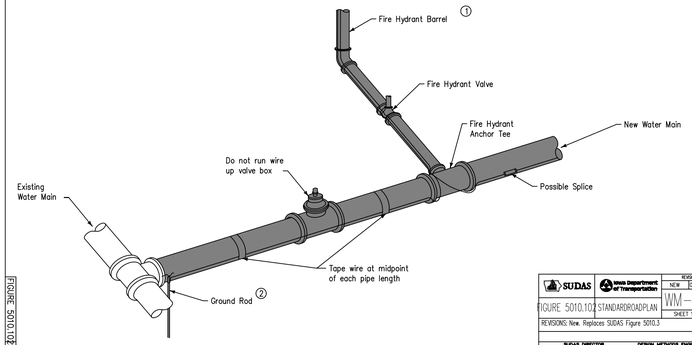
SCALE: AS NOTED | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-DTL-1.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 88 OF 100 | FILE NO.: 15-013
LOCATION:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:18:32 AM, PJV

1. Extend tracer wire up fire hydrant barrel to internal terminals of tracer wire station and back down. Refer to WM-201 for details of fire hydrant assembly.
2. Clamp tracer wire to ground rod at system termination points.



TYPICAL INSTALLATION

SUDAS	Iowa Department of Transportation	REVISION
	NEW	04-21-09
FIGURE 5010.102	STANDARDROADPLAN	WM-102
		SHEET 1 of 1

REVISIONS: New. Replaces SUDAS Figure 5010.3

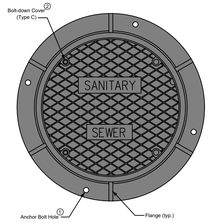
SUDAS DIRECTOR | DESIGN METHODS ENGINEER

TRACER SYSTEM

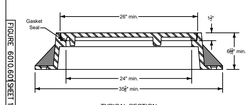
FIGURE 5010.102 SHEET 1 OF 1

TYPE A
Two-piece fixed casting

TYPE C
Two-piece fixed casting with bolt-down cover ②



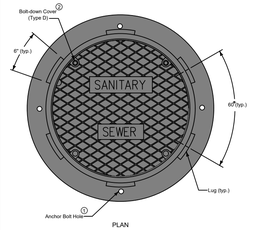
PLAN



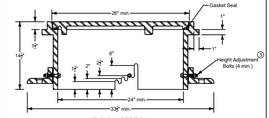
TYPICAL SECTION

TYPE B
Three-piece floating casting

TYPE D
Three-piece floating casting with bolt-down cover ②



PLAN



TYPICAL SECTION

Frame Notes:
Size and spacing of lugs and flanges may vary.

Cover Notes:
Roughness pattern and text style may vary.
Minimum one concealed pickhole.

1. When the contract documents require the frame to be attached to the structure, drill four $\frac{3}{4}$" diameter holes or slots, equally spaced around frame.
2. If specified, furnish bolt down frame and cover with four $\frac{3}{4}$" x 2" stainless steel, hex head, recessed cap screws. Secure cover with screws, washers, and rubber gasket seals.
3. Set casting at proper grade using one of the adjustment slots. Remove bolts upon completion of paving.

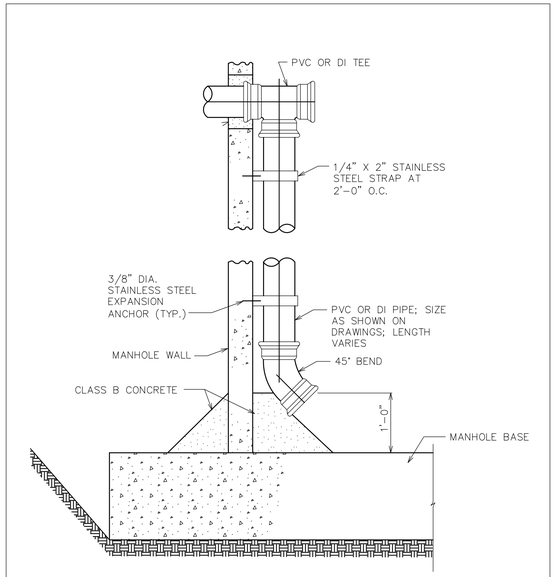
		REVISION
		1 04-21-15
FIGURE 6010.601	STANDARDROADPLAN	SW-601
		SHEET 1 of 1

REVISIONS: Minor Revision to depict adjustability of TYPE B and TYPE D casting. Modified circle note 3

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

CASTINGS FOR SANITARY SEWER MANHOLES

FIGURE 6010.601 SHEET 1 OF 1

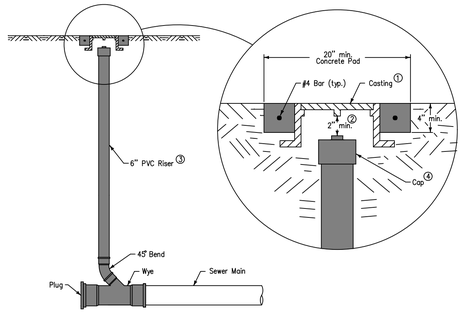


CITY OF WAUKEE

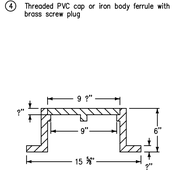
INSIDE DROP CONNECTION

STD.DWG.NO.14

1. Standard duty casting complying with AASHTO M 306. Mark lid with "Sanitary" or "Sanitary C.O."
2. Do not allow casting to bear on top of riser pipe.
3. 6-inch PVC Service Pipe
4. Threaded PVC cap or iron body ferrule with brass screw plug



CLEANOUT



CASTING ①
(Dimensions are nominal)

SUDAS	Iowa Department of Transportation	REVISION
	NEW	10-20-09
FIGURE 4010.203	STANDARDROADPLAN	SW-203
		SHEET 1 of 1

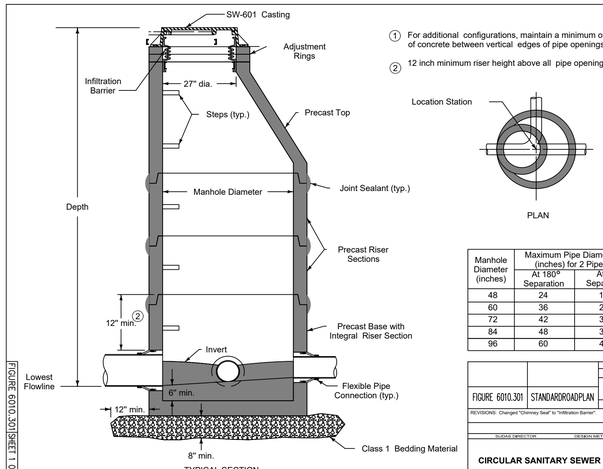
REVISIONS: New

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

SANITARY SEWER CLEANOUT

FIGURE 4010.203 SHEET 1 OF 1

1. For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.
2. 12 inch minimum riser height above all pipe openings.



TYPICAL SECTION

PLAN

Manhole Diameter (inches)	Maximum Pipe Diameter (inches) for 2 Pipes ①	
	At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

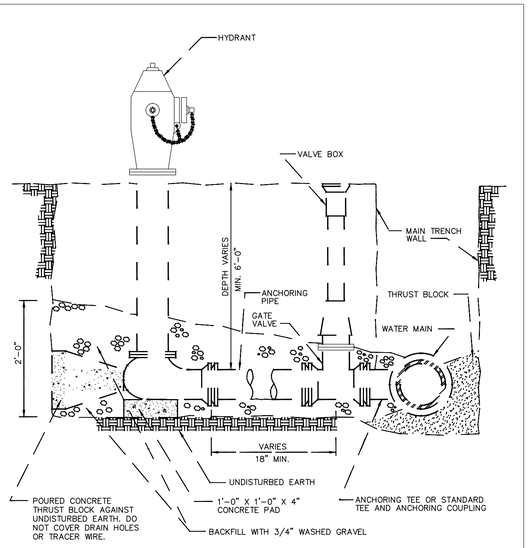
		REVISION
		1 10-21-14
FIGURE 6010.301	STANDARDROADPLAN	SW-301
		SHEET 1 of 1

REVISIONS: Changed "Chimney Seal" to "Infiltration Barrier"

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

CIRCULAR SANITARY SEWER MANHOLE

FIGURE 6010.301 SHEET 1 OF 1



SEE 'GENERAL NOTES' ON SHEET 2 FOR LOCATION TO SIDEWALKS.

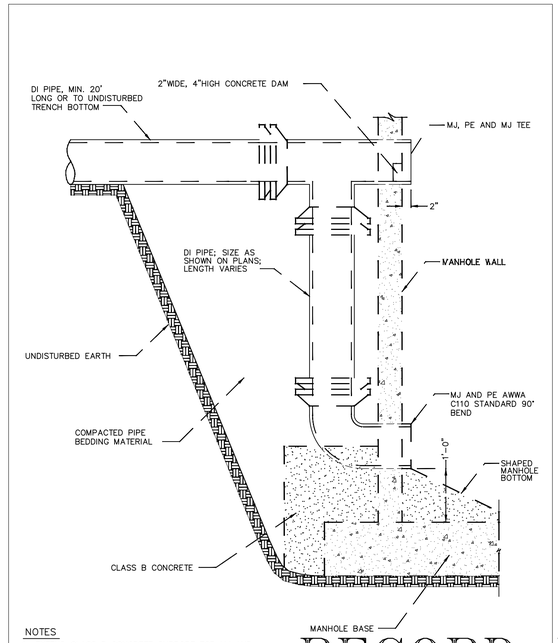
NOTES

1. MINIMUM SIZE FOR PIPING, VALVES AND FITTINGS FROM WATER MAIN TO HYDRANT INLET: 6".
2. PROVIDE TRACER WIRE AND TRACER WIRE STATION.
3. WRAP HYDRANT, PIPE AND FITTINGS WITH POLYETHYLENE ENCASEMENT.

CITY OF WAUKEE

HYDRANT

STD.DWG.NO.34



NOTES

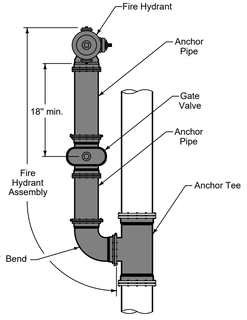
1. EXTEND CLASS B CONCRETE SUPPORT FOR MJ AND PE QUARTER BEND 8' ALL SIDES.
2. USE ANSI A21.50 DUCTILE IRON PIPE; MINIMUM THICKNESS CLASS 52. COAT WITH STANDARD COATING INSIDE AND OUT.
3. USE ANSI A21.10 MECHANICAL JOINT FITTINGS; 150 PSI PRESSURE RATING. COAT WITH STANDARD COATING INSIDE AND OUT.
4. GROUT PIPE IN BLOCKOUT WITH NON-SHRINK GROUT IF PRECAST MANHOLE SECTION IS USED.
5. DROP CONNECTIONS NOT PERMITTED ON 18" OR LARGER SEWER PIPE.

CITY OF WAUKEE

OUTSIDE DROP CONNECTION

STD.DWG.NO.13

Use ductile iron pipe with restrained mechanical joints for fire hydrant assembly and anchor tee.



SUDAS WM-201 - ALTERNATE PLAN

RECORD DRAWING

89

GLYNN VILLAGE PLAT 10 - DETAILS 3

LOCATION:	SCALE:	AS NOTED	DESIGNED BY: JRK
	DWG:	15-013-DTL-1.dwg	CHECKED BY: DJS
	FIELD BOOK:		SHEET 89 OF 100

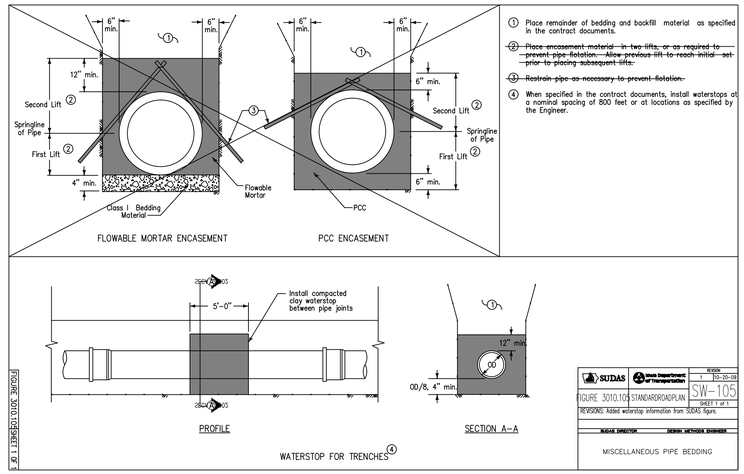
DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:18:37 AM, PJV



1. Place remainder of bedding and backfill material as specified in the contract documents.
2. Place encasement material in two lifts, or as required to prevent pipe flotation. Allow previous lift to reach initial set prior to placing subsequent lifts.
3. Restrain pipe as necessary to prevent flotation.
4. When specified in the contract documents, install waterstops at a nominal spacing of 800 feet or at locations as specified by the Engineer.

SUDAS | Iowa Department of Transportation | REVISION 1 | 10-20-09

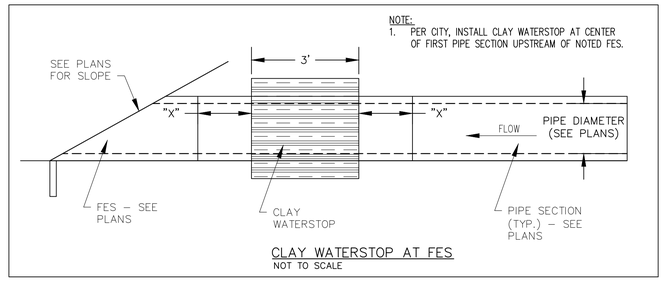
FIGURE 3010.105 STANDARD ROAD PLAN | SW-105 | SHEET 1 of 1

REVISIONS: Added waterstop information from SUDAS figure.

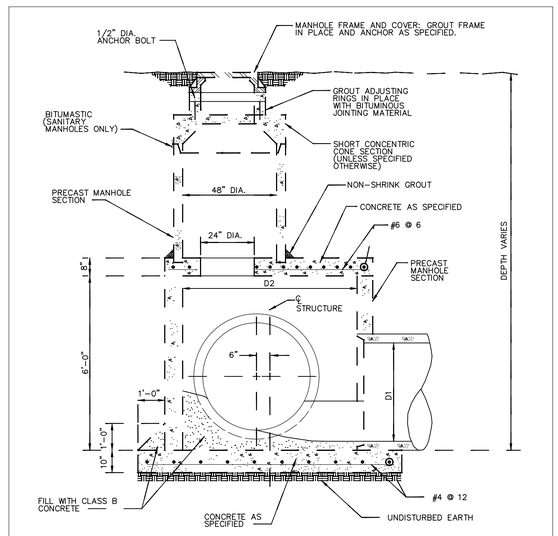
ISSUANCE DIRECTOR | DESIGN METHODS ENGINEER

MISCELLANEOUS PIPE BEDDING

PSMUE 3010.105SW-01 1 OF 1



CLAY WATERSTOP AT FES
NOT TO SCALE

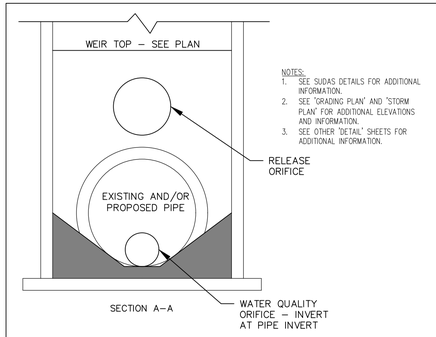


NOTES

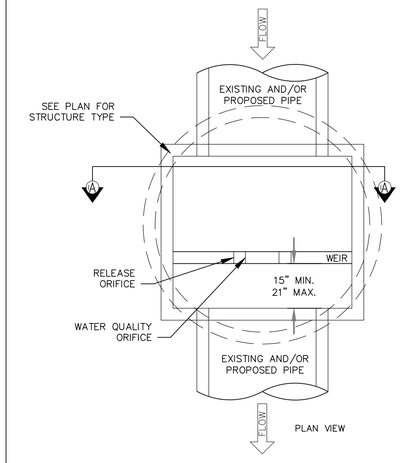
1. SLOPE CONCRETE FILL 1/4 D1 MINIMUM TO INVERT OF OUTLET PIPE.
2. FOR PIPES LARGER THAN 48" USE TEE SECTION MANHOLE. USE CURVED PIPE IF SEWER CHANGES DIRECTION.
3. PROVIDE MANHOLE STEPS FOR SANITARY MANHOLE ONLY, IF SPECIFIED.
4. SET MANHOLE COVER FLUSH WITH GROUND UNLESS SHOWN OR SPECIFIED OTHERWISE.
5. FOR SANITARY SEWERS, PROVIDE JOINT IN ALL PIPES WITHIN 2' OF MANHOLE WALL OR FLEXIBLE GASKET IN MANHOLE WALL.
6. IF JOINTS ARE PROVIDED FOR SANITARY SEWERS OR MANHOLE IS USED FOR STORM SEWER, GROUT PIPE IN BLOCKOUT WITH NON-SHRINK GROUT.
7. PROVIDE CHIMNEY SEAL ALL SANITARY MANHOLES.

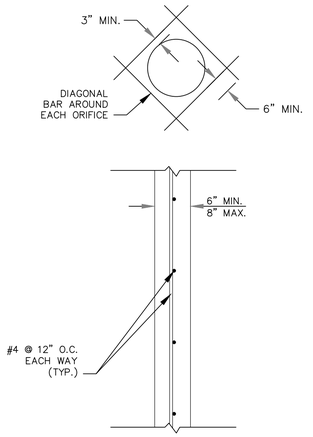
DIAMETER D2	MAXIMUM D1
60"	36"
66"	42"
78"	48"

CITY OF WAUKEE
SPECIAL MANHOLE
STD.DWG.NO.11

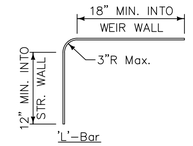


NOTES:
1. SEE SUDAS DETAILS FOR ADDITIONAL INFORMATION.
2. SEE "GRADING PLAN" AND "STORM PLAN" FOR ADDITIONAL ELEVATIONS AND INFORMATION.
3. SEE OTHER "DETAIL" SHEETS FOR ADDITIONAL INFORMATION.

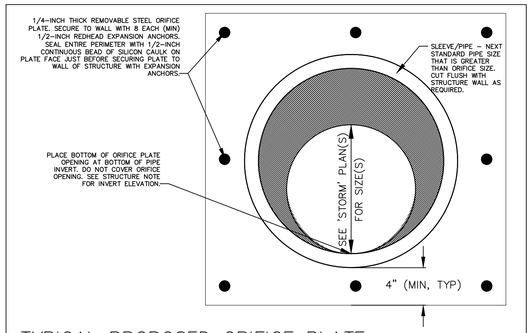




NOTES:
1. INSTALL FOUR (4) #4 DIAGONAL BARS AROUND EACH ORIFICE.
2. TIE WEIR WALL REINFORCING INTO STRUCTURE WALL.
   2.1. CAST-IN-PLACE STRUCTURE: ALTERNATE 'L'-BAR DIRECTION.
   2.2. PRECAST STRUCTURE: DRILL AND EPOXY MINIMUM ONE-HALF (½") INCH DIAMETER ANCHOR BOLTS AT EACH HORIZONTAL BAR LOCATION. EMBED TO AT LEAST ONE-HALF WALL THICKNESS PLUS THREE-QUARTERS (¾") INCH. EXTENSION INTO WEIR WALL OF AT LEAST SIX (6") INCHES FOR TYING ONTO HORIZONTAL BARS.



CONTROL STRUCTURE MANHOLE WITH ORIFICE AND WEIR ON EXISTING AND/OR PROPOSED PIPE
NOT TO SCALE



TYPICAL PROPOSED ORIFICE PLATE DETAIL AT BASIN(S)
NOT TO SCALE

RECORD DRAWING

90

GLYNN VILLAGE PLAT 10 - DETAILS 4

SCALE:	AS NOTED
DWG:	15-013-DTL-1.dwg
FIELD BOOK:	
LOCATION:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	90 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

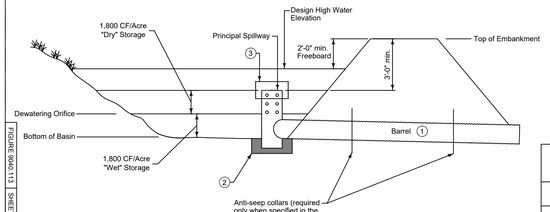
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:18:42 AM, PJV

WITH PLAT 8 TEMPORARY EMBANKMENT ON 'EAST/8E' BASIN

1. Barrel length and diameter as specified in the contract documents.
2. Riser pipe and base/dewatering device: See Figure 9040.115.
3. Anti-vortex device: See Figure 9040.116.



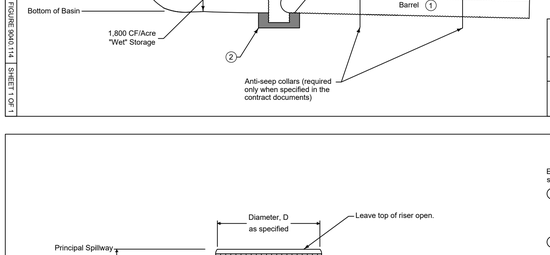
REVISION 2 10-21-14
9040.113
SHEET 1 of 1

SEDIMENT BASIN WITHOUT EMERGENCY SPILLWAY

FIGURE 9040.113 | SHEET 1 OF 1

AFTER REMOVAL OF PLAT 8 TEMPORARY EMBANKMENT ON 'EAST/8E' BASIN AND FOR 'BAILEY WEST' BASIN

1. Barrel length and diameter as specified in the contract documents.
2. Riser pipe and base/dewatering device: See Figure 9040.115.
3. Anti-vortex device: See Figure 9040.116.



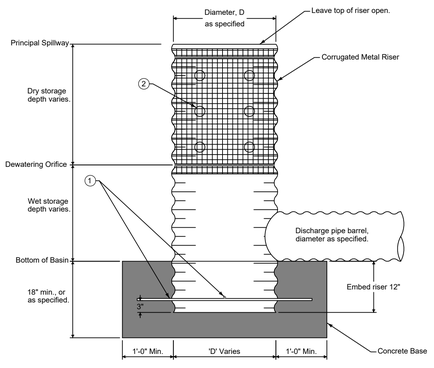
REVISION 2 10-21-14
9040.114
SHEET 1 of 1

SEDIMENT BASIN WITH EMERGENCY SPILLWAY

FIGURE 9040.114 | SHEET 1 OF 1

Elevations and dimensions not given are as specified in the contract documents.

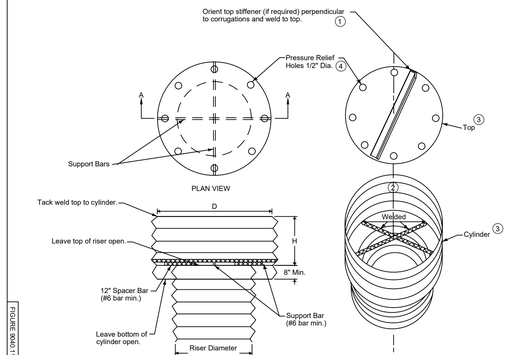
1. Drill four, 5/8 inch diameter holes, 3 inches from bottom of riser pipe and insert two, #4 bars in an "X" configuration. Length of bars = D+16 inches
2. Provide perforation configuration as specified in the contract documents.



REVISION 2 10-21-14
9040.115
SHEET 1 of 1

SEDIMENT BASIN DEWATERING DEVICE (PERFORATED RISER)

FIGURE 9040.115 | SHEET 1 OF 1



Alternate anti-vortex device configurations may be utilized upon approval of the Engineer.

1. See sheet 2 for dimensions of cylinder support bars, top plate, and top stiffener.
2. Firmly attach the anti-vortex cylinder to the top of the riser by welding or other means.
3. Corrugated metal or 1/8 inch steel plate cylinder and top.
4. Pressure relief holes may be omitted if ends of corrugations are left fully open when the top is attached.

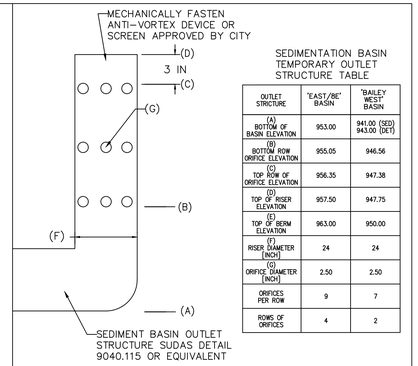
RISER	CYLINDER				MINIMUM TOP	
Diameter (in.)	Diameter (in.)	Thickness (gage)	Height (H) (in.)	Minimum Size Support Bar	Thickness	Stiffener
12	18	16	6	#6 rebar or 1 1/2" X 3/16" angle	16 ga F & C	----
15	21	16	7	#6 rebar or 1 1/2" X 3/16" angle	16 ga F & C	----
18	27	16	8	#6 rebar or 1 1/2" X 3/16" angle	16 ga F & C	----
21	30	16	11	#6 rebar or 1 1/2" X 3/16" angle	16 ga (C), 14 ga (F)	----
24	36	16	13	#6 rebar or 1 1/2" X 3/16" angle	16 ga (C), 14 ga (F)	----
27	42	16	15	#6 rebar or 1 1/2" X 3/16" angle	16 ga (C), 14 ga (F)	----
36	54	16	17	#8 rebar	14 ga (C), 12 ga (F)	----
42	60	16	19	#8 rebar	14 ga (C), 12 ga (F)	----
48	72	16	21	1 1/4" pipe or 1 1/4" X 1 1/4" X 1/4" angle	14 ga (C), 10 ga (F)	----
54	78	16	25	1 1/4" pipe or 1 1/4" X 1 1/4" X 1/4" angle	14 ga (C), 10 ga (F)	----
60	90	14	29	1 1/2" pipe or 1 1/2" X 1 1/2" X 1/4" angle	12 ga (C), 8 ga (F)	----
66	96	14	33	2" pipe or 2" X 2" X 1/4" angle	12 ga (C), 8 ga (F)	2" X 2" X 1/4" angle
72	102	14	36	2" pipe or 2" X 2" X 1/4" angle	12 ga (C), 8 ga (F)	2 1/2" X 2 1/2" X 1/4" angle
78	114	14	39	2 1/2" pipe or 2" X 2" X 1/4" angle	12 ga (C), 8 ga (F)	2 1/2" X 2 1/2" X 1/4" angle
84	120	12	42	2 1/2" pipe or 2" X 2" X 1/4" angle	12 ga (C), 8 ga (F)	2 1/2" X 2 1/2" X 5/16" angle

Notes:
1. The criterion for sizing the cylinder is that the area between the inside of the cylinder and the outside of the riser is equal to or greater than the area inside the riser. Therefore, the above table is invalid for use with concrete pipe risers.
2. C - Corrugated F - Flat.

REVISION 0 10-21-14
9040.116
SHEET 2 of 2

ANTI-VORTEX DEVICE

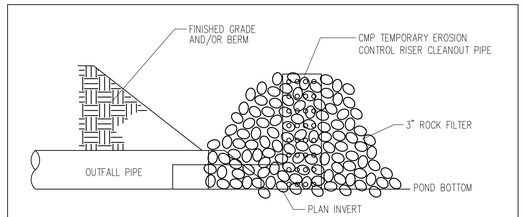
FIGURE 9040.116 | SHEET 2 OF 2



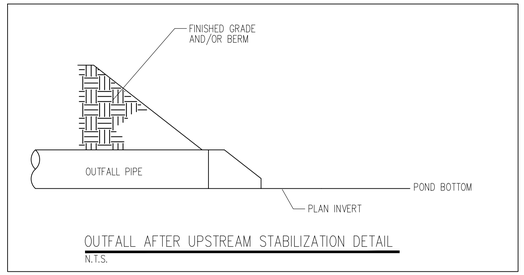
SEDIMENTATION BASIN TEMPORARY OUTLET STRUCTURE TABLE

OUTLET STRICTURE	'EAST/8E' BASIN	'BAILEY WEST' BASIN
(A) BOTTOM OF BASIN ELEVATION	953.00	941.00 (SED) 943.00 (DET)
(B) BOTTOM ROW ORIFICE ELEVATION	955.05	946.56
(C) TOP ROW OF ORIFICE ELEVATION	956.35	947.38
(D) TOP OF RISER ELEVATION	957.50	947.75
(E) TOP OF BERM ELEVATION	963.00	950.00
(F) RISER DIAMETER (INCH)	24	24
(G) ORIFICE DIAMETER (INCH)	2.50	2.50
ORIFICES PER ROW	9	7
ROWS OF ORIFICES	4	2

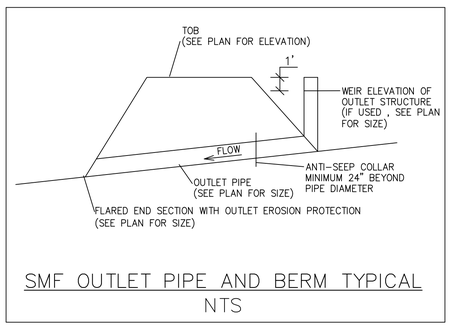
TYPICAL CMP TEMPORARY EROSION CONTROL RISER CLEANOUT PIPE
NOT TO SCALE



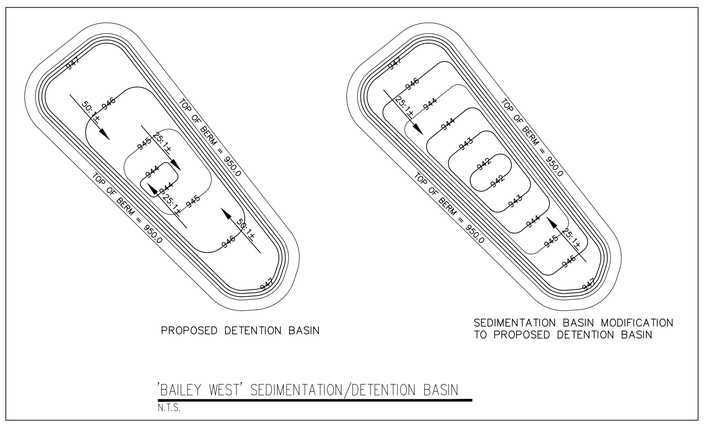
OUTFALL TEMPORARY SILTATION DETAIL
N.T.S.



OUTFALL AFTER UPSTREAM STABILIZATION DETAIL
N.T.S.



SMF OUTLET PIPE AND BERM TYPICAL
NTS



'BAILEY WEST' SEDIMENTATION/DETENTION BASIN
N.T.S.

GLYNN VILLAGE PLAT 10 - DETAILS 5

SCALE:	AS NOTED
DWG:	15-013-DTL-1.dwg
FIELD BOOK:	
DESIGNED BY:	JRK
CHECKED BY:	DJS
SHEET	91 OF 100
DRAWN BY:	PJV
DATE:	02/24/2016
FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

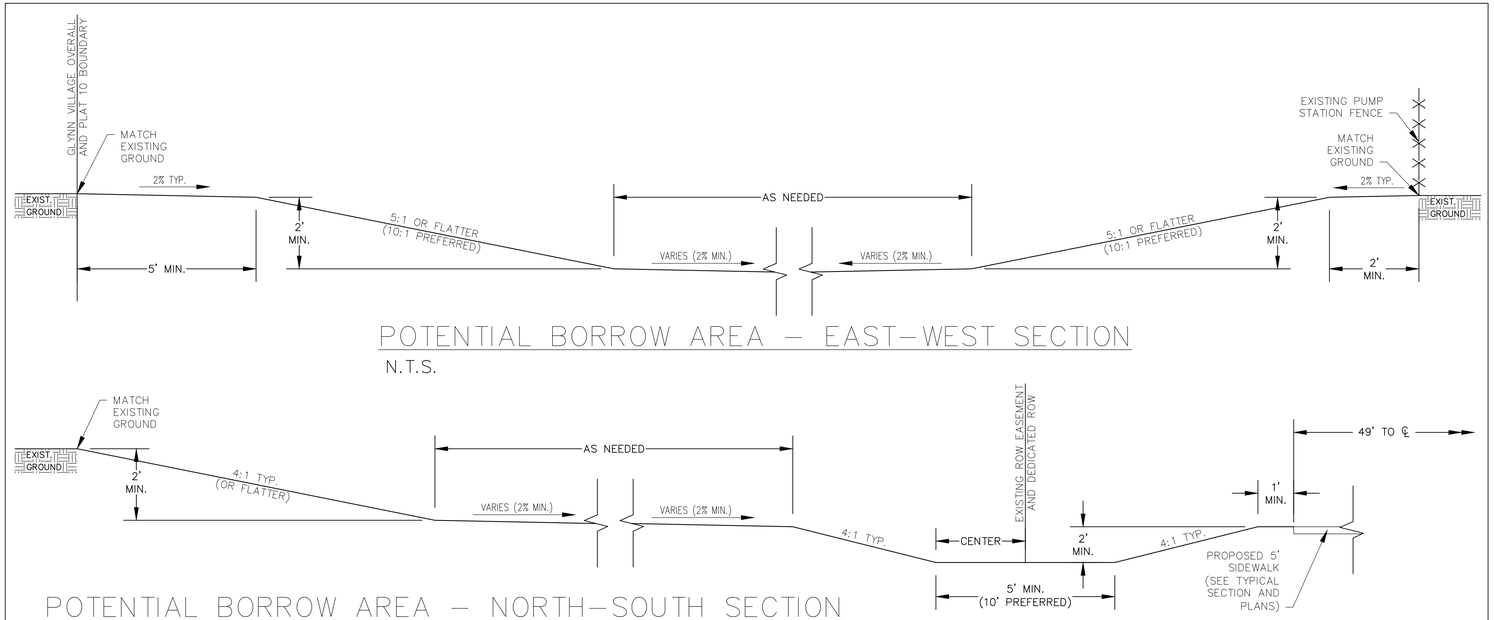
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

RECORD DRAWING

91

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:18:47 AM, PJV

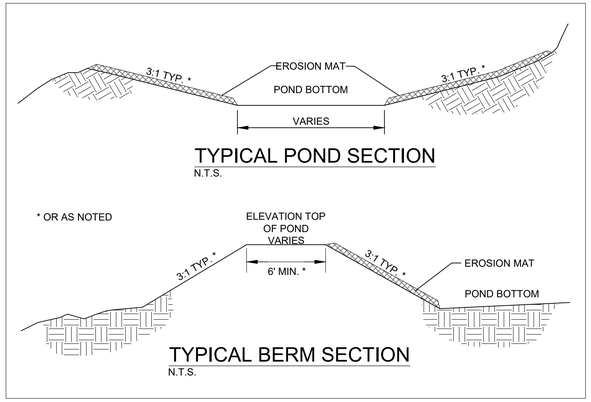


POTENTIAL BORROW AREA – EAST–WEST SECTION

N.T.S.

POTENTIAL BORROW AREA – NORTH–SOUTH SECTION

N.T.S.

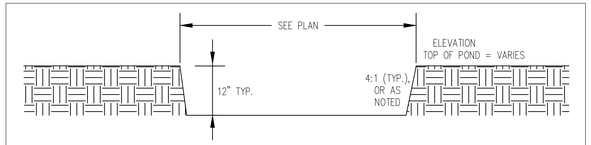


TYPICAL POND SECTION

N.T.S.

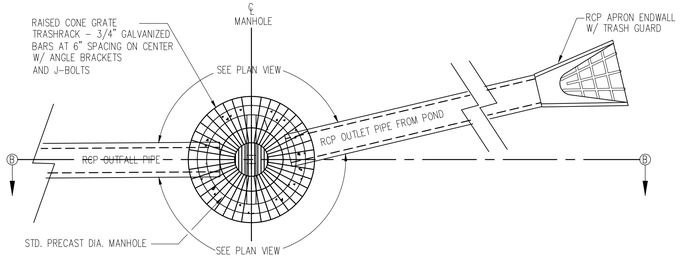
TYPICAL BERM SECTION

N.T.S.



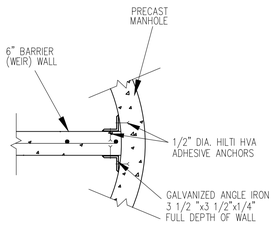
EMERGENCY OVERFLOW/CROSS FLOW WEIR SECTION

N.T.S.



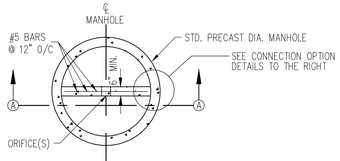
OUTLET STRUCTURE

N.T.S.



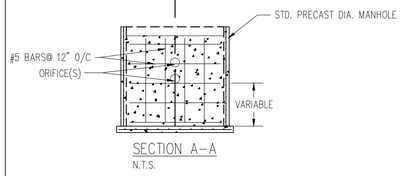
CONNECTION OPTION A

N.T.S.



PLAN VIEW

N.T.S.

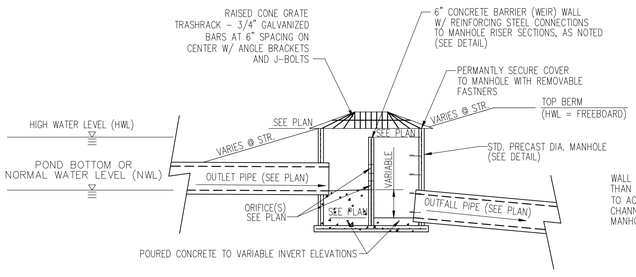


SECTION A–A

N.T.S.

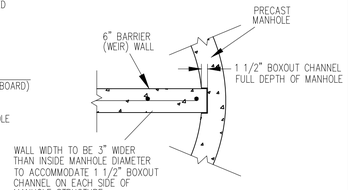
REINFORCED CONCRETE BARRIER (WIER) WALL STRUCTURAL DETAIL

N.T.S.



SECTION B–B

N.T.S.



CONNECTION OPTION B

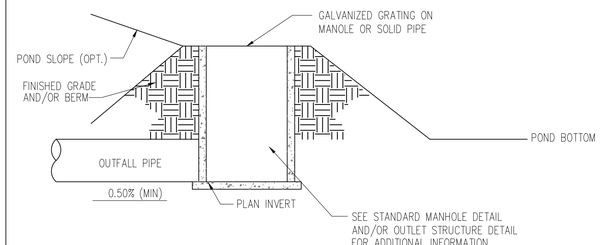
N.T.S.

TYPICAL DETENTION BASIN OUTLET CONTROL STRUCTURE

N.T.S.

NOTES:

1. PERMANENTLY SECURE COVER TO MANHOLE AND/OR RISER WITH REMOVABLE FASTENERS.
2. USE 1/4" MINIMUM BAR STOCK WITH ON–CENTER SPACINGS OF APPROXIMATELY 4" AND 1 1/4".
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR GALVANIZED GRATING.



RISER PIPE DETAIL

N.T.S.

RECORD DRAWING

92

GLYNN VILLAGE PLAT 10 - DETAILS 6

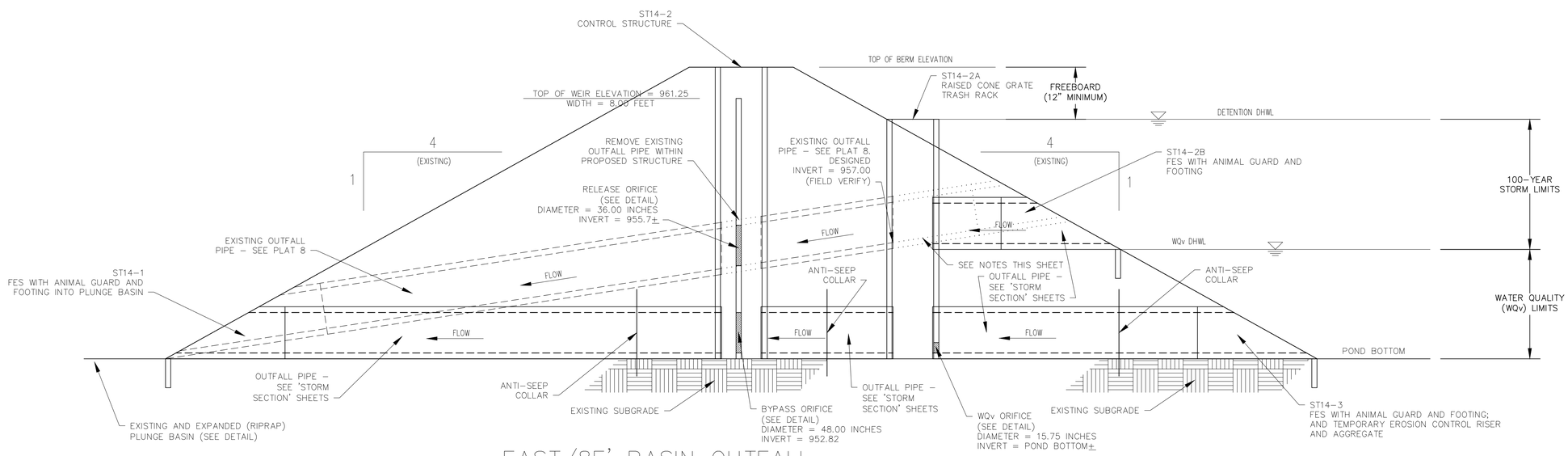
SCALE:	AS NOTED	DESIGNED BY:	JRK
DWG:	15-013-DTL-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	92 OF 100
LOCATION:		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:18:52 AM, PJV

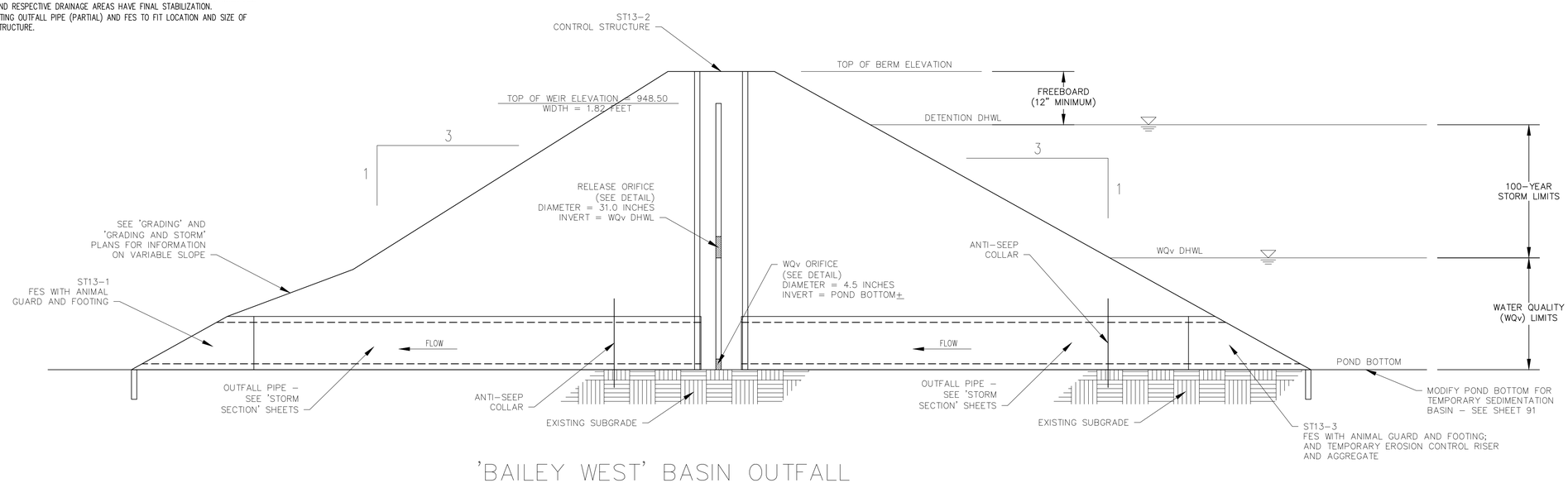


EAST/8E' BASIN OUTFALL

N.T.S.

NOTES:

1. SEE 'GRADING AND STORM' PLAN SHEETS FOR ADDITIONAL INFORMATION.
2. SEE 'STORM SECTION' PLAN SHEETS FOR ADDITIONAL INFORMATION ON PIPE AND STRUCTURE SIZING.
3. SEE 'DETAIL' SHEET 91 FOR ADDITIONAL INFORMATION ON TEMPORARY EROSION CONTROL RISER AND TEMPORARY SEDIMENTATION BASIN.
4. SEE NOTED DETAILS AND OTHER DETAILS FOR ADDITIONAL INFORMATION.
5. 100-YEAR STORM (DETENTION) VOLUME IS VOLUME ABOVE THE WQv VOLUME.
6. TEMPORARY EROSION CONTROL RISER AND AGGREGATE SHALL BE REMOVED WHEN ALL UPSTREAM AND RESPECTIVE DRAINAGE AREAS HAVE FINAL STABILIZATION.
7. REMOVE EXISTING OUTFALL PIPE (PARTIAL) AND FES TO FIT LOCATION AND SIZE OF PROPOSED STRUCTURE.



'BAILEY WEST' BASIN OUTFALL

N.T.S.

RECORD DRAWING 93

GLYNN VILLAGE PLAT 10 - DETAILS 7

NO.	REVISION	DATE	BY	FOR:

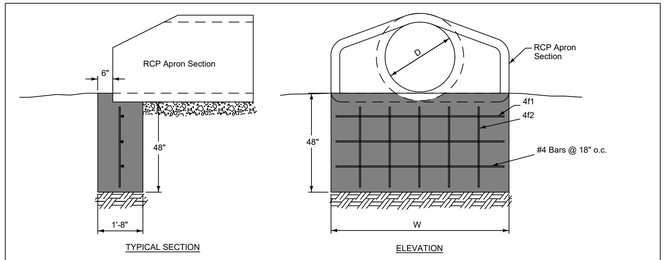
LOCATION:

SCALE:	AS NOTED	DESIGNED BY:	JRK
DWG:	15-013-DTL-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	93 OF 100
DRAWN BY:	PJV		
DATE:	02/24/2016		
FILE NO.:	15-013		

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:18:57 AM, PJV



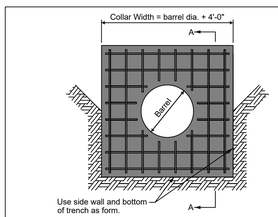
REINFORCING BAR LIST

D	W	Mark	Size	Length	Count
12"	2'-4"	4f1	4	2'-0"	3
		4f2	4	3'-8"	2
15"	2'-10 ½"	4f1	4	2'-6 ½"	3
		4f2	4	3'-8"	2
18"	3'-5"	4f1	4	3'-1"	3
		4f2	4	3'-8"	3
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
48"	7'-10"	4f1	4	7'-6"	3
		4f2	4	3'-8"	6
54"	8'-5"	4f1	4	8'-1"	3
		4f2	4	3'-8"	6
60"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
66"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
72"	10'-0"	4f1	4	9'-8"	3
		4f2	4	3'-8"	7
78"	10'-7"	4f1	4	10'-3"	3
		4f2	4	3'-8"	7
84"	11'-1"	4f1	4	10'-9"	3
		4f2	4	3'-8"	8

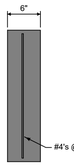
FIGURE 4030.221 | SHEET 1 OF 1

REVISION	
1	10-21-14
4030.221	
SHEET 1 of 1	

RCP APRON SECTION FOOTING

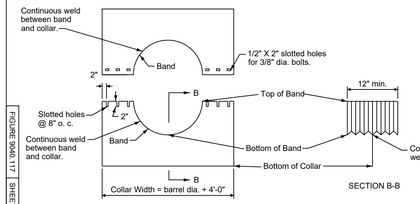


CONCRETE COLLAR



SECTION A-A

Anti-seep collars are not required unless specified in the contract documents.



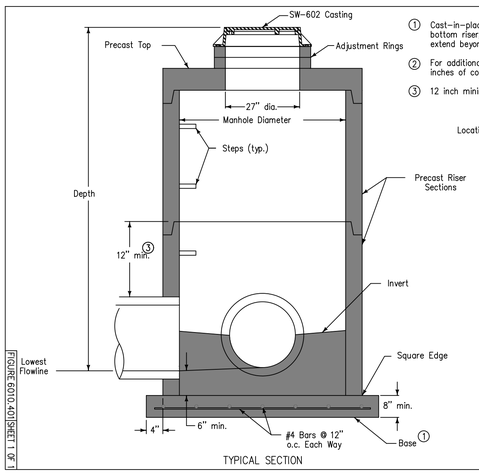
SECTION B-B

CMP COLLAR

FIGURE 9040.117 | SHEET 1 OF 1

REVISION	
2	10-21-14
9040.117	
SHEET 1 of 1	

ANTI-SEEP COLLAR

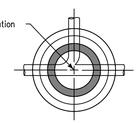


TYPICAL SECTION

① Cast-in-place base shown. If base is precast integral with bottom riser, the footprint of the base is not required to extend beyond the outer edge of the riser.

② For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.

③ 12 inch minimum riser height above all pipe openings.



PLAN

Manhole Diameter (inches)	Maximum Pipe Diameter ② (inches) for 2 Pipes At 180° Separation	At 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

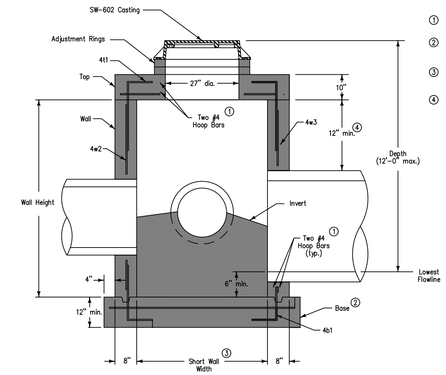
FIGURE 6010.401 | SHEET 1 OF 1

SUDAS	Iowa Department of Transportation	REVISION
		NEW 04-21-09
FIGURE 6010.401	STANDARD ROAD PLAN	SW-401
		SHEET 1 of 1

REVISIONS: New. Replaces SUDAS Type "M-A" Manhole. Will replace RA-50.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

CIRCULAR STORM SEWER MANHOLE



TYPICAL SECTION

Adjacent walls may have different widths based upon pipe configuration, but structure must be rectangular.

① Provide two #4 hoop bars at top opening and at all pipe openings.

② Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.

③ Wall widths vary with pipe diameter and range from 4 feet minimum to 9 feet maximum. Provide 12 inches of wall width (minimum) each side of pipe opening.

④ 12 inch minimum wall height above all pipes.

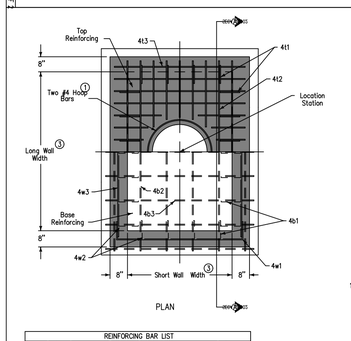
FIGURE 6010.403 | SHEET 1 OF 2

SUDAS	Iowa Department of Transportation	REVISION
		NEW 04-21-09
FIGURE 6010.403	STANDARD ROAD PLAN	SW-403
		SHEET 1 of 2

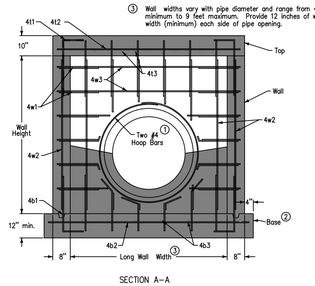
REVISIONS: New _Replaces_SUDAS_Type_"M-C"_Manhole.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

DEEP WELL RECTANGULAR STORM SEWER MANHOLE



PLAN



SECTION A-A

① Provide two #4 hoop bars at top opening and at all pipe openings.

② Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of walls.

③ Wall widths vary with pipe diameter and range from 4 feet minimum to 9 feet maximum. Provide 12 inches of wall width (minimum) each side of pipe opening.

REINFORCING BAR LIST					
Mark	Size	Location	Shape	Length	Spacing
4f1	4	Top	⌐¬	36"	12"
4f2	4	Top	—	Long Wall plus 12"	6"
4f3	4	Top	—	Short Wall plus 12"	6"
4b1	4	Base	⌊_⌋	36"	12"
4b2	4	Base	—	Long Wall plus 18"	12"
4b3	4	Base	—	Short Wall plus 18"	12"
4w1	4	Walls	⌐¬	Short Wall plus 48"	12"
4w2	4	Walls	—	Wall Height minus 4"	12"
4w3	4	Walls	—	Long Wall plus 12"	12"

BENT BARS

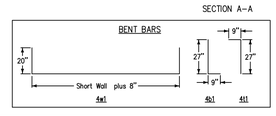


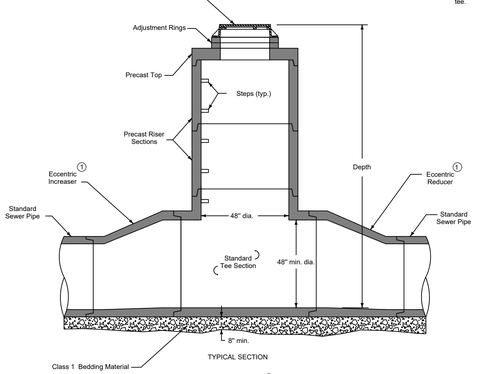
FIGURE 6010.405 | SHEET 1 OF 2

SUDAS	Iowa Department of Transportation	REVISION
		NEW 04-21-09
FIGURE 6010.403	STANDARD ROAD PLAN	SW-403
		SHEET 2 of 2

REVISIONS: New _Replaces_SUDAS_Type_"M-C"_Manhole.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

DEEP WELL RECTANGULAR STORM SEWER MANHOLE



TYPICAL SECTION

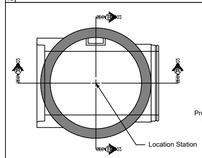
① For sewer pipes less than 48 inch diameter, install eccentric reducers/increasers with a standard tee or utilize a composite tee.

STANDARD TEE

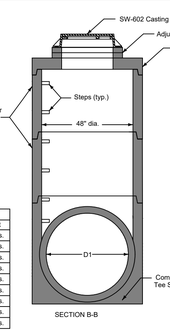
FIGURE 6010.405 | SHEET 1 OF 2

REVISION	
1	10-21-14
SW-405	
SHEET 1 of 2	

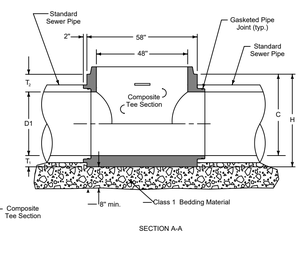
TEE-SECTION
STORM SECTION MANHOLE



PLAN



SECTION B-B



SECTION A-A

COMPOSITE TEE DIMENSIONS						
Size	D1	H	T_1	T_2	C	Weight
48" on 12"	12"	50"	8½"	29½"	41½"	5600 lbs.
48" on 15"	15"	50"	7"	28"	43"	5400 lbs.
48" on 18"	18"	50"	5½"	26½"	44½"	5200 lbs.
48" on 21"	21"	48"	9½"	17½"	38½"	5800 lbs.
48" on 24"	24"	48"	8"	16"	40"	5600 lbs.
48" on 27"	27"	48"	9½"	11½"	39½"	5900 lbs.
48" on 30"	30"	48"	8"	10"	40"	5300 lbs.
48" on 33"	33"	54"	9½"	11½"	44½"	6600 lbs.
48" on 36"	36"	54"	8"	10"	46"	6100 lbs.

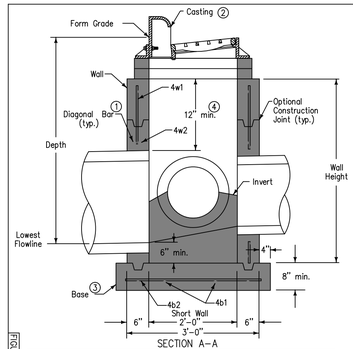
COMPOSITE TEE

Alternate to standard tee with eccentric reducer (for pipes 36" and smaller).

FIGURE 6010.405 | SHEET 2 OF 2

REVISION	
1	10-21-14
SW-405	
SHEET 2 of 2	

TEE-SECTION
STORM SECTION MANHOLE



SECTION A-A

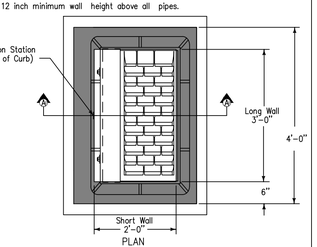
Refer to SW-514 for boxout details.

① Install four #4 diagonal bars at all pipe openings.

② SW-603 Type R unless Type Q is specified in the contract documents.

③ Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.

④ 12 inch minimum wall height above all pipes.



PLAN

REINFORCING BAR LIST						
Mark	Size	Location	Shape	Length	Count	Spacing
4w1	4	Walls	———	Wall Height minus 4"	14	12"
4w2	4	Long Walls	———	3'-8"	Varies	12"
4w3	4	Short Walls	———	2'-8"	Varies	12"
4b1	4	Base	———	4'-2"	4	10"
4b2	4	Base	———	3'-2"	5	10"

MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	24"	30"

FIGURE 6010.501 | SHEET 1 OF 1

SUDAS	Iowa Department of Transportation	REVISION
		1 10-16-12
FIGURE 6010.501	STANDARD ROAD PLAN	SW-501
		SHEET 1 of 1

REVISIONS: Added reference to SW-514.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

SINGLE GRATE INTAKE

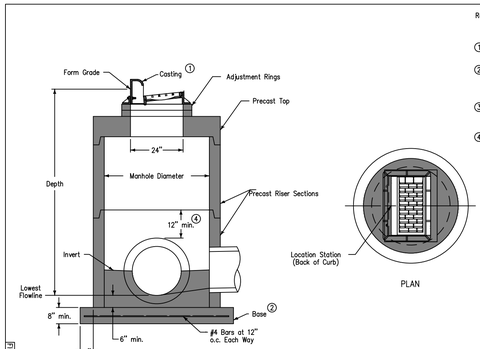
Refer to SW-514 for boxout details.

① SW-603 Type R unless Type Q is specified in the contract documents.

② Cast-in-place base shown. Base may be square. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.

③ For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.

④ 12 inch minimum riser height above all pipes.



TYPICAL SECTION

PLAN

Manhole Diameter (inches)	Maximum Pipe Diameter ③ (inches) for 2 Pipes at 180° Separation	at 90° Separation
48	24	18
60	36	24
72	42	30
84	48	36
96	60	42

FIGURE 6010.502 | SHEET 1 OF 1

SUDAS	Iowa Department of Transportation	REVISION
		1 10-16-12
FIGURE 6010.502	STANDARD ROAD PLAN	SW-502
		SHEET 1 of 1

REVISIONS: Added reference to SW-514.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

CIRCULAR SINGLE GRATE INTAKE

RECORD DRAWING 94

GLYNN VILLAGE PLAT 10 - DETAILS 8

NO.	REVISION	DATE	BY

FOR:

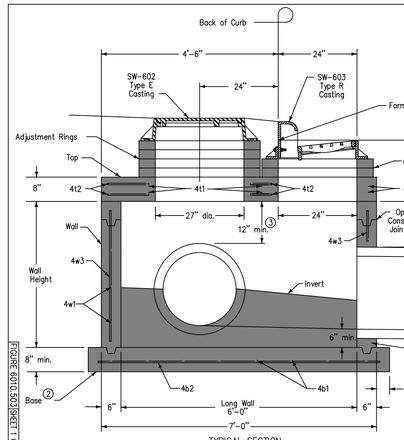
LOCATION:

SCALE:	AS NOTED	DESIGNED BY:	JRK
DWG:	15-013-DTL-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	94 OF 100
		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

FRG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:19:02 AM, PJV



TYPICAL SECTION

Refer to SW-514 for boxout details.

1. Install four #4 diagonal bars at manhole opening and at all pipe openings.
2. Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
3. 12 inch minimum wall height above all pipes.

FIGURE 6010.503 SHEET 1 OF 2

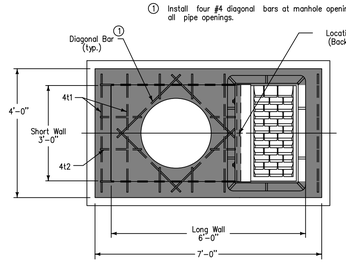
SUDAS | Iowa Department of Transportation | REVISION 1 10-16-12

FIGURE 6010.503 STANDARD ROAD PLAN | SW-503 | SHEET 1 of 2

REVISIONS: Added reference to SW-514.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

SINGLE GRATE INTAKE WITH MANHOLE



PLAN

REINFORCING BAR LIST						
Mark	Size	Location	Shape	Count	Length	Spacing
4t1	4	Top	——	12	3'-8"	12"
4t2	4	Top	——	8	4'-2"	12"
4b1	4	Base	——	7	4'-2"	13"
4b2	4	Base	——	5	7'-2"	10"
4w1	4	Short Walls	——	Varies	3'-8"	12"
4w2	4	Long Walls	——	Varies	6'-8"	12"
4w3	4	Walls	——	18	Wall Height minus 4"	13"

MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	24"	30"
Long Wall	30"	36"

FIGURE 6010.503 SHEET 2 OF 2

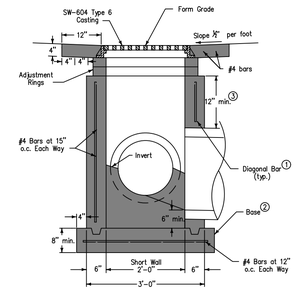
SUDAS | Iowa Department of Transportation | REVISION 1 10-16-12

FIGURE 6010.503 STANDARD ROAD PLAN | SW-503 | SHEET 2 of 2

REVISIONS: Added reference to SW-514.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

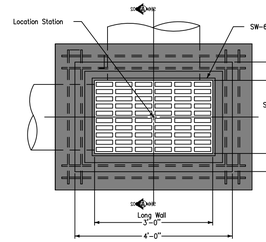
SINGLE GRATE INTAKE WITH MANHOLE



SECTION A–A

MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	24"	30"

1. Install four #4 diagonal bars at all pipe openings.
2. Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
3. 12 inch minimum wall height above all pipes.



PLAN

FIGURE 6010.511 SHEET 1 OF 1

SUDAS | Iowa Department of Transportation | REVISION NEW 04-21-20

FIGURE 6010.511 STANDARD ROAD PLAN | SW-511 | SHEET 1 of 1

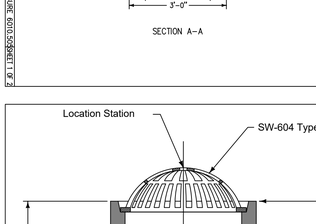
REVISIONS: New. Replaces SUDAS Area Type "M-H" Intake.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

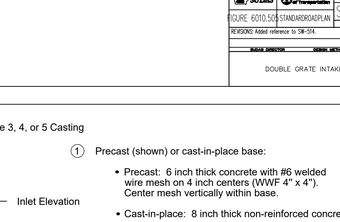
RECTANGULAR AREA INTAKE

Refer to SW-514 for boxout details.

1. Install four #4 diagonal bars at all pipe openings.
2. Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
3. 12 inch minimum wall height above all pipes.



SECTION A–A



PLAN

FIGURE 6010.505 SHEET 1 OF 2

SUDAS | Iowa Department of Transportation | REVISION 1 10-16-12

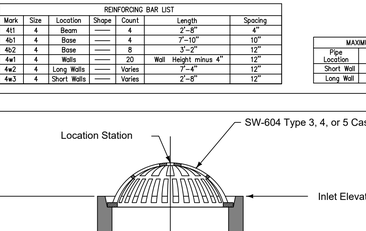
FIGURE 6010.505 STANDARD ROAD PLAN | SW-505 | SHEET 1 of 2

REVISIONS: Added reference to SW-514.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

DOUBLE GRATE INTAKE

1. Install four #4 diagonal bars at all pipe openings.
2. Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
3. 12 inch minimum wall height above all pipes.



TYPICAL SECTION

REINFORCING BAR LIST						
Mark	Size	Location	Shape	Count	Length	Spacing
4t1	4	Beam	——	4	2'-8"	4"
4b1	4	Base	——	4	7'-10"	10"
4b2	4	Base	——	8	3'-2"	12"
4w1	4	Walls	——	20	Wall Height minus 4"	12"
4w2	4	Long Walls	——	Varies	7'-4"	12"
4w3	4	Short Walls	——	Varies	2'-8"	12"

MAXIMUM PIPE DIAMETERS		
Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	60"	66"

FIGURE 6010.505 SHEET 2 OF 2

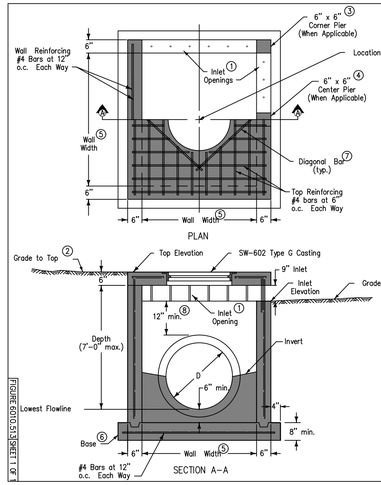
SUDAS | Iowa Department of Transportation | REVISION 1 10-16-12

FIGURE 6010.505 STANDARD ROAD PLAN | SW-505 | SHEET 2 of 2

REVISIONS: Added reference to SW-514.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

DOUBLE GRATE INTAKE

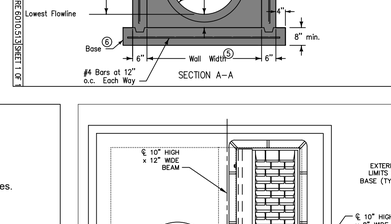


PLAN

Structure may be built with openings on any or all sides. Provide openings and orientation as specified in the contract documents.

Adjacent walls may have different widths based upon pipe configuration, but structure must be rectangular.

1. 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.
2. Grade to inlet elevation on open sides. Grade to top elevation on closed sides.
3. Corner pier required between openings of two adjacent walls. Extend wall reinforcing vertically through pier. Install one additional 15–inch #4 bar in pier.
4. Center pier required at center of any inlet opening with length of 5 feet or greater. Extend wall reinforcing vertically through pier. Install one additional 15–inch #4 bar in pier.
5. 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.
6. 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.
7. Install four #4 diagonal bars at all pipe openings.
8. 12" minimum wall height above all pipes.



SECTION A–A

FIGURE 6010.513 SHEET 1 OF 1

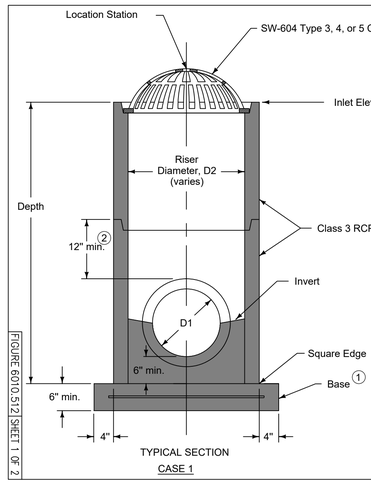
SUDAS | Iowa Department of Transportation | REVISION NEW 04-21-20

FIGURE 6010.513 STANDARD ROAD PLAN | SW-513 | SHEET 1 of 1

REVISIONS: New. Replaces SUDAS Area Type "M-G" Intake.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

OPEN–SIDED AREA INTAKE



TYPICAL SECTION

CASE 1

1. Precast (shown) or cast-in-place base:
   - Precast: 6 inch thick concrete with #6 welded wire mesh on 4 inch centers (WWF 4" x 4"). Center mesh vertically within base.
   - Cast-in-place: 8 inch thick non-reinforced concrete.
2. 12 inch minimum riser height above all pipes.

INTAKE SIZE - CASE 1	
Outlet Pipe Diameter, D1	Minimum Riser Diameter, D2
12"	18"
15"	24"
18"	24"
21"	30"
24"	30"
27"	36"

FIGURE 6010.512 SHEET 1 OF 2

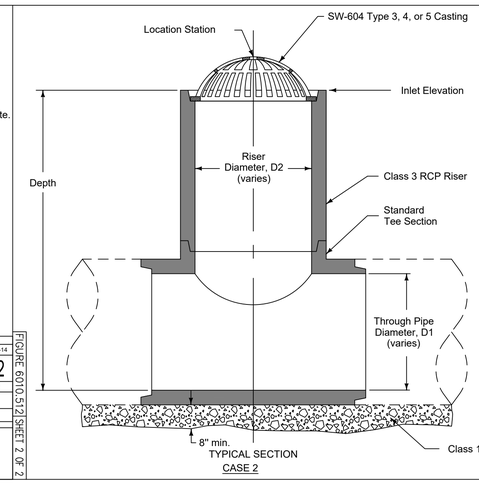
REVISION 2 10-21-14

FIGURE 6010.512 STANDARD ROAD PLAN | SW-512 | SHEET 1 of 2

REVISIONS: Deleted the flow arrow on sheet 2.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

CIRCULAR AREA INTAKE



TYPICAL SECTION

CASE 2

3. Minimum riser diameter is 18 inches.

INTAKE SIZE - CASE 2	
Through Pipe Diameter, D1	Maximum 3 Riser Diameter, D2
18"	18"
21"	18"
24"	24"
27"	24"
30"	30"
36" or more	36"

FIGURE 6010.512 SHEET 2 OF 2

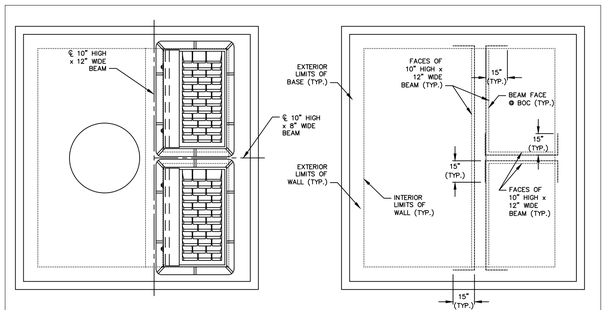
REVISION 2 10-21-14

FIGURE 6010.512 STANDARD ROAD PLAN | SW-512 | SHEET 2 of 2

REVISIONS: Deleted the flow arrow on sheet 2.

SUDAS DIRECTOR | DESIGN METHODS ENGINEER

CIRCULAR AREA INTAKE



NOTES:
1. CONSTRUCT SIMILAR TO SW–503, EXCEPT FOR BEAMS.
2. REINFORCING STEEL IN BEAM CORNERS – 4–#8 BARS @ TWO (2") INCHES FROM EACH FACE.

DOUBLE GRATE INTAKE WITH MANHOLE

N.T.S.

RECORD DRAWING 95

GLYNN VILLAGE PLAT 10 - DETAILS 9

NO.	REVISION	DATE	BY	FOR:

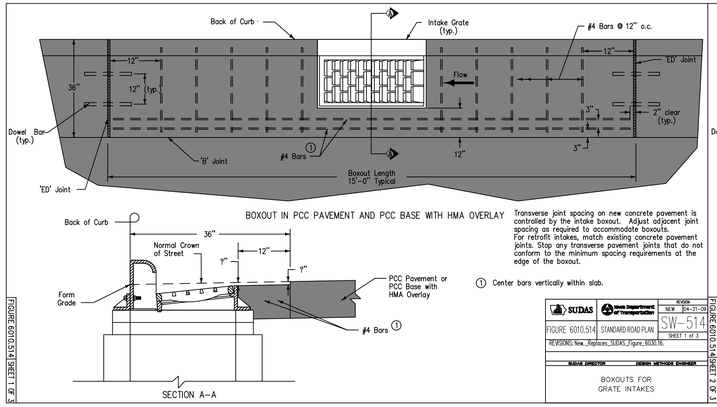
LOCATION:

SCALE: AS NOTED | DESIGNED BY: JRK | DRAWN BY: PJV
DWG: 15-013-DTL-1.dwg | CHECKED BY: DJS | DATE: 02/24/2016
FIELD BOOK: | SHEET 95 OF 100 | FILE NO.: 15-013

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:19:07 AM, PJV



BOXOUT IN PCC PAVEMENT AND PCC BASE WITH HMA OVERLAY

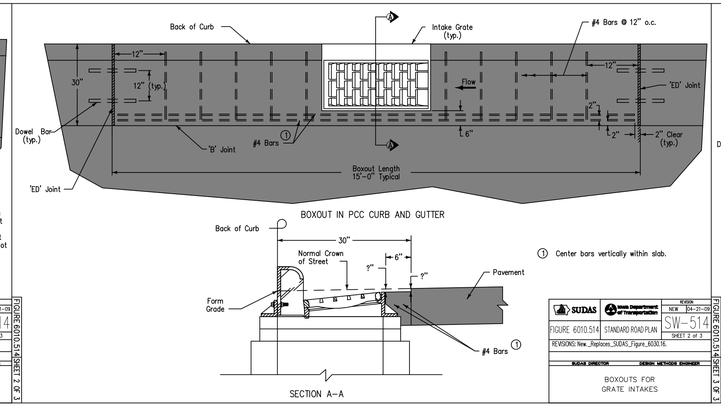
Transverse joint spacing on new concrete pavement is controlled by the intake boxout. Adjust adjacent joint spacing as required to accommodate boxouts. For retrofit intakes, match existing concrete pavement joints. Stop any transverse pavement joints that do not conform to the minimum spacing requirements at the edge of the boxout.

① Center bars vertically within slab.

SUDAS	Iowa Department of Transportation	REVISION
FIGURE 6010.514	STANDARD ROAD PLAN	NEW 04-21-09
REVISIONS: New _Replaces_SUDAS_Figure_6030.16.		SW-514 SHEET 1 of 3
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

BOXOUTS FOR GRATE INTAKES

FIGURE 6010.514 SHEET 1 OF 3



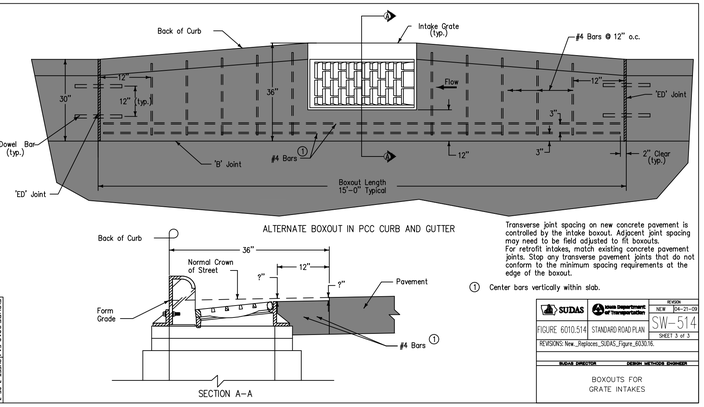
BOXOUT IN PCC CURB AND GUTTER

① Center bars vertically within slab.

SUDAS	Iowa Department of Transportation	REVISION
FIGURE 6010.514	STANDARD ROAD PLAN	NEW 04-21-09
REVISIONS: New _Replaces_SUDAS_Figure_6030.16.		SW-514 SHEET 2 of 3
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

BOXOUTS FOR GRATE INTAKES

FIGURE 6010.514 SHEET 2 OF 3



ALTERNATE BOXOUT IN PCC CURB AND GUTTER

Transverse joint spacing on new concrete pavement is controlled by the intake boxout. Adjacent joint spacing may need to be field adjusted to fit boxouts. For retrofit intakes, match existing concrete pavement joints. Stop any transverse pavement joints that do not conform to the minimum spacing requirements at the edge of the boxout.

① Center bars vertically within slab.

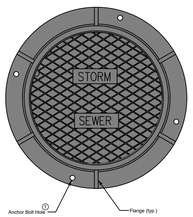
SUDAS	Iowa Department of Transportation	REVISION
FIGURE 6010.514	STANDARD ROAD PLAN	NEW 04-21-09
REVISIONS: New _Replaces_SUDAS_Figure_6030.16.		SW-514 SHEET 3 of 3
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

BOXOUTS FOR GRATE INTAKES

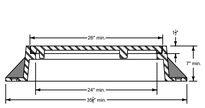
FIGURE 6010.514 SHEET 3 OF 3

TYPE E

Two-piece fixed casting



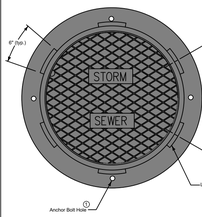
PLAN



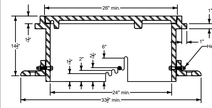
TYPICAL SECTION

TYPE F

Three-piece floating casting



PLAN



TYPICAL SECTION

Frame Notes:
Size and spacing of lugs and flanges may vary.

Cover Notes:
Roughness pattern and text styles may vary.
Minimum one concealed pickhole.

① When the contract documents require the frame to be attached to the structure, drill four 9/16" diameter holes or slots, equally spaced around frame.

② Set casting at proper grade using one of the adjustment slots. Remove bolts upon completion of paving.

		REVISION
FIGURE 6010.602	STANDARD ROAD PLAN	1 10-21-14
		SW-602 SHEET 1 of 2
REVISIONS: Changed dimensions on Type E and Type F castings. Added Type G casting.		
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

TEE-SECTION STORM SECTION MANHOLE

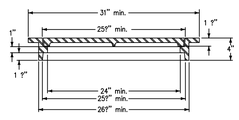
FIGURE 6010.602 SHEET 1 OF 2

TYPE G

Two-piece fixed casting



PLAN



TYPICAL SECTION

		REVISION
FIGURE 6010.602	STANDARD ROAD PLAN	1 10-21-14
		SW-602 SHEET 2 of 2
REVISIONS: Changed dimensions on Type E and Type F castings. Added Type G casting.		
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

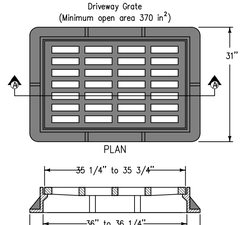
TEE-SECTION STORM SECTION MANHOLE

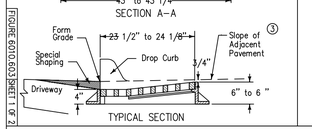
FIGURE 6010.602 SHEET 2 OF 2

TYPE O ①

Driveway Grate

(Minimum open area 370 in²)



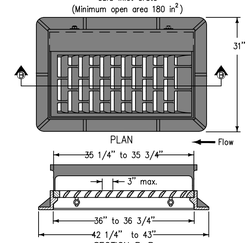


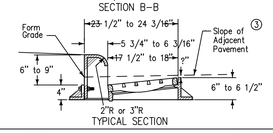
TYPICAL SECTION

TYPE R ②

Curb Inlet Grate

(Minimum open area 180 in²)





TYPICAL SECTION

① For use at curb drops for driveways. Use only when specified in the contract documents.

② Provide bicycle-safe vane-style grate. At low points, grates with vanes facing both directions of flow are allowed.

③ For details of boxout pavement, refer to SW-514.

		REVISION
FIGURE 6010.603	STANDARD ROAD PLAN	4 10-15-13
		SW-603 SHEET 1 of 2
REVISIONS: Changed dimensions on Type R drawings.		
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

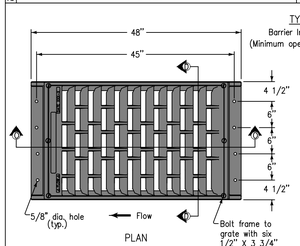
CASTINGS FOR GRATE INTAKES

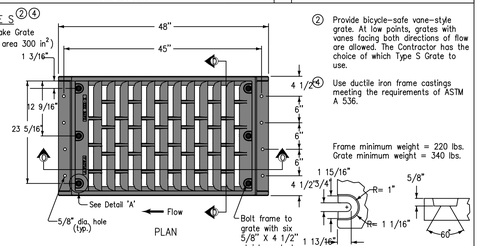
FIGURE 6010.603 SHEET 1 OF 2

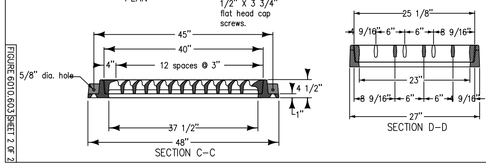
TYPE S ②④

Barrier Intake Grate

(Minimum open area 300 in²)







② Provide bicycle-safe vane-style grate. At low points, grates with vanes facing both directions of flow are allowed. The Contractor has the choice of which Type S Grate to use.

Use ductile iron frame castings meeting the requirements of ASTM A 536.

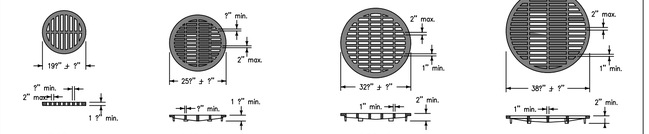
Frame minimum weight = 220 lbs.
Grate minimum weight = 340 lbs.

		REVISION
FIGURE 6010.603	STANDARD ROAD PLAN	4 10-15-13
		SW-603 SHEET 2 of 2
REVISIONS: Changed dimensions on Type R drawings.		
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

CASTINGS FOR GRATE INTAKES

FIGURE 6010.603 SHEET 2 OF 2

TYPE 4



TYPE 4A
For Placement on 18" RCP

TYPE 4B
For Placement on 24" RCP

TYPE 4C
For Placement on 30" RCP

TYPE 4D
For Placement on 36" RCP

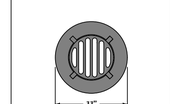
TYPE 3
(Light Duty)



TYPE 3A
For Placement on 18" RCP

TYPE 3B
For Placement on 24" RCP

TYPE 5
(Light Duty)
For Placement on 24" to 30" RCP

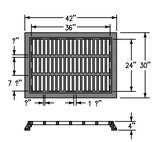


SUDAS	Iowa Department of Transportation	REVISION
FIGURE 6010.604	STANDARD ROAD PLAN	1 10-20-15
		SW-604 SHEET 1 of 2
REVISIONS: Added Type 9 Grate to sheet 2. Added shading.		
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

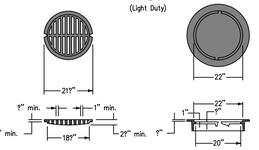
CASTINGS FOR AREA INTAKES

FIGURE 6010.604 SHEET 1 OF 2

TYPE 6



TYPE 9
(Light Duty)



GRATE ①
Minimum Weight = 85 lbs.

FRAME
Minimum Weight = 75 lbs.

① Cast grate without locking lugs so it may be used in an inverted position.

SUDAS	Iowa Department of Transportation	REVISION
FIGURE 6010.604	STANDARD ROAD PLAN	1 10-20-15
		SW-604 SHEET 2 of 2
REVISIONS: Added Type 9 Grate to sheet 2. Added shading.		
SUDAS DIRECTOR	DESIGN METHODS ENGINEER	

CASTINGS FOR AREA INTAKES

FIGURE 6010.604 SHEET 2 OF 2

GLYNN VILLAGE PLAT 10 - DETAILS 10

SCALE:	AS NOTED	DESIGNED BY:	JRK
DWG:	15-013-DTL-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	96 OF 100
LOCATION:		DRAWN BY:	PJV
		DATE:	02/24/2016
		FILE NO.:	15-013

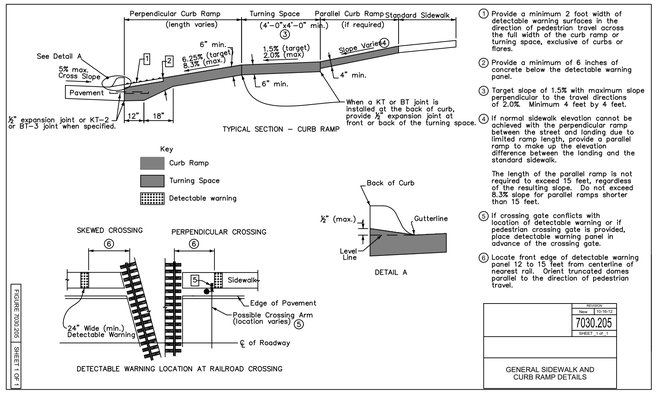
NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

RECORD DRAWING 96

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:19:12 AM, PJV



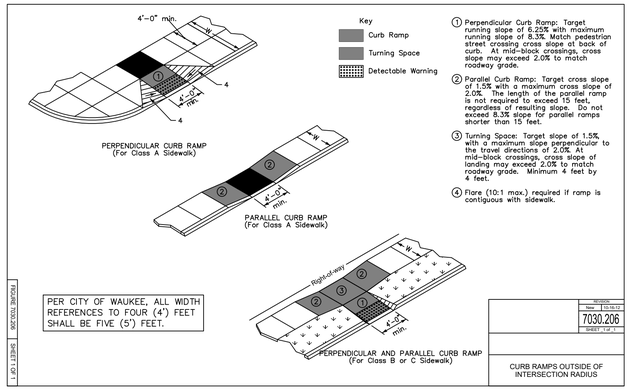
1. Provide a minimum 2 foot width of detectable warning surfaces in the direction of pedestrian travel across the full width of the curb ramp or turning space, exclusive of curbs or flares.
2. Provide a minimum of 6 inches of concrete below the detectable warning panel.
3. Target slope of 1.5% with maximum slope perpendicular to the travel directions of 2.0%. Minimum 4 feet by 4 feet.
4. 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 landing 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 ramps shorter than 15 feet.
5. If crossing gate conflicts with location of detectable warning or if pedestrian crossing gate is provided, place detectable warning panel in advance of the crossing gate.
6. Locate front edge of detectable warning panel 12 to 15 feet from centerline of nearest rail. Orient truncated domes parallel to the direction of pedestrian travel.

REVISION	
New	10-19-10
7030.205	
SHEET 1 OF 1	

GENERAL SIDEWALK AND CURB RAMP DETAILS

PSHEET 7030.205 SHEET 1 OF 1



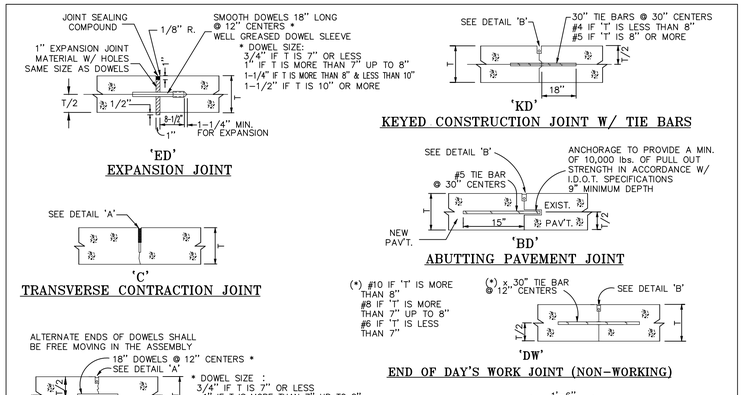
1. Perpendicular Curb Ramp: Target running slope of 6.25% with maximum running slope of 8.3%. Match pedestrian street crossing cross slope at back of curb. At mid-block crossings, cross slope may exceed 2.0% to match roadway grade.
2. Parallel Curb Ramp: Target cross slope of 1.5% with a maximum cross slope of 2.0%. The length of the parallel ramp is not required to exceed 15 feet, regardless of resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.
3. 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 roadway grade. Minimum 4 feet by 4 feet.
4. Flare (10:1 max.) required if ramp is contiguous with sidewalk.

PER CITY OF WAUKEE, ALL WIDTH REFERENCES TO FOUR (4') FEET SHALL BE FIVE (5') FEET.

REVISION	
New	10-19-10
7030.206	
SHEET 1 OF 1	

CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

PSHEET 7030.206 SHEET 1 OF 1

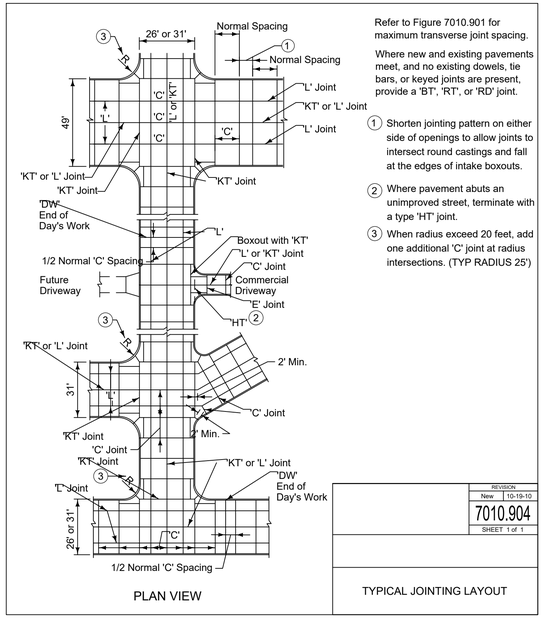


NOTE:

1. APPROVED DOWEL ASSEMBLIES SHALL BE USED FOR ALL 'ED' & 'CD' JOINT
2. ALL LOAD TRANSFER DEVICES AND TIE BARS SHALL BE POSITIONED ON CHAIRS AND SECURED AGAINST MOVEMENT WITH METAL STAKES DURING PLACING AND FINISHING OF CONCRETE.
3. ALL REINFORCING STEEL RODS, DOWELS OR TIE BARS USED IN THE PCC PAVING SHALL BE EPOXY-COATED.
4. BACKER ROD IS OPTIONAL OUTSIDE OF RIGHT-OF-WAY; CANNOT BE USED WITHIN LIMITS OF RIGHT-OF-WAY.

NON-REINFORCED CONCRETE PAVEMENT JOINTS

NOT TO SCALE



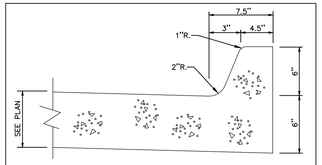
Refer to Figure 7010.901 for maximum transverse joint spacing.

Where new and existing pavements meet, and no existing dowels, tie bars, or keyed joints are present, provide a 'BT', 'RT', or 'RD' joint.

1. Shorten jointing pattern on either side of openings to allow joints to intersect round castings and fall at the edges of intake boxouts.
2. Where pavement abuts an unimproved street, terminate with a type 'HT' joint.
3. When radius exceed 20 feet, add one additional 'C' joint at radius intersections. (TYP RADIUS 25')

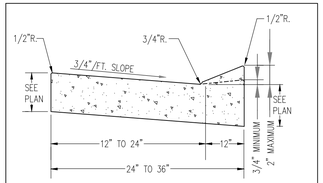
REVISION	
New	10-19-10
7010.904	
SHEET 1 of 1	

TYPICAL JOINTING LAYOUT



STANDARD P.C.C. CURB & GUTTER

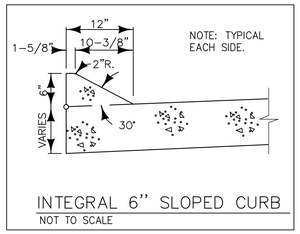
NO SCALE



NOTES:
1. THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE, PROVIDING THE MINIMUM GUTTER THICKNESS (PLAN) IS MAINTAINED.

STANDARD P.C.C. DRIVEWAY OPENING, GUTTER, AND SIDEWALK RAMP

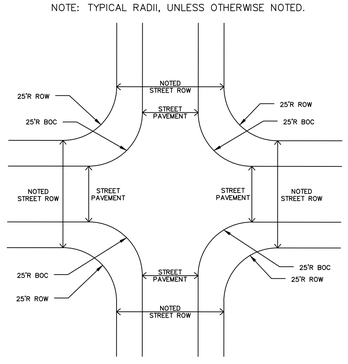
NO SCALE



INTEGRAL 6" SLOPED CURB

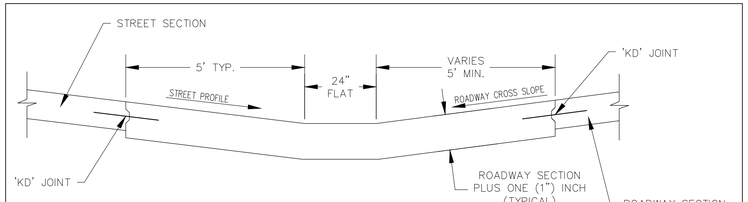
NOT TO SCALE

NOTE: TYPICAL RADII, UNLESS OTHERWISE NOTED.



TYPICAL INTERSECTION RIGHT-OF-WAY (ROW) DETAIL

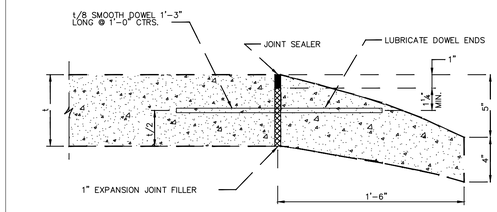
NOT TO SCALE



NOTES:
1. SUBBASE/SUBGRADE SAME AS ADJACENT ROADWAY.
2. MATCH STREET JOINTING.

VALLEY GUTTER

NO SCALE



CONCRETE HEADER

NOTE
1. t = PAVEMENT THICKNESS IN INCHES; AS SPECIFIED.

CITY OF WAUKEE

HEADER DETAILS

STD.DWG.NO.24

RECORD DRAWING 97

GLYNN VILLAGE PLAT 10 - DETAILS II

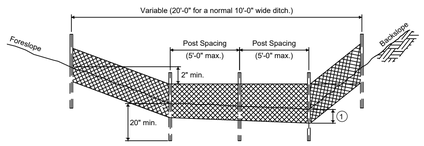
LOCATION:	SCALE: AS NOTED	DESIGNED BY: JRK	DRAWN BY: PJV
	DWG: 15-013-DTL-1.dwg	CHECKED BY: DJS	DATE: 02/24/2016
	FIELD BOOK:	SHEET 97 OF 100	FILE NO.: 15-013

NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

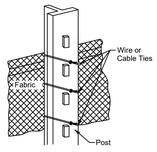
15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:19:17 AM, PJV



TYPICAL SILT FENCE DITCH CHECK

1 Insert 12 inches of fabric a minimum of 6 inches deep (fabric may be folded below the ground line).



ATTACHMENT TO POST

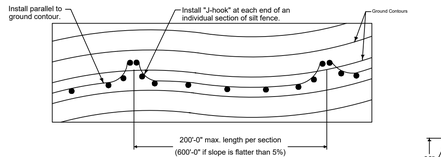
FIGURE 9040.119 | SHEET 1 OF 2

REVISION
2 \ 10-21-14

9040.119

SHEET 1 of 2

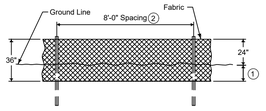
SILT FENCE



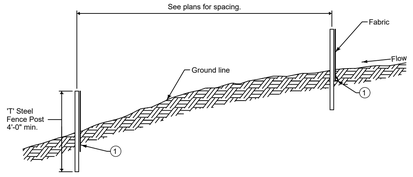
TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES
(Plan View)

1 Insert 12 inches of fabric a minimum of 6 inches deep (fabric may be folded below the ground line).

2 Reduce post spacing to 5'-0" at water concentration areas, or as required to adequately support fence.



DETAILS OF SILT FENCE ON LONGITUDINAL SLOPES



TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES
(Profile View)

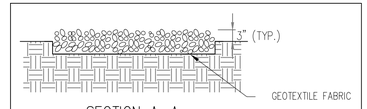
FIGURE 9040.119 | SHEET 2 OF 2

REVISION
2 \ 10-21-14

9040.119

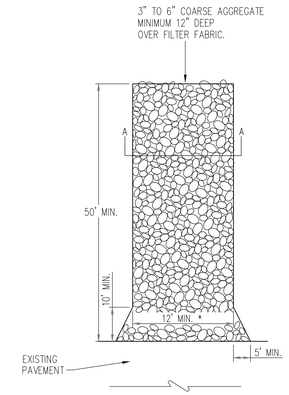
SHEET 2 of 2

SILT FENCE



SECTION A–A

N.T.S.



* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPENING.

NOTES:

1. TRACKING ENTRANCE SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMMEDIATELY. THIS WORK SHALL BE INCIDENTIAL TO THE CONTRACT.

2. STONE SHALL BE REMOVED AND REPLACED WHEN SOIL FILLS OPENINGS AND/OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCIDENTIAL TO THE CONTRACT.

3. EXISTING PAVEMENT SHALL BE INSPECTED AND CLEANED AT LEAST DAILY. THIS WORK SHALL BE INCIDENTIAL TO THE CONTRACT.

VEHICULAR TRACKING ENTRANCE

N.T.S.

(A.K.A. – CONSTRUCTION ENTRANCE, ROCK STABILIZED ENTRANCE, ETC.

SILT FENCE SPACING ON SLOPES	
SLOPE	HORIZONTAL INTERVAL
≤ 10:1 (10%)	100 FEET (MAXIMUM)
5:1 (20%)	60 FEET (MAXIMUM)
4:1 (25%)	50 FEET (MAXIMUM)
3:1 (33.3%)	40 FEET (MAXIMUM)

SILT FENCE SPACING IN SWALE	
SWALE GRADE	HORIZONTAL INTERVAL
1% TO 2%	150 FEET (MAXIMUM)
2% TO 4%	75 FEET (MAXIMUM)
4% TO 6%	40 FEET (MAXIMUM)
OVER 6%	25 FEET (MAXIMUM)

DITCH CHECK/CHECK DAM SPACING		
SWALE/DITCH GRADE	DESIGN HORIZ. INTERVAL	ACTUAL HORIZ. INTERVAL
1% TO 2%	200 FEET TO 100 FEET	150 FEET (MAXIMUM)
2% TO 4%	100 FEET TO 50 FEET	75 FEET (MAXIMUM)
4% TO 6%	50 FEET TO 33.5 FEET	40 FEET (MAXIMUM)
OVER 6%	(2 FEET)/(SLOPE, FT/FT)	25 FEET (MAXIMUM)

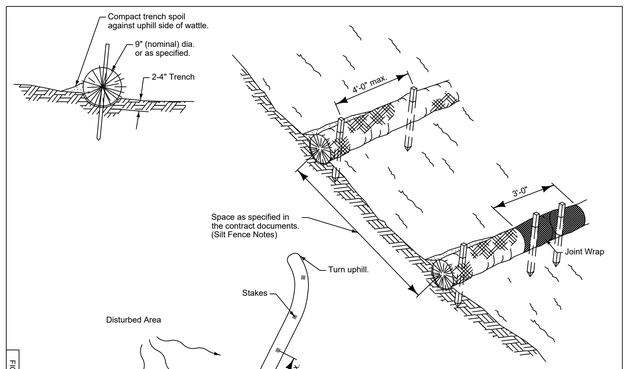


FIGURE 9040.5 | SHEET 1 OF 1

REVISION
1 \ 10-18-11

9040.5

SHEET 1 of 1

WATTLE

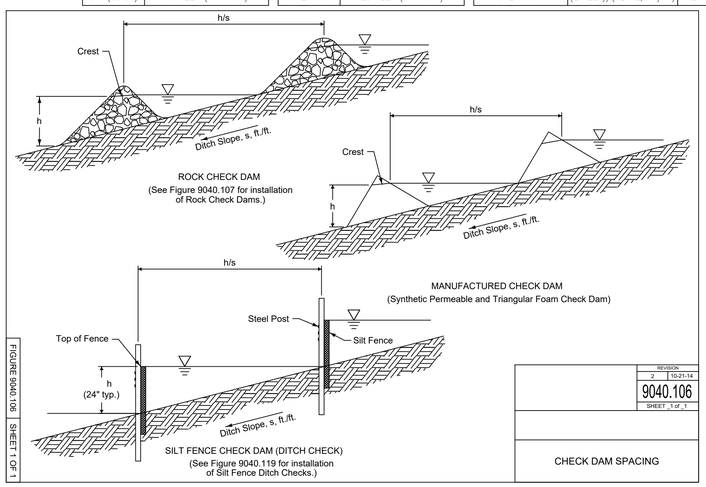


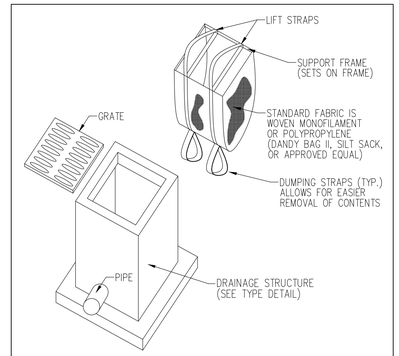
FIGURE 9040.106 | SHEET 1 OF 1

REVISION
2 \ 10-21-14

9040.106

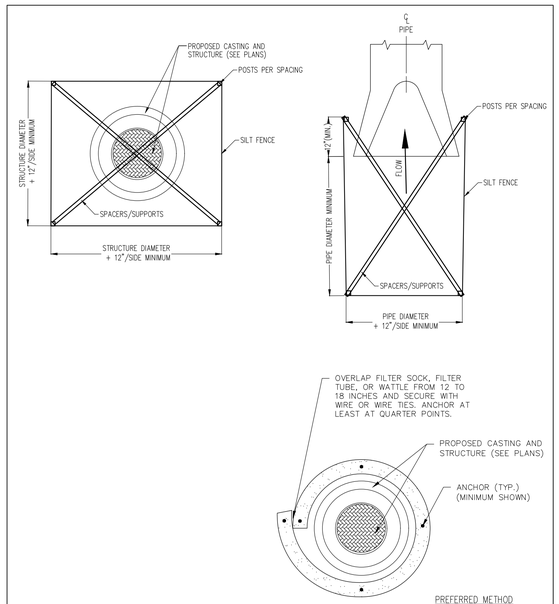
SHEET 1 of 1

CHECK DAM SPACING



INLET PROTECTION INSERT (PAVED AREAS)

N.T.S.



PREFERRED METHOD

INLET AND PIPE PROTECTION

N.T.S.

–IMPORTANT–

EROSION AND SEDIMENT CONTROLS MUST BE ROUTINELY INSPECTED AT LEAST EVERY SEVEN (7) DAYS. WEEKLY WRITTEN REPORTS OF ALL INSPECTIONS MUST BE MAINTAINED BY THE CONTRACTOR(S); AND SUBMITTED WEEKLY TO THE CITY. THE REPORT MUST MINIMALLY CONTAIN THE FOLLOWING INFORMATION:

A. DATE, TIME, AND EXACT PLACES OF INSPECTION;
B. NAME(S) OF INDIVIDUAL(S) PERFORMING INSPECTION;
C. AN ASSESSMENT OF THE CONDITION OF EROSION AND SEDIMENT CONTROLS;
D. A DESCRIPTION OF ANY EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED;
E. A DESCRIPTION OF THE SITE'S PRESENT PHASE OF CONSTRUCTION.

RECORD DRAWING 98

GLYNN VILLAGE PLAT 10 - DETAILS 12

LOCATION:	SCALE:	AS NOTED	DESIGNED BY: JRK
	DWG:	15-013-DTL-1.dwg	CHECKED BY: DJS
	FIELD BOOK:		SHEET 98 OF 100

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

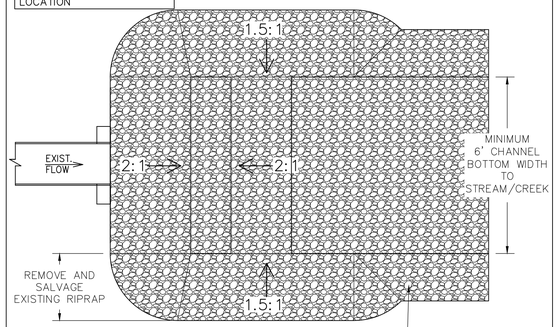
NO.	REVISION	DATE	BY	FOR:

ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

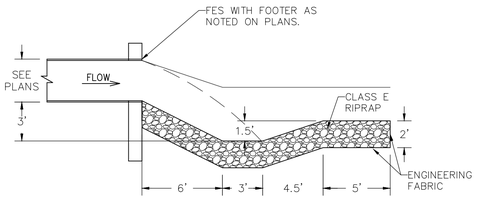
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:19:22 AM, PJV

SEE 'GRADING AND STORM' SHEET 70 FOR SIZE AND LOCATION



EXISTING SMF 'EAST/8E' DIKE PLUNGE BASIN PLAN

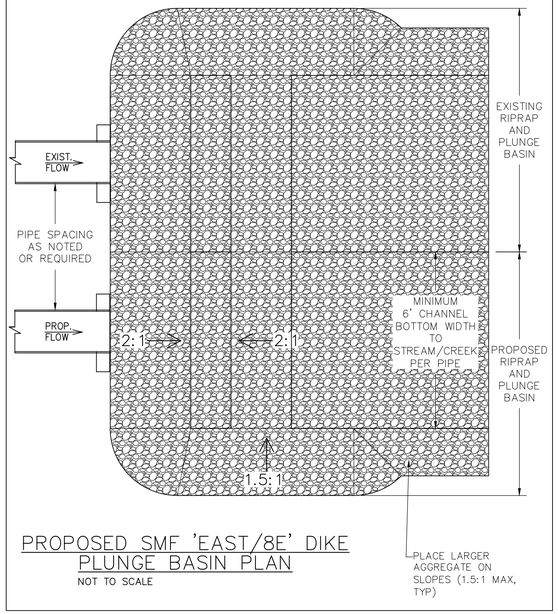
NOT TO SCALE



SMF 'EAST/8E' DIKE PLUNGE BASIN SECTION

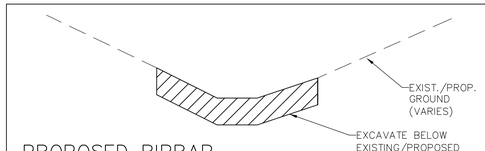
NOT TO SCALE

NOTE:
ALL DISTURBED AREAS SHALL BE COVERED IN RIPRAP.



PROPOSED SMF 'EAST/8E' DIKE PLUNGE BASIN PLAN

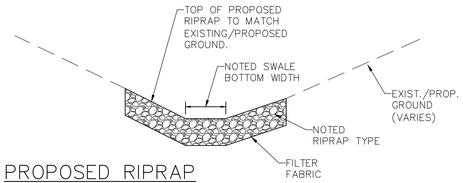
NOT TO SCALE



PROPOSED RIPRAP TYPICAL EXCAVATION SECTION

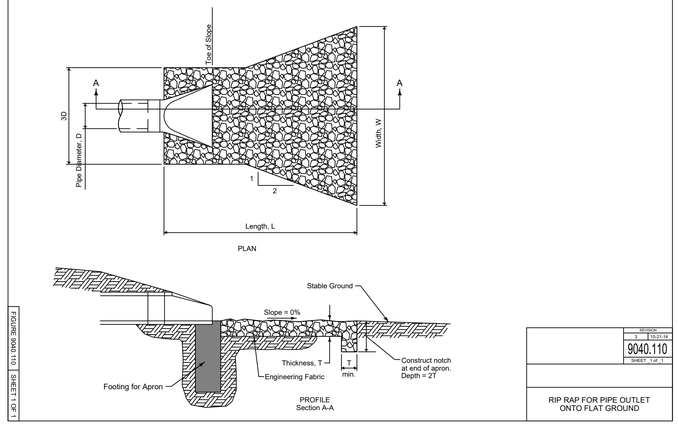
NOT TO SCALE

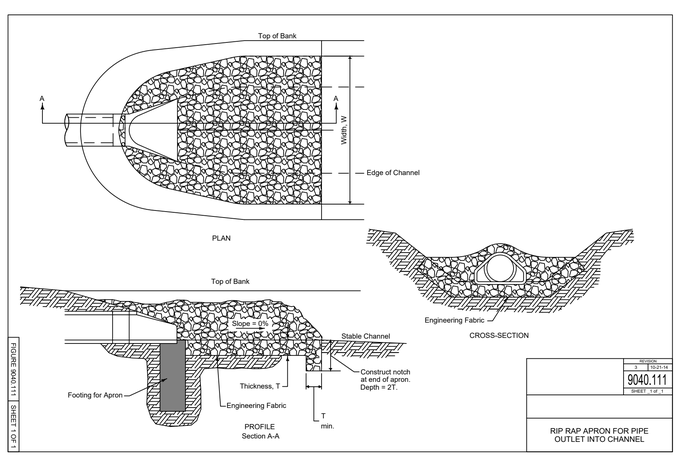
NOTES:
1. SEE SUDAS STANDARD DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
2. SEE 'GRADING' SHEETS 5 TO 10, INCLUSIVE, AND 'STORM' SHEETS 26 TO 71, INCLUSIVE, FOR SIZES AND LOCATIONS.

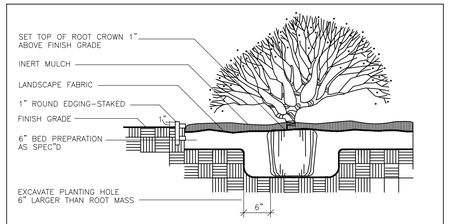


PROPOSED RIPRAP TYPICAL PLACEMENT SECTION

NOT TO SCALE

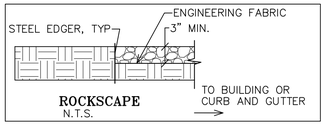




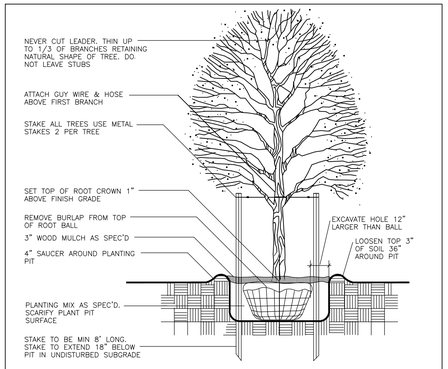


3 — SHRUB PLANTING

NOT TO SCALE



ROCKSCAPE
N.T.S.



TREE PLANTING

NOT TO SCALE

VILLAGE PLAT 10 - DETAILS 13

SCALE:	AS NOTED	DESIGNED BY:	JRK
DWG:	15-013-DTL-1.dwg	CHECKED BY:	DJS
FIELD BOOK:		SHEET	99 OF 100
LOCATION:			

DRAWN BY: PJV
DATE: 02/24/2016
FILE NO.: 15-013

NO.	REVISION	DATE	BY

FOR:

GLYNN

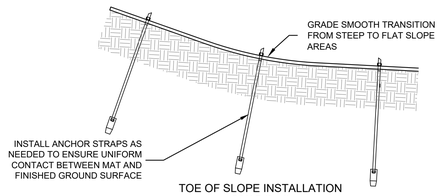
ERG
Engineering Resource Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

RECORD DRAWING

99

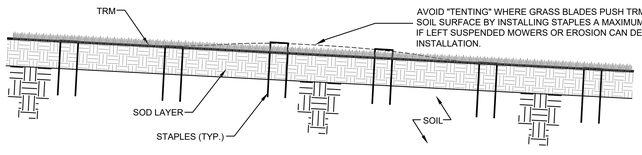
J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-1.dwg, 10/19/2017 11:19:27 AM, PJV



TOE OF SLOPE INSTALLATION
SCALE 1" = 1'

TURF REINFORCEMENT MAT INSTALLED OVER SOD:
- TRIM INSTALLED SOD TO 1" HEIGHT. INSTALL TRM OVER INSTALLED SOD. STRETCH TRM TIGHTLY ACROSS INSTALLATION SURFACE AREA. INSTALL STAPLES AT MAXIMUM OF 18" APART (450 MM). IRRIGATE SOD AS NEEDED AFTER INSTALLATION TO AID IN ESTABLISHMENT OF VEGETATION.
- SOD DOWNSTREAM OF MAT INSTALLATION AREA DOES NOT NEED TRIMMED BEFORE MAT INSTALLATION.
- TO HOLD SOD IN PLACE DOWNSTREAM OF TM'S, INSTALL WIRE STAPLES AT 8' O.C. WITHIN 4' OF UPSTREAM EDGE OF SOD, AND AT A RATE OF ONE STAPLE PER SQUARE FOOT STAGGERED THROUGHOUT.

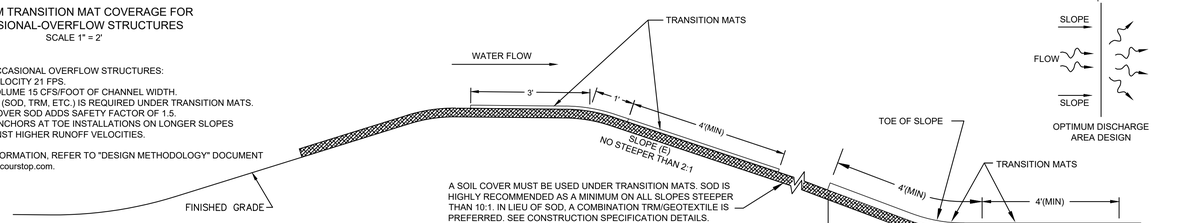
==> FOR DESIGN INFORMATION, REFER TO "DESIGN METHODOLOGY" DOCUMENT AVAILABLE AT www.scourstop.com.



MINIMUM TRANSITION MAT COVERAGE FOR OCCASIONAL-OVERFLOW STRUCTURES
SCALE 1" = 2'

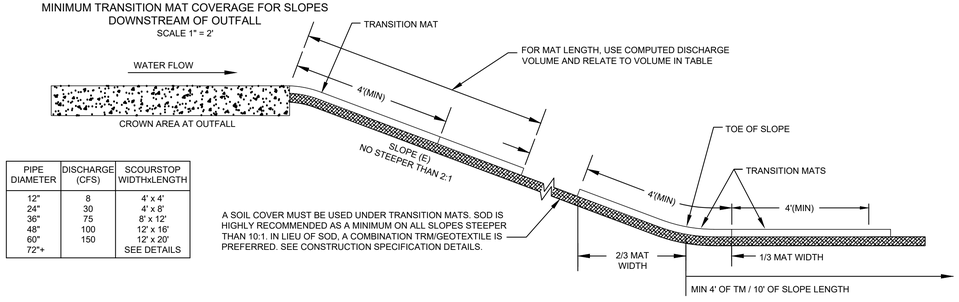
LIMITATIONS FOR OCCASIONAL OVERFLOW STRUCTURES:
- MAXIMUM FLOW VELOCITY 21 FPS.
- MAXIMUM FLOW VOLUME 15 CFS/FOOT OF CHANNEL WIDTH.
- A SOIL COVER BMP (SOD, TRM, ETC.) IS REQUIRED UNDER TRANSITION MATS.
- ADDITION OF TRM OVER SOD ADDS SAFETY FACTOR OF 1.5.
- ADD ADDITIONAL ANCHORS AT TOE INSTALLATIONS ON LONGER SLOPES TO PROTECT AGAINST HIGHER RUNOFF VELOCITIES.

==> FOR DESIGN INFORMATION, REFER TO "DESIGN METHODOLOGY" DOCUMENT AVAILABLE AT www.scourstop.com.



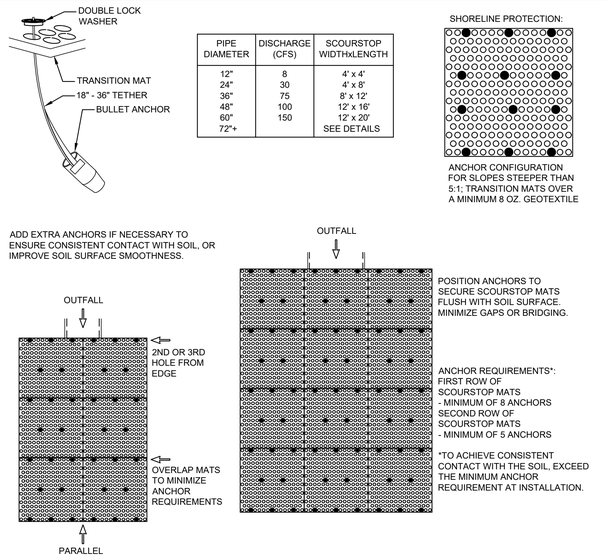
TRM/SOD COMBINATION INSTALLATION DETAILS
NO SCALE

MINIMUM TRANSITION MAT COVERAGE FOR SLOPES DOWNSTREAM OF OUTFALL
SCALE 1" = 2'



PIPE DIAMETER	DISCHARGE (CFS)	SCOURSTOP WIDTHxLENGTH
12"	8	4' x 4'
24"	30	4' x 8'
36"	75	8' x 12'
48"	100	12' x 16'
60"	150	12' x 20'
72"+		SEE DETAILS

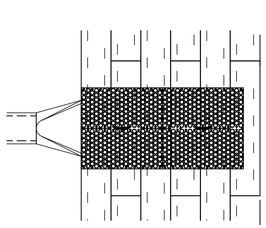
NOT TO SCALE



PIPE DIAMETER	DISCHARGE (CFS)	SCOURSTOP WIDTHxLENGTH
12"	8	4' x 4'
24"	30	4' x 8'
36"	75	8' x 12'
48"	100	12' x 16'
60"	150	12' x 20'
72"+		SEE DETAILS

SHORELINE PROTECTION:

ANCHOR CONFIGURATION FOR SLOPES STEEPER THAN 5:1; TRANSITION MATS OVER A MINIMUM 8 OZ. GEOTEXTILE



STAPLED SOD DETAILS
NO SCALE

SCOURSTOP TRANSITION MAT APPLICATIONS:

1. INTENDED AS AN BIOTECHNICAL REPLACEMENT FOR RIP-RAP. THIS IS AN ENGINEERED SYSTEM. UTILIZE PROPER DESIGN PRACTICES FOR LONG-TERM EFFECTIVE PERFORMANCE.
2. CAN BE PLACED ON DOWNSTREAM OUTLET SIDE OF CURB CUTS, OVERFLOW STRUCTURES, ENDS OF CONCRETE FLUMES OR PIPE FIXTURES; AS STREAM BANK AND SHORELINE PROTECTION.
3. SCOURSTOP STANDARD SIZE IS 4' X 4' X ½" SHEET WITH MULTIPLE VOIDS FOR VEGETATION GROWTH, PROVIDING SOIL PROTECTION FOR:
   3.1. THE SUSCEPTIBLE, EROSIVE AREA DIRECTLY BELOW OUTFALLS
   3.2. ANY HIGHLY EROSIVE AREA; 3) SHORELINE AND STREAMBANKS.
4. PRIMARY BENEFITS OVER RIPRAP ARE: UTILIZATION OF VEGETATION, LOWER INSTALLATION COSTS, LOWER LONG TERM MAINTENANCE, AESTHETICALLY PLEASING, AND IMPROVED SAFETY.

PREFERRED INSTALLATION SPECIFICATIONS:

1. READ AND UNDERSTAND INSTALLATION GUIDE.
2. FOR EACH INSTALLATION, COMPLETE INSTALLER'S CHECKLIST AND PROVIDE TO GENERAL CONTRACTOR FOR PAYMENT.
3. FOR VEGETATION, INSTALL APPROPRIATE SOIL UNDER THESE INSTALLATIONS TO IMPROVE THE GROWING ENVIRONMENT.
4. MINIMUM APPLICATION IS FOUR (4) FOOT LENGTH. UTILIZE DESIGNER CHECKLIST FOR PROPER DESIGN AND INSTALLATION MODE.
5. REMOVE AND REPLACE SATURATED SOILS FOR A SOLID BASE. USE SUB-SURFACE DRAIN FOR TRICKLE FLOWS.
6. CAN BE INSTALLED AS A BUTT JOINT, OR PERMANENTLY ATTACHED TO THE HARD SURFACE.
7. AVOID EROSIVE IMPACT CONDITIONS AT SCOUR AREA.
8. ENSURE LOCATION HAS ADEQUATE SUNLIGHT FOR HEALTHY VEGETATION, OTHERWISE UTILIZE THE HP-TRM INSTALLATION.
9. SCOURSTOP SHALL NOT BE INSTALLED OVER BARE SOIL. OPTIONAL SOIL COVERS ARE SOD, TRM'S, AND GEOTEXTILES. SOIL COVERS MAY NEED TO EXTEND DOWNSTREAM OF SCOURSTOP INSTALLATION IN AREAS OF HIGHER VELOCITY OR SHEAR (CHECK WITH DESIGNER PRIOR TO INSTALLATION).
10. WHERE EXCESS CONCRETE FROM THE END SECTION FOOTINGS EXTENDS BEYOND THE END SECTION, INSERT A FILLER MATERIAL (LIKE A HIGH-PERFORMANCE TRM OR HEAVY GEOTEXTILE) BETWEEN THE TRANSITION MAT AND THE EXCESS CONCRETE SURFACE TO FILL THE AREA TOO SHALLOW (<4 INCHES) TO SUPPORT SOIL AND VEGETATION GROWTH.
11. CONSTRUCT DOWNSTREAM CHANNEL AT LEAST TWICE THE WIDTH OF THE OUTLET. CONSTRUCT WIDTH AS FLAT AND LEVEL AS POSSIBLE FOR PROPER DRAINAGE.
12. SOIL ANCHORS SHALL BE DRIVEN AT LEAST 18 INCHES DEEP, OR DEEPER AS NEEDED INTO FIRM SOIL. USE FLEXIBLE STRAPPING AND DOUBLE-LOCK WASHERS TO ATTACH THE TRANSITION MAT INSTALLATION INTO THE SOIL. FIRMLY PULL STRAP TO SNUG THE TRANSITION MAT DOWN AGAINST THE SOIL WITH THE WASHER AND ONE-WAY STOP. A 3-2-3 ANCHOR CONFIGURATION IS THE MINIMUM ANCHOR QUANTITY.
13. PER NPDES PHASE II, THE DOWNSTREAM CHANNEL (D.C.) MUST BE PROTECTED FOR ITS ENTIRE LENGTH. THIS D.C. IS PART OF THE TRANSITION MAT ENGINEERED SYSTEM. USE SOD TO PROTECT THE D.C. WHEN POSSIBLE. SEE DETAILS PAGE FOR PROPER INSTALLATION. TURF REINFORCEMENT MATS (TRM'S) ARE ACCEPTABLE. TRM'S HAVE LOW PERFORMANCE RATINGS WHEN UNVEGETATED - DESIGN APPROPRIATELY.
14. ON AREAS OF SLOPE TRANSITION, UTILIZE ANCHORS TO MAINTAIN SOIL CONTACT ACROSS ENTIRE MAT LENGTH. ANCHORS CAN BE USED TO PROVIDE UP TO 14" OF DEFLECTION AT CENTER OF MAT FROM ENDS.
15. TYPE "A" INSTALLATION INSTRUCTIONS
    15.1. DESIGN OUTLET VELOCITY < 21 FPS AND DOWNSTREAM SCOUR AREA FLATTER THAN 10%, OR 10:1.
    15.2. SOD IS THE SOIL COVER PRACTICE UNDER THE TRANSITION MATS - WIDTH AND LENGTH OF TM'S SPECIFIED BY DESIGNER. SOD ELIMINATES GERMINATION RISK, AND IS GREAT PROTECTION FOR SOIL.
16. TYPE "B" INSTALLATION INSTRUCTIONS
    16.1. DESIGN OUTLET VELOCITY < 21 FPS AND DOWNSTREAM SCOUR AREA STEEPER THAN 10%, OR 10:1.
    16.2. SOD TRIMMED AND COVERED BY AN OPEN-WEAVE TRM IS THE SOIL COVER PRACTICE UNDER THE TRANSITION MATS - WIDTH AND LENGTH OF TM'S TO BE SPECIFIED BY DESIGNER. ADDITIONAL TRANSITION MATS ARE REQUIRED AT THE TOE OF THE SLOPE. SEE DETAILS.
    16.3. TRIM INSTALLED SOD TO ONE (1) TO TWO (2) INCH HEIGHT. INSTALL TRM OVER INSTALLED SOD AND STRETCH TIGHTLY BEFORE STAPLING. IRRIGATE SOD AS NEEDED AFTER INSTALLATION TO AID IN ESTABLISHMENT OF VEGETATION.
    16.4. ANCHOR SOD/TRM COMBINATION WITH 8-INCH STAPLES A MAXIMUM OF 18 INCHES APART.
17. TYPE "C" INSTALLATION INSTRUCTIONS
    17.1. DESIGN OUTLET VELOCITY < 8 FPS AND DOWNSTREAM SCOUR AREA FLATTER THAN 4%, OR 25:1.
    17.2. A TRM IS THE SOIL COVER PRACTICE UNDER THE TRANSITION MATS. THE WIDTH AND LENGTH OF THE TM'S TO BE SPECIFIED BY DESIGNER. TRM'S OVER BARE SOIL HAVE LOW-PERFORMANCE UNTIL VEGETATED.
18. TYPE "D" INSTALLATION INSTRUCTIONS
    18.1. DESIGN APPLICATIONS: ALL OUTFALLS; LOW SUNLIGHT AREAS; SEMI-ARID REGIONS; WHERE VEGETATION MAY BE SLOW TO ESTABLISH.
    18.2. A THREE (3) OUNCE GEOTEXTILE COVERED WITH A HIGH-PERFORMANCE TRM IS THE PREFERRED SOIL COVER PRACTICE. THE WIDTH AND LENGTH OF THE TM'S TO BE SPECIFIED BY DESIGNER. THE GEOTEXTILE PROTECTS THE SOIL FROM EROSION, AND THE HP-TRM PROVIDES LONG TERM STABILITY. THIS INSTALLATION CAN BE SOIL-FILLED AND SEEDED, OR LEFT TO FILL-IN WITH SEDIMENTS AND NATIVE VEGETATION. MECHANICALLY-BONDED FIBER MATRIX (MBFM) HYDROMULCH HAS ALSO SHOWN TO BE AN EFFECTIVE FILLER/SEED BASE. FOR INSTALLATIONS ON OUTFALLS > 60 INCHES WITH HIGH VELOCITY FLOWS, AN ADDITIONAL LAYER OF TM'S ADJACENT TO THE OUTFALL PROVIDES GREATER PROTECTION.
19. TYPE "E" INSTALLATION INSTRUCTIONS
    19.1. DESIGN APPLICATIONS: STREAMBANK AND SHORELINE; MAXIMUM 1.5H:1V SLOPE.
    19.2. AN EIGHT (8) TO 12 OUNCE GEOTEXTILE IS THE SOIL COVER PRACTICE UNDER THE TRANSITION MATS WHICH ARE GENERALLY INSTALLED THREE (3) FEET BELOW AND MINIMUM EIGHT (8) INCHES ABOVE THE NORMAL WATER LEVEL. TYPES A, B, AND D MAY BE UTILIZED ABOVE THE GEOTEXTILE/TM PROTECTED AREA. REQUIRES DIFFERENT ANCHOR CONFIGURATION AND DEPTH.
20. FOR DESIGN INFORMATION, REFER TO "DESIGN METHODOLOGY" DOCUMENT AVAILABLE AT WWW.SCOURSTOP.COM.

SEE 'GRADING' SHEETS 5 TO 10, INCLUSIVE, AND 'STORM' SHEETS 26 TO 71, INCLUSIVE, FOR SIZES AND LOCATIONS

RECORD DRAWING

100

GLYNN VILLAGE PLAT 10 - DETAILS 14

FOR:		DRAWN BY:	PJV
LOCATION:		DESIGNED BY:	JRK
		CHECKED BY:	DJS
SCALE:	AS NOTED	SHEET	100
DWG:	15-013-DTL-3.dwg	OF	100
FIELD BOOK:		FILE NO.:	15-013

NO.	REVISION	DATE	BY

ERG
Engineering Resources Group, Inc.
Engineers and Surveyors
2413 GRAND AVENUE
DES MOINES, IOWA 50312
(515) 288-4823

15-013

J:\2015 Proj\15-013\DESIGN\ASBUILT\15-013-DTL-3.dwg, 10/19/2017 11:19:33 AM, PJV