# The Reserve at Stoney Creek - 3rd Plat

## Lots 60 Thru 110 & Tracts L thru N
## CONSTRUCTION PLANS
## Part of the SW 1/4 Section 36, Township 47 N, Range 32 W
## LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

### CONSTRUCTION AND DESIGN NOTES:

#### STREET & STORM SEWERS:

1 ~ STREET PAVEMENT SHALL CONSIST OF TYPE CG-2 CURBS WITH PAVEMENT PER TABLE LS-2 OF THE LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL

RESIDENTIAL LOCAL STREET
OPTION 1) 4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER A 6" MoDOT TYPE 5 BASE AND A SUBGRADE MIXTURE OF 6" FLY ASH STABILIZED SUBGRADE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
OPTION 2) 4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER 10" MoDOT TYPE 5 BASE OVERTOP A BIAXIAL GEOGRID MEETING THE REQUIREMENTS OF TABLE 2201.6-1

2 ~ RESIDENTIAL LOCAL STREETS SHALL BE PER APWA STANDARD FOR 50' R/W TYPICAL SECTION TABLE LS-2 SECTION 5200 (RESIDENTIAL LOCAL STREET).

3 ~ STORM SEWER PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) AS APPROVED BY CITY OF LEES SUMMIT DESIGN AND CONSTRUCTION MANUAL.

4 ~ JUNCTION BOXES SHALL BE PER CITY OF LEES SUMMIT STANDARD DRAWING NO. STM-3. FIELD INLETS SHALL BE PER CITY OF LEES SUMMIT STANDARD DRAWING STM-2. TOEWALLS SHALL BE PER CITY OF LEES SUMMIT DRAWING NO. ST-5. STORM MANHOLES SHALL BE PER CITY OF LEES SUMMIT. ROCK LINING AND RIP RAP SHALL BE PER CITY OF LEES SUMMIT.

#### WATER:

1 ~ THE CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT WATER UTILITIES DEPARTMENT AT 816.969.1900 AT LEAST 48 HOURS PRIOR TO CONNECTING TO ANY EXISTING WATER MAIN.

2 ~ ALL WATER MAINS SHALL COMPLY WITH ANSI/AWWA C150/A21.50 AND C151/A21.51, AND CITY OF LEES SUMMIT STANDARDS.

3 ~ FIRE HYDRANTS SHALL BE OPTIC YELLOW WATEROUS "PACER" MODEL NO. WB-67-250 WITH NON-RISING STEM OR CITY ENGINEER APPROVED EQUAL. HYDRANTS SHALL HAVE A 5 1/4" VALVE WITH A 4 1/2" PUMPER NOZZLE AND 2 - 2 1/2" HOSE NOZZLES (LEFT HAND OPENING).

4 ~ GATE VALVES SHALL BE MUELLER NO. A 2380-5 HUB END "O" RING SEAL NON-RISING STEM. VALVES 12" OR LARGER SHALL BE BUTTERFLY VALVES MANUFACTURED BY THE HENRY PRATT COMPANY OR CITY ENGINEER APPROVED EQUAL. LEFT HAND OPENING. MINIMUM 200# TESTING AWWA.

5 ~ VALVE BOXES SHALL BE CLAY & BAILEY NO. P-108 OR CITY ENGINEER APPROVED EQUAL. ALL VALVE BOXES SHALL BE LOCATED OUT OF EXISTING OR PROPOSED PAVEMENT AREAS.

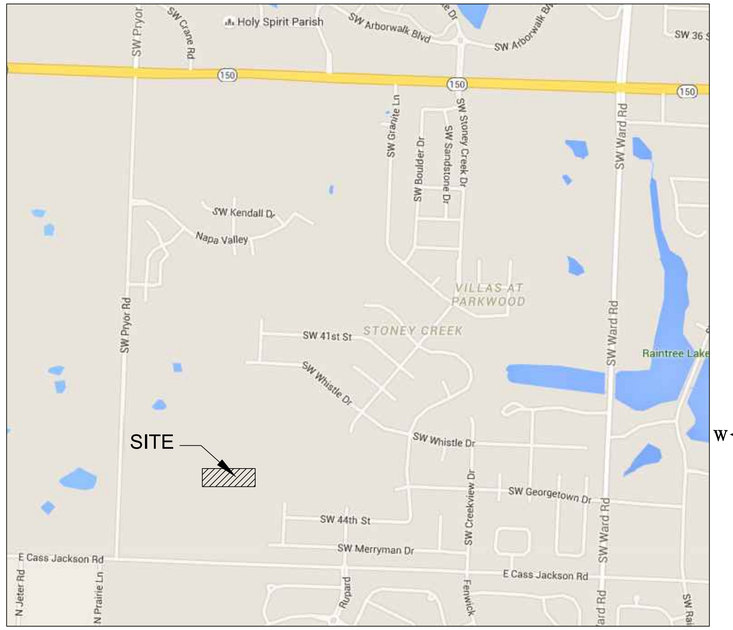
6 ~ ALL WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 42 INCHES. STREET GRADING SHALL BE COMPLETED PRIOR TO BEGINNING CONSTRUCTION OF WATER MAINS.

7 ~ ALL BENDS, TEES AND FIRE HYDRANTS SHALL BE INSTALLED WITH SUITABLE CONCRETE THRUST BLOCKS POURED IN PLACE AGAINST UNDISTURBED EARTH AND PER CITY OF LEES SUMMIT AND APWA STANDARDS.

8 ~ THE MINIMUM SEPARATION BETWEEN THE PROPOSED WATER MAIN AND SANITARY OR STORM SEWERS IS AS FOLLOWS:
A ~ SANITARY SEWERS: HORIZONTAL = 10 FEET - VERTICAL = 18 INCHES
B ~ STORM SEWERS: HORIZONTAL = 5 FEET - VERTICAL = 18 INCHES
THESE SEPARATIONS SHALL PREVAIL OVER ANY DATA SHOWN IN THESE PLANS AND THE CONTRACTOR SHALL INSTALL BENDS OR OTHER FITTINGS AS NECESSARY TO ACHIEVE THE REQUIRED SEPARATIONS.

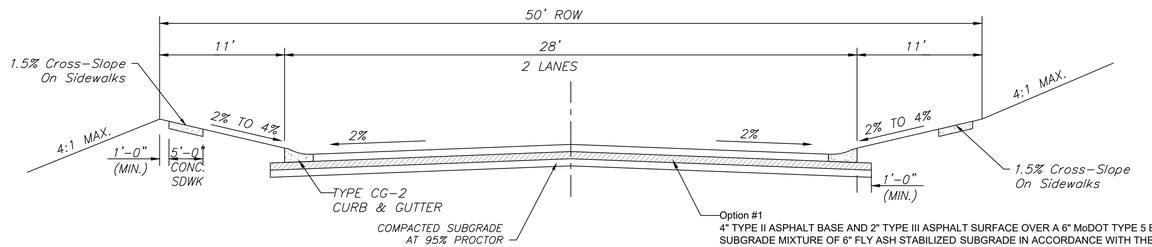
#### GENERAL NOTES:

1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
2 ~ ALL REQUIRED EASEMENTS WITHIN THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR ON THE FINAL PLAT.
3 ~ ANY REQUIRED EASEMENT LOCATED OUTSIDE OF THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR BY SEPARATE INSTRUMENT PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS.
4 ~ THE CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT PUBLIC WORKS INSPECTION AT 816.969.1800 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
5 ~ THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH THE IMPROVEMENTS PROPOSED BY THESE PLANS AND SITE CONDITIONS.
6 ~ THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND OBTAIN THE APPROPRIATE BLASTING PERMITS FOR A REQUIRED BLASTING. IF BLASTING IS ALLOWED, ALL BLASTING SHALL CONFORM TO STATE REGULATIONS AND LOCAL ORDINANCES.




N
W E
S

## SITE LOCATION MAP




TYPICAL SECTION
(RESIDENTIAL STREET)
N.T.S.

Option #1
4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER A 6" MoDOT TYPE 5 BASE AND A SUBGRADE MIXTURE OF 6" FLY ASH STABILIZED SUBGRADE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.

Option #2
4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER 10" MoDOT TYPE 5 BASE OVERTOP A BIAXIAL GEOGRID MEETING THE REQUIREMENTS OF TABLE 2201.6-1

NOTE:
ALL CURB & GUTTER ON GEORGETOWN DRIVE EAST OF AMETHYST DRIVE SHALL BE CG-2.
ALL CURB & GUTTER ON GEORGETOWN DRIVE WEST OF AMETHYST DRIVE SHALL BE CG-1.

### INDEX OF SHEETS:


C.001 ~ COVER SHEET
C.050 ~ ESC PHASE 1 - Pre Clearing Plan
C.051 ~ ESC PHASE 2 - Inactive Area Stabilization Plan
C.052 ~ ESC PHASE 3 - Final Restoration Plan
C.100 ~ SITE PLAN
C.200 ~ MASTER DRAINAGE PLAN SHEET 1 OF 3 GRADING PLAN - SWPPP
C.201 ~ MASTER DRAINAGE PLAN SHEET 2 OF 3 SPOT ELEVATIONS
C.202 ~ MASTER DRAINAGE PLAN SHEET 3 OF 3 DRAINAGE AREA MAP
C.203 ~ STREET PLAN & PROFILE
C.204 ~ STREET PLAN & PROFILE
C.205 ~ STREET PLAN & PROFILE
C.206 ~ STREET PLAN & PROFILE
C.207 ~ STREET SIGNAGE PLAN
C.208 ~ INTERSECTION DETAILS & ADA RAMP PLAN
C.209 ~ INTERSECTION DETAILS & ADA RAMP PLAN
C.210 ~ DETENTION BASIN / BMP PLAN
C.211 ~ STREET ALIGNMENT PLAN
C.300 ~ STORM SEWER GENERAL LAYOUT
C.301 ~ STORM SEWER PLAN & PROFILE
C.302 ~ STORM SEWER PLAN & PROFILE
C.303 ~ STORM SEWER PLAN & PROFILE
C.304 ~ STORM SEWER PLAN & PROFILE
C.305 ~ STORM SEWER PLAN & PROFILE
C.306 ~ STORM SEWER TABLES - 10 YEAR
C.307 ~ STORM SEWER TABLES - 100 YEAR
C.600 ~ CONSTRUCTION DETAILS
C.601 ~ CONSTRUCTION DETAILS
C.602 ~ CONSTRUCTION DETAILS


### UTILITY COMPANIES:

THE FOLLOWING LIST OF UTILITY COMPANIES IS PROVIDED FOR INFORMATION ONLY. WE DO NOT OFFER ANY GUARANTEE OR WARRANTY THAT THIS LIST IS COMPLETE OR ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES THAT MAY BE AFFECTED BY THE PROPOSED CONSTRUCTION AND VERIFYING THE ACTUAL LOCATION OF EACH UTILITY LINE. THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH PROPOSED IMPROVEMENTS.

KCP&L ~ 298-1196
MISSOURI GAS ENERGY ~ 756-5261
SOUTHWESTERN BELL TELEPHONE ~ 761-5011
COMCAST CABLE ~ 795-1100
WILLIAMS PIPELINE ~ 422-6300
CITY OF LEE'S SUMMIT PUBLIC WORKS ~ 969-1800
CITY OF LEE'S SUMMIT PUBLIC WORKS INSPECTIONS ~ 969-1800
CITY OF LEE'S SUMMIT WATER UTILITIES ~ 969-1900
MISSOURI ONE CALL (DIG RITE) ~ 1-800-344-7483

LEGEND:

| | | |
|---|---|---|
| B/L | – | BUILDING SET-BACK |
| C/A | – | COMMON AREA |
| D/E | – | DRAINAGE EASEMENT |
| FND. | – | FOUND |
| L/E | – | LANDSCAPE EASEMENT |
| L.N.A. | – | LIMITS OF NO ACCESS |
| R/W | – | RIGHT OF WAY |
| SAN | – | SANITARY SEWER LINE |
| S/W | – | SIDEWALK |
| U/E | – | UTILITY EASEMENT |
| W | – | WATER LINE |
| ST | – | STORM SEWER LINE |

### BENCHMARK:

CENTER OF SANITARY SEWER MANHOLE LOCATED IN THE SE CORNER OF THE LOT 123, FOXWOOD EAST 5TH PLAT.

ELEVATION 945.69

### ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS PROJECT HAS BEEN DESIGNED AND THESE PLANS PREPARED IN ACCORDANCE WITH THE CURRENT DESIGN CRITERIA OF THE CITY OF LEE'S SUMMIT, MISSOURI AND THE STATE OF MISSOURI. I FURTHER CERTIFY THAT THESE PLANS WERE DESIGNED IN ACCORDANCE TO AASHTO STANDARDS.

### CITY OF LEE'S SUMMIT, MISSOURI

APPROVED: DATE: _____

BY: _____
CITY ENGINEER

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Cover Sheet
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.001

North

0 40' 80' 160'

# PRE CLEARING PLAN

SCALE: 1" = 80'

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

SF-1 SILT FENCE PROTECTION TO BE MAINTAINED BY CONTRACTOR

## LEGEND

PHASE 1 SILT FENCE ——SF-1——SF-1——

PHASE 2 SILT FENCE ——SF-2——SF-2——

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 5111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

Perimeter Silt Fence Must Be Installed Prior to Any Land Disturbance Activities Per APWA Detail ESC-11. (Typ.)

Perimeter Silt Fence Must Be Installed Prior to Any Land Disturbance Activities Per APWA Detail ESC-11. (Typ.)

Temporary Sediment Basin #1
33,417 c.f. @ 989.00'
Installed with Manor at Stoney Creek 2nd Plat

Perimeter Silt Fence Must Be Installed Prior to Any Land Disturbance Activities Per APWA Detail ESC-11. (Typ.)

Perimeter Silt Fence Must Be Installed Prior to Any Land Disturbance Activities Per APWA Detail ESC-11. (Typ.)

Temporary Construction Entrance Must Be Installed Prior to Any Land Disturbance Activities Per APWA Detail ESC-01.

Existing Stockpile

Existing Temporary Cul-De-Sac

Tract L

Tract M

Tract N

TRACT "J"

TRACT "K"

TRACT "G" PARK AREA

PHASE 4 THE RESERVE AT STONEY CREEK AREA 221,975.82

PHASE 3 THE RESERVE AT STONEY CREEK AREA 403,605.09

PHASE 4 THE MANOR AT STONEY CREEK AREA 221,975.82

PHASE 3 THE MANOR AT STONEY CREEK AREA 657,428.39

PHASE 2 THE MANOR AT STONEY CREEK AREA 491,043.45

SW STONEY CREEK DRIVE (60' R/W)

SW STONEY BROOK CIRCLE (50' R/W)

SW 44TH STREET

STONEY CREEK ESTATES 3RD PLAT

5' SIDEWALK

SF-1 SF-2


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

ESC PHASE 1 - Pre Clearing Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

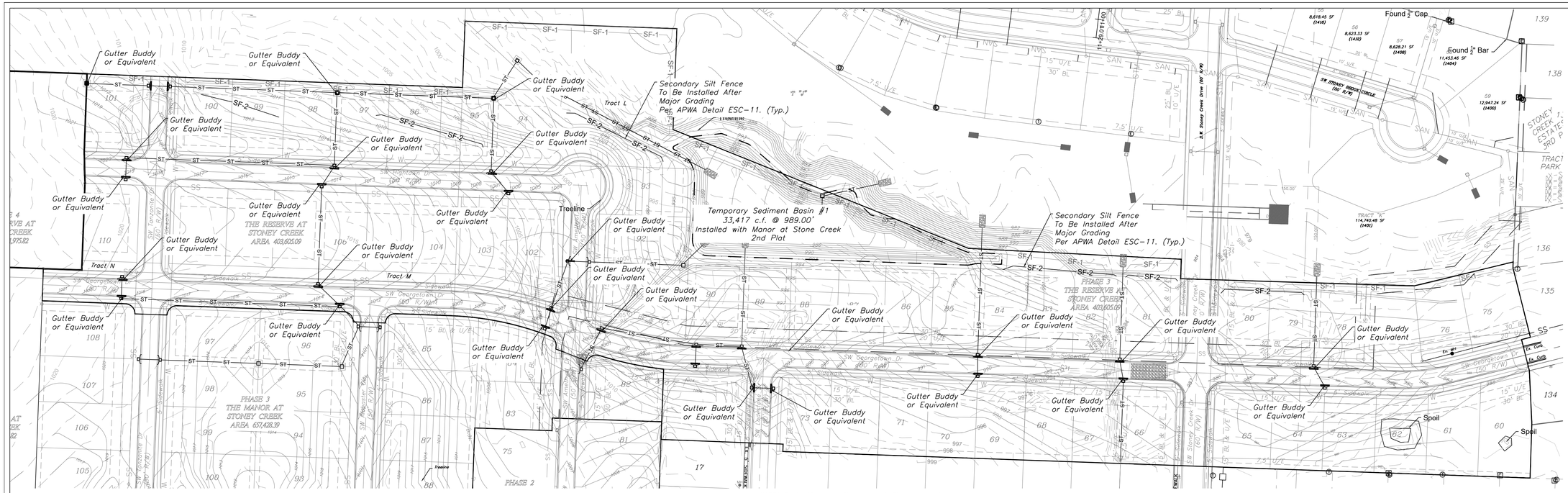
STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 19071
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.050




NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

SF-1 SILT FENCE PROTECTION TO BE MAINTAINED BY CONTRACTOR

DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 5111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

North

0 40' 80' 160'

## INACTIVE AREA STABELIZATION PLAN

SCALE: 1" = 80'

## LEGEND

PHASE 1 SILT FENCE ——SF-1——SF-1——

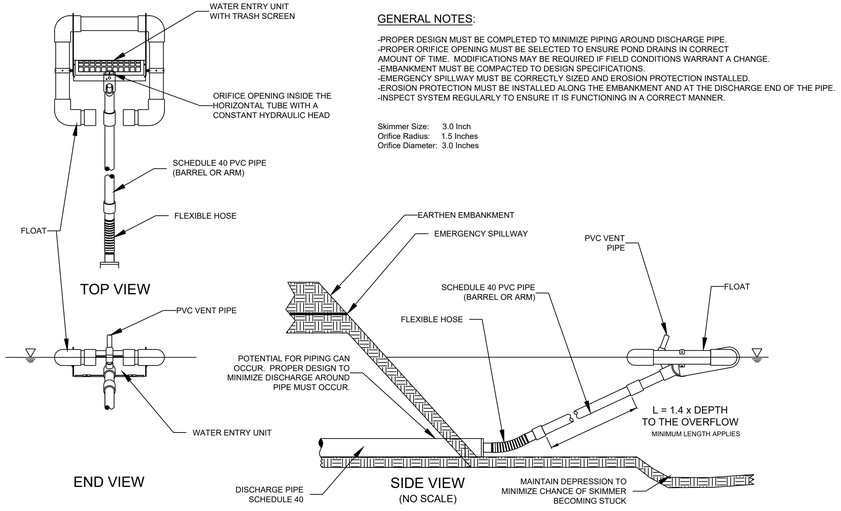
PHASE 2 SILT FENCE ——SF-2——SF-2——

INLET PROTECTION GUTTER BUDDY OR EQUIVALENT

**Basin was installed with Phase 2 Construction**

**TEMPORARY SEDIMENT TRAP #1 CALCULATIONS:**

1. **TOTAL AREA DRAINING TO BASIN = 8.07 ac**
2. **REQUIRED VOLUME OF TRAP = 3,600cft PER acre = 8.07 X 3,600 = 29,052 cft**
3. **VOLUME OF PROPOSED TRAP = 33,417 cft**




GENERAL NOTES:

-PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
-PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
-EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
-EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
-EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
-INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.

Skimmer Size: 3.0 Inch
Orifice Radius: 1.5 Inches
Orifice Diameter: 3.0 Inches

**MAINTENANCE:**

TO MAINTAIN THE EROSION AND SEDIMENT CONTROLS, THE FOLLOWING PROCEDURES WILL BE PERFORMED:

**SEDIMENT CAPTURE DEVICES:** SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC FENCES, WHEN THE DEPTH OF ACCUMULATED SEDIMENT REACHES ABOUT ONE-THIRD THE HEIGHT OF THE STRUCTURE.

**STORM SEWER INLETS:** ANY SEDIMENT IN THE STORM SEWER INLETS WILL BE REMOVED AND DISPOSED OF PROPERLY.

**TEMPORARY CONTROLS:** ALL TEMPORARY CONTROLS WILL BE REMOVED AFTER THE DISTURBED AREAS HAVE BEEN STABILIZED.

**INSPECTION PROCEDURES:**

INSPECTIONS WILL BE DONE BY THE RESPONSIBLE PERSON(S) AT LEAST ONCE EVERY WEEK AND WITHIN 24 HOURS EACH STORM EVENT PRODUCING ANY AMOUNT OF RAINFALL. AREAS THAT HAVE BEEN RESEEDED WILL BE INSPECTED REGULARLY AFTER SEED GERMINATION TO ENSURE COMPLETE COVERAGE OF EXPOSED AREAS. DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED SHALL HAVE ALL POLLUTION CONTROL MEASURES INSPECTED FOR PROPER INSTALLATION, OPERATION AND MAINTENANCE. LOCATIONS WHERE STORM WATER LEAVES THE SITE SHALL BE INSPECTED FOR EVIDENCE OF EROSION OR SEDIMENT DEPOSITION. ANY DEFICIENCIES SHALL BE NOTED IN A REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE INSPECTION. THE PERMITTEE SHALL PROMPTLY NOTIFY THE SITE CONTRACTORS RESPONSIBLE FOR OPERATION AND MAINTENANCE OF POLLUTION CONTROL DEVICES OF DEFICIENCIES.

IF THE EXISTING GROUND COVER IS NATURAL GRASS, DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH WHEAT/RYE AT A RATE OF 1.5 POUNDS PER 1000 SQUARE FEET. PERMANENT SEEDING SHALL CONSIST OF 90% IN THREE EQUAL PARTS OF THIN BLADE, TURF-TYPE, TALL FESCUE AND 10% BLUEGRASS SEED AT A RATE OF 10 POUNDS PER 1000 SQUARE FEET. BOTH TEMPORARY AND PERMANENT SEEDED AREAS SHALL BE MULCHED AND WATERED TO MAINTAIN THE PROPER MOISTURE LEVEL OF THE SOIL TO ESTABLISH GRASS. NEW GRASS SHALL BE WATERED AND MAINTAINED UNTIL IT REACHES A HEIGHT OF 3 INCHES. ANY BARE AREAS SHALL BE RESEEDED.

ALL EROSION CONTROL DEVICES SHALL BE REMOVED BY GENERAL CONTRACTOR AFTER SITE STABILIZATION IS COMPLETE AND APPROVED BY ENGINEER.

THE DEVELOPER WILL DESIGNATE A QUALIFIED PERSON OR PERSONS TO PERFORM THE FOLLOWING INSPECTIONS:

**STABILIZATION MEASURES:** DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY MONTH THROUGHOUT THE LIFE OF THE PROJECT. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.

**STRUCTURAL CONTROLS:** FILTER FABRIC FENCES AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN WILL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING, AND EFFECTIVENESS IN TRAPPING SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.

**DISCHARGE POINTS:** DISCHARGE POINTS OR LOCATIONS WILL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM ENTERING RECEIVING WATERS.

**CONSTRUCTION ENTRANCE:** LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE WILL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.

A LOG OF EACH INSPECTION SHALL BE KEPT. THE INSPECTION REPORT IS TO INCLUDE THE FOLLOWING MINIMUM INFORMATION: INSPECTOR'S NAME; DATE OF INSPECTION; OBSERVATIONS RELATIVE TO THE EFFECTIVENESS OF THE POLLUTION CONTROL DEVICES; ACTIONS TAKEN OR NECESSARY TO CORRECT DEFICIENCIES; AND LISTING OF AREAS WHERE LAND DISTURBANCE OPERATIONS HAVE PERMANENTLY OR TEMPORARILY STOPPED. THE INSPECTION REPORT SHALL BE SIGNED BY THE PERMITTEE OR BY THE PERSON PERFORMING THE INSPECTION IF DULY AUTHORIZED TO DO SO.

**EROSION CONTROL DESCRIPTION:**

1.) SILT FENCE SHALL BE PLACE AT THE PERIMETER OF THE GRADING AND AT INTERMEDIATE AREAS THROUGHOUT THE SITE AS SHOWN ON THE PLAN. INLET SEDIMENT TRAPS SHALL BE PLACED SURROUNDING ALL STORM INLETS

2.) INSTALL TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON PLAN

**EROSION CONTROL PROCEDURE:**

1.) SILT FENCE AND TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE PERIMETER OF THE GRADED AREAS PRIOR TO BEGINNING OF CLEARING OR DEMOLITION OPERATIONS. THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON PLANS AS GRADING PROGRESSES.

**TEMPORARY CONSTRUCTION ENTRANCE NOTES:**

A.) INSTALLATION

1.) AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC STREETS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED

2.) REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE AND CROWN FOR POSITIVE DRAINAGE.

3.) IF SLOPE TOWARDS THE PUBIC ROAD EXCEED 2% CONSTRUCT A 6 TO 8 INCH HIGH RIDGE WITH 3H : 1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.

4.) INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS

5.) PLACE STONE TO DIMENSIONS AND GRADES AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE

6.) DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE

7.) IF WET CONDITIONS ARE ANTICIPATED PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY

B.) TROUBLESHOOTING

1.) CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:

-INADEQUATE RUNOFF CONTROLS TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROADS

- INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES

-SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL - INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC

-PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC - EXTEND PAD BEYOND THE MINIMUM 50 FOOT LENGTH AS NECESSARY

C.) INSPECTION AND MAINTENANCE

1.) INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER ANY RAIN EVENT

2.) RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL

3.) TOP DRESS WITH CLEAN 2 AND 3 INCH STONE AS NEEDED

4.) IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADWAY. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY

5.) REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK - 3RD PLAT
Issue Date: July 16, 2019

ESC PHASE 2 - Inactive Area Stabilization Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.051

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

SEED AND MULCH NOTES:

All areas disturbed by construction activities shall be seeded and mulched. Seeding shall be done before the proposed seedbed becomes eroded, crusted over, or dried out and shall not be done when the ground is frozen, or covered with snow. The seed shall comply with the requirements of the Missouri Seed Law and the Federal Seed Act. Also, it shall contain no seed of any plant on the Federal Noxious Weed List. Other weed seeds shall not exceed one percent by weight of mix

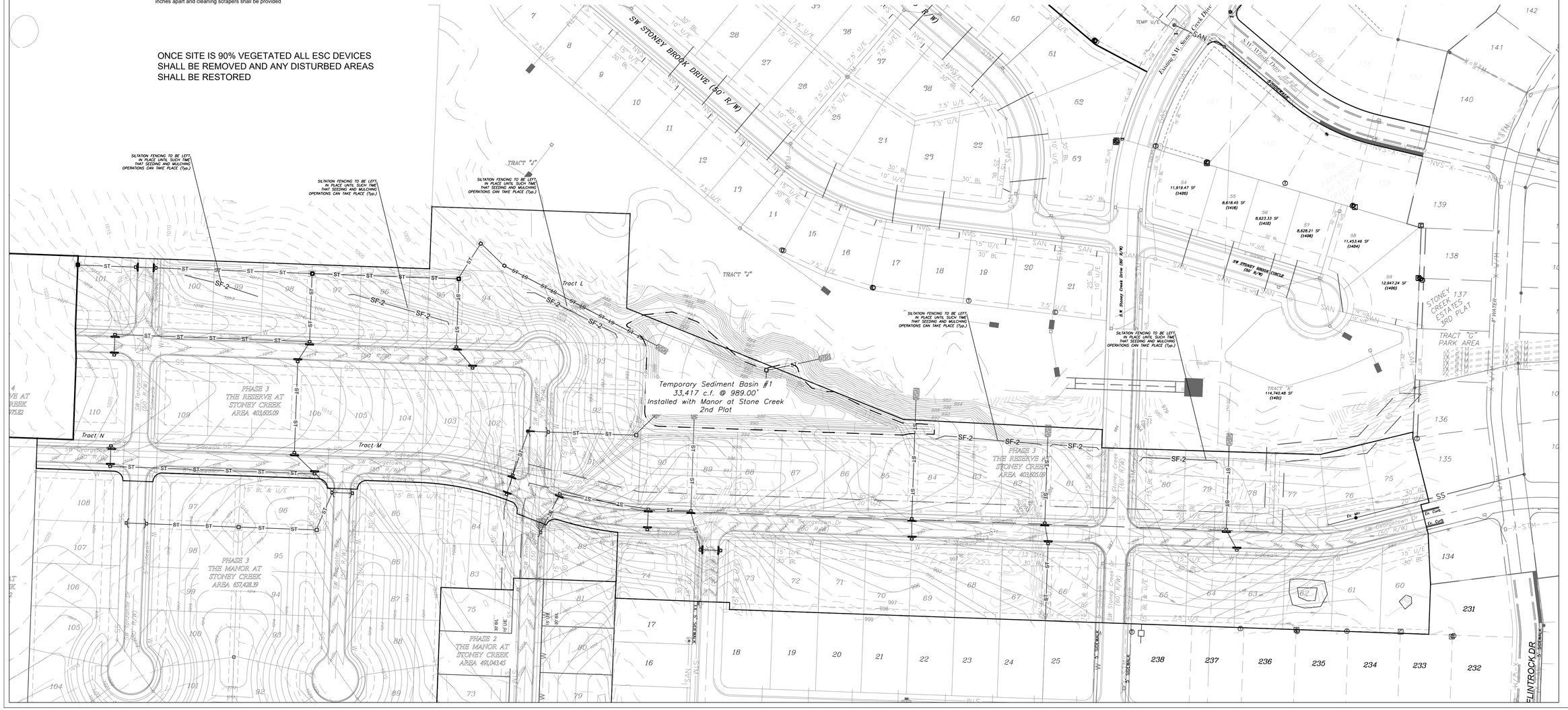
Seed and Fertilizer Rate:

- Mix I - Rye Grass / Blue Grass -------- 100 lbs. per Acre
- Mix II - Tall Fescue / Blue Grass ------ 195 lbs. per Acre
- Lime ----------2000 lbs per Acre (50 lbs. per 1000 sq. ft.)
- Fertilizer ----------800 to 1200 lbs per Acre (25 lbs per 1000 sq. ft.)

During the dates December 15th through May 31 ALL lime fertilizer, seed and mulch shall be applied to finished slopes of disturbed areas. During the months of June, July, October and November 1st through December 15th, lime fertilizer, seed and mulch shall be applied at the following rates:
Lime - 100% of specified quantity
Fertilizer - 75% of the specified quantity
Seed - 50% of the specified quantity
Mulch - 100% of the specified quantity

Mulch shall be Vegetative type, cereal straw from stalks of oats, rye, or barley, or approved equal. The straw shall be free of prohibited weed seed and relatively free of all other noxious and undesirable seed. Mulch shall be applied at the rate of 2 tons per acre, (70 to 90 lbs per 1000 sq. ft.). Mulch shall be embedded by a mulch anchoring tool or disk type roller having flat serrated disks spaced not more than 10 inches apart and cleaning scrapers shall be provided

ONCE SITE IS 90% VEGETATED ALL ESC DEVICES SHALL BE REMOVED AND ANY DISTURBED AREAS SHALL BE RESTORED







0 40' 80' 160'

## FINAL RESTORATION PLAN

SCALE: 1" = 80'

SF-1 SILT FENCE PROTECTION TO BE MAINTAINED BY CONTRACTOR

## LEGEND

PHASE 1 SILT FENCE ——SF-1——SF-1——

PHASE 2 SILT FENCE ——SF-2——SF-2——

INLET PROTECTION
GUTTER BUDDY OR EQUIVALENT

## "AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 5111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
*Engineering 2005002186-D*
*Surveying 2005008319-D*
Kansas
*Engineering E-1695*
*Surveying LS-218*
*Oklahoma*
*Engineering 6254*
*Nebraska*
*Engineering CA2821*


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

ESC PHASE 3 - Final Restoration Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

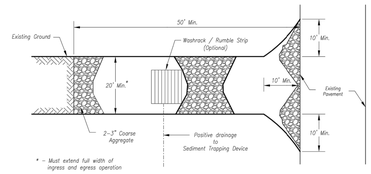
STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER


Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

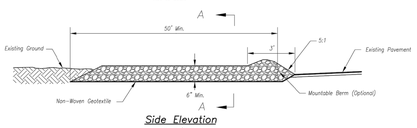

REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

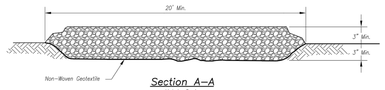
C.052




Plan View
Not to Scale




Side Elevation
Not to Scale




Section A-A
Not to Scale

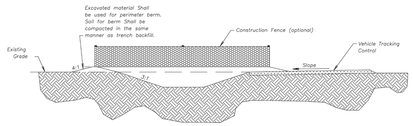
Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE




CONCRETE WASHOUT

Notes for Concrete Washout:

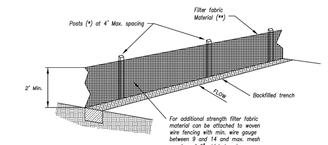
1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking post shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A see-place impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

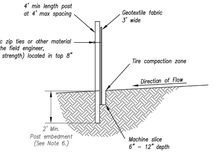
Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
| CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT | STANDARD DRAWING NUMBER ESC-01 |
| | ADOPTED: 10/24/2016 |




(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ⅜" x 1 ⅜"
- NO.2 SOUTHERN PINE 2 ⅜" x 2 ⅜"
- STEEL 1.33 LB/FT

(**) - Geotextile Fabric shall meet the requirements of AASHTO M288

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

SILT FENCE DETAILS
Not to Scale

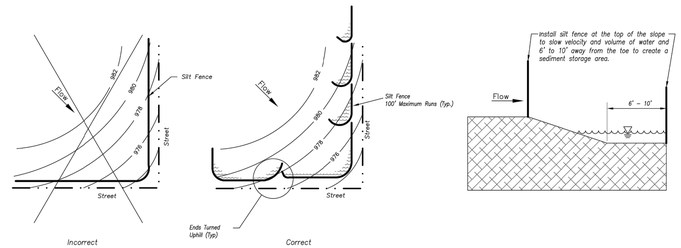


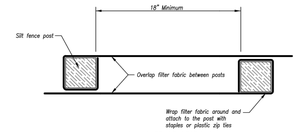

Figure A

SILT FENCE LAYOUT
Not to Scale

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

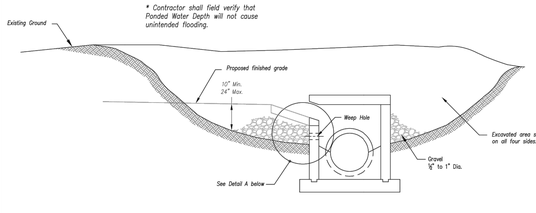


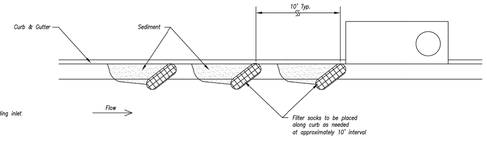




JOINING FENCE SECTIONS
Not to Scale

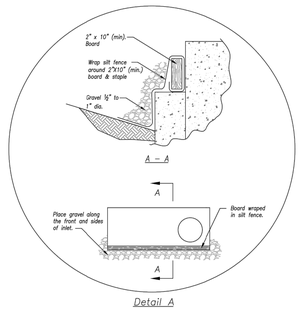
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
| SILT FENCE | STANDARD DRAWING NUMBER ESC-03 |
| | ADOPTED: 10/24/2016 |

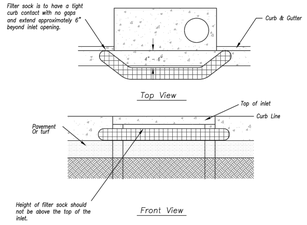



On Grade Curb Inlet Protection




Detail A




Sump Inlet Sediment Filter

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" x 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

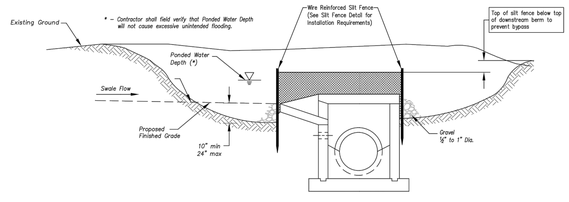
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

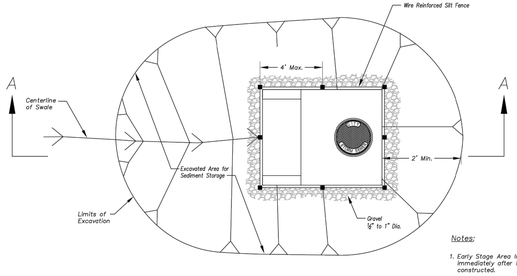
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
| CURB INLET PROTECTION | STANDARD DRAWING NUMBER ESC-06 |
| | ADOPTED: 10/24/2016 |

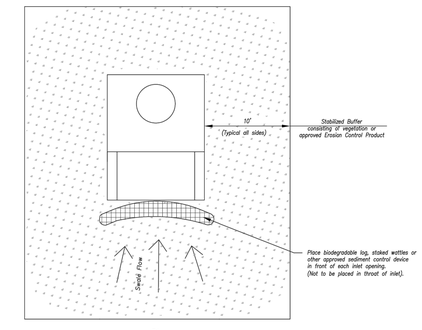



Section A-A
Not to Scale

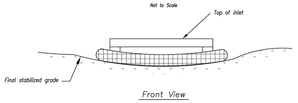



Plan
Not to Scale

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)




Plan
Not to Scale




Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
| AREA INLET AND JUNCTION BOX PROTECTION | STANDARD DRAWING NUMBER ESC-07 |
| | ADOPTED: 10/24/2016 |

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK - 3RD PLAT
Issue Date: July 16, 2017

ESC - Standard Details
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019098
LEE'S SUMMIT, MO
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019098
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 - As-Built
11/7/19 - As-Built
11/14/19 - As-Built

C.053

North

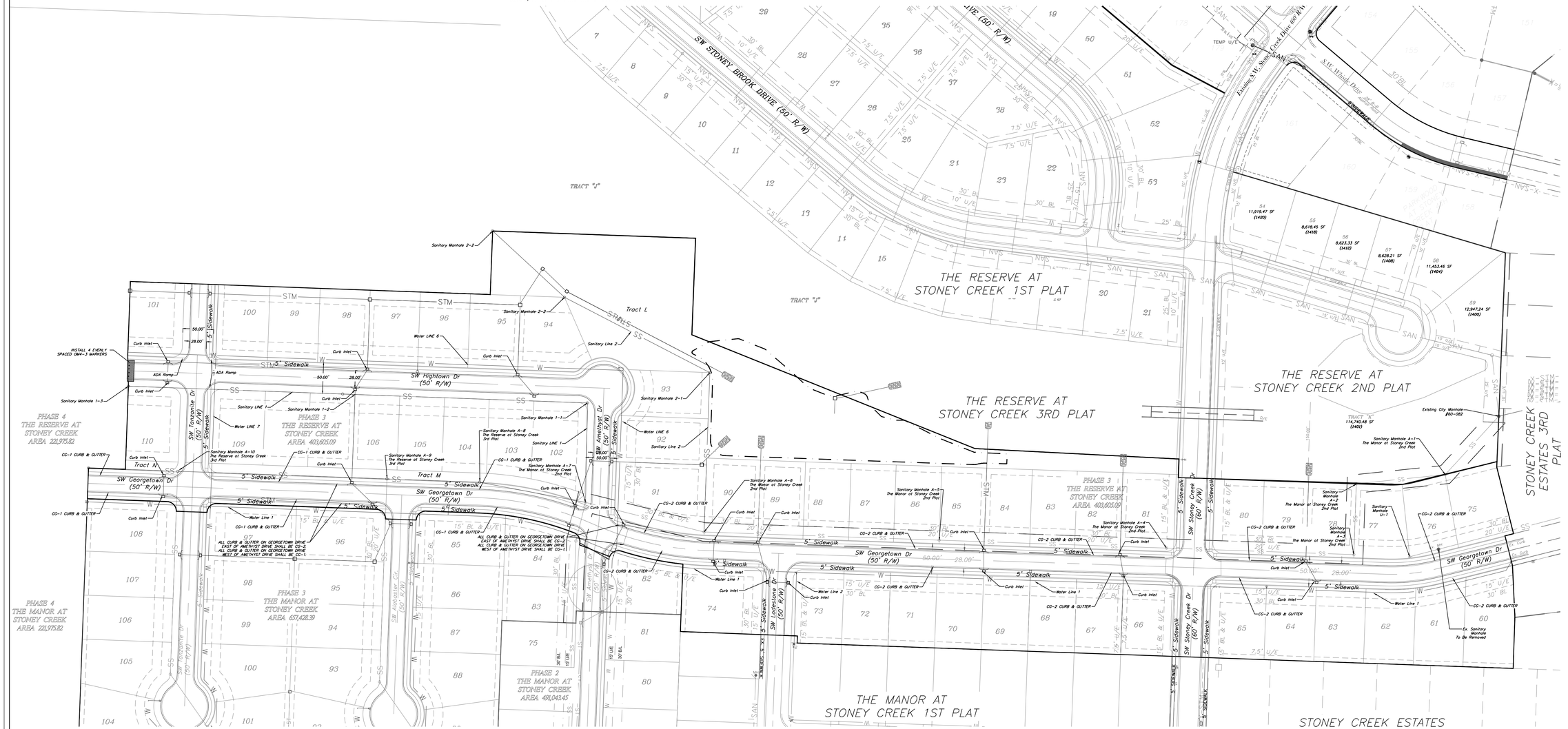
0 40' 80' 160'

SITE PLAN

SCALE: 1" = 80'

*Sidewalk Construction Notes*

*–ADA ramps shall be constructed with the subdivision improvements.*
*–Sidewalk and ADA ramps along common area tracts L, M and N shall be constructed by the developer at the time the street is constructed.*




"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Site Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER


Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226


REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.100

*Notes*

*1. Contractor is responsible for verifying all existing utility locations prior to excavation*
*2. There are no known natural or artificial water storage detention areas, or wetlands in the area designated for construction*
*3. No part of the project lies within the 100 year flood plain*
*4. All erosion and sediment control measures need to be implemented prior to construction*
*5. Additional erosion control may be required by the CIty Engineer, Design Engineer or Owner at any time problematic areas are noted in the field or existing measures are found to be ineffective*
*6. Soil Stabilization of disturbed areas shall be completed within 14 days of construction inactivity*
*7. Contractor responsible for all density testing of roadway subgrade and granular base.*

North

0 40' 80' 160'

GRADING PLAN

SCALE: 1" = 80'




"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

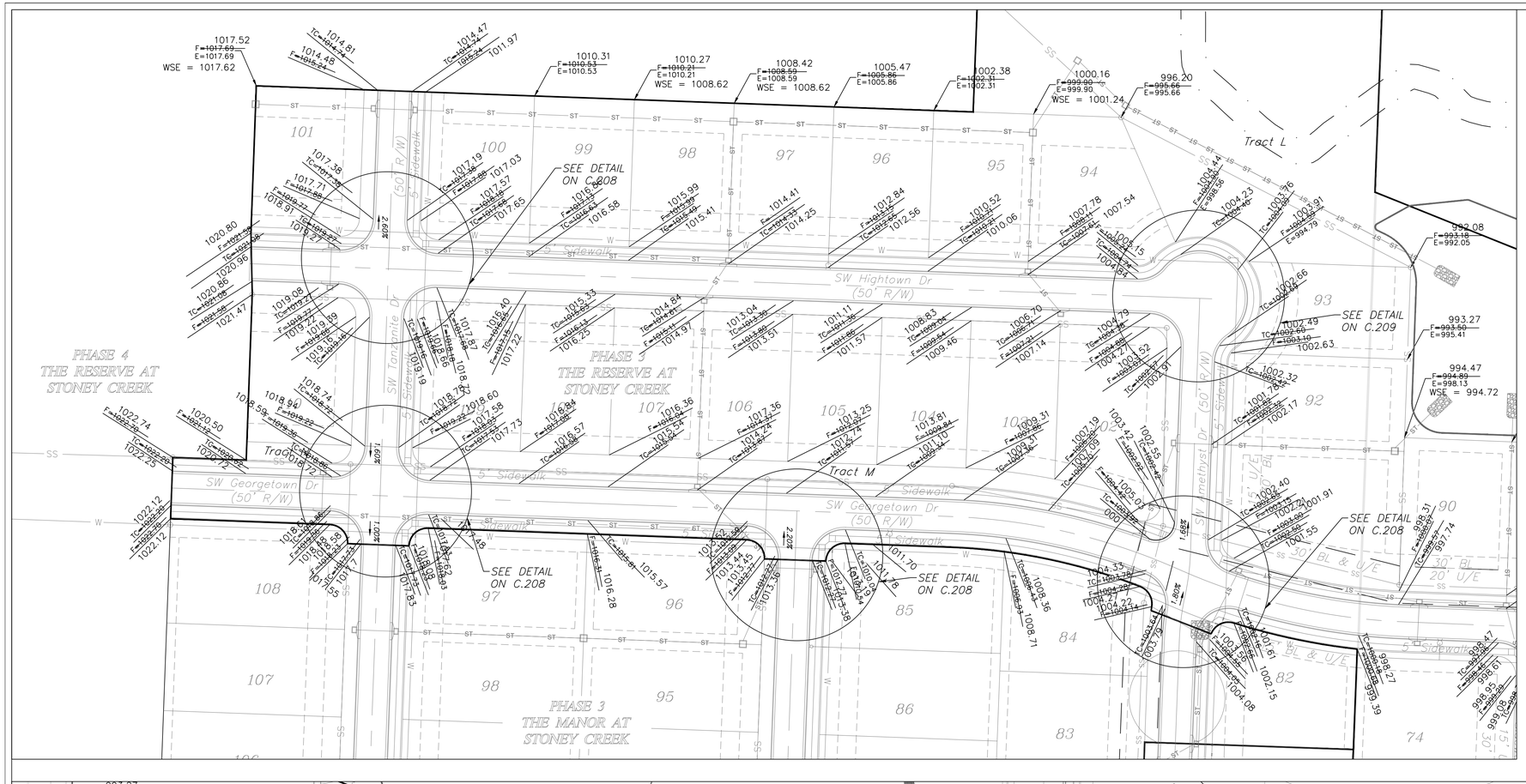
Master Drainage Plan 1 of 3:
Grading Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

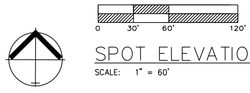
STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.200




## SPOT ELEVATIONS

SCALE: 1" = 60'

| Lot Number | Basement Type | MBOE (Left Rear) | MBOE (Right Rear) |
|---|---|---|---|
| 60 | Full | | |
| 61 | Full | | |
| 62 | Full | | |
| 63 | Full | | |
| 64 | Full | | |
| 65 | Full | | |
| 66 | Full | | |
| 67 | Full | | |
| 68 | Full | | |
| 69 | Full | | |
| 70 | Full | | |
| 71 | Full | | |
| 72 | Full | | |
| 73 | Full | | |
| 74 | Daylight | | |
| 75 | Daylight | | |
| 76 | Daylight | | |
| 77 | Full | | |
| 78 | Full | | |
| 79 | Full | | |
| 80 | Daylight | | |
| 81 | Daylight | | |
| 82 | Daylight | | |
| 83 | Daylight | | |
| 84 | Daylight | | |
| 85 | Daylight | | |
| 86 | Daylight | | |
| 87 | Daylight | | |
| 88 | Daylight | | |
| 89 | Full | 997.50 | 997.50 |
| 90 | Full | 997.50 | 997.50 |
| 91 | Daylight | 997.50 | 997.50 |
| 92 | Daylight | 997.50 | 997.50 |
| 93 | Walkout | 997.50 | 997.50 |
| 94 | Daylight | 1003.90 | None |
| 95 | Daylight | 1005.25 | 1003.90 |
| 96 | Daylight | 1008.00 | 1005.25 |
| 97 | Daylight | 1011.50 | 1008.00 |
| 98 | Daylight | 1012.50 | 1011.50 |
| 99 | Daylight | 1014.00 | 1012.50 |
| 100 | Daylight | 1017.00 | 1014.00 |
| 101 | Daylight | 1020.50 | 1017.00 |
| 102 | Full | | |
| 103 | Full | | |
| 104 | Full | | |
| 105 | Full | | |
| 106 | Full | | |
| 107 | Full | | |
| 108 | Full | | |
| 109 | Full | | |
| 110 | Full | | |

NOTE:

MBOE CAN BE INTERPOLATED
FROM SIDE TO SIDE
BASED ON HOME LOCATION.

## "AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Master Drainage Plan 2 of 3:
Spot Elevations
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 19071
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

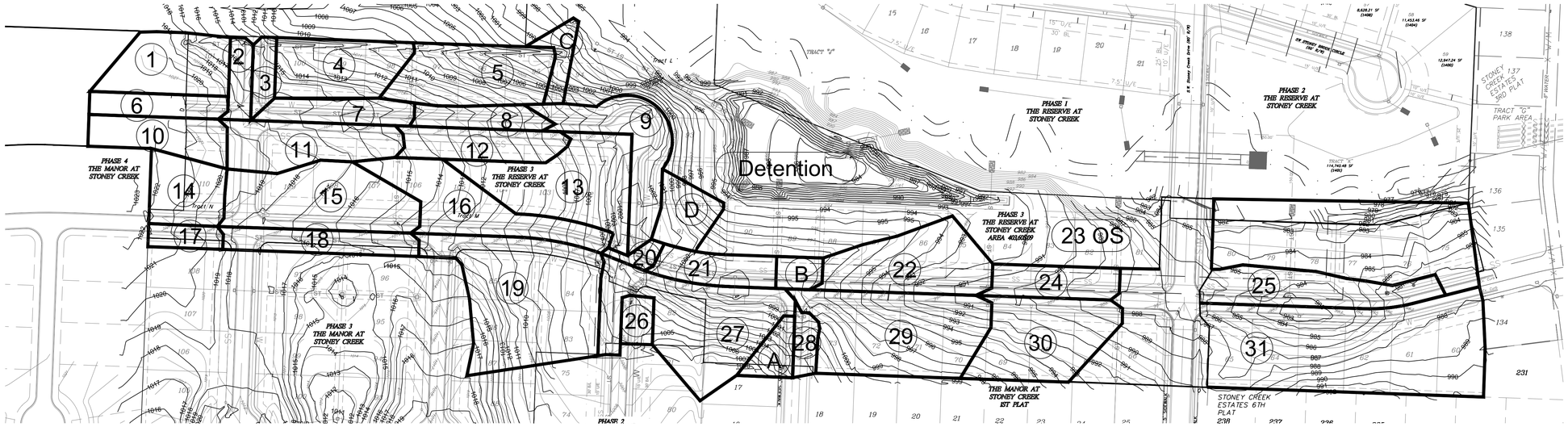
C.201

North

0 50' 100' 200'

# DRAINAGE AREA MAP

SCALE: 1" = 100'




## "AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT

Issue Date: July 16, 2017

Master Drainage Map 3 of 3:
Drainage Area Map
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

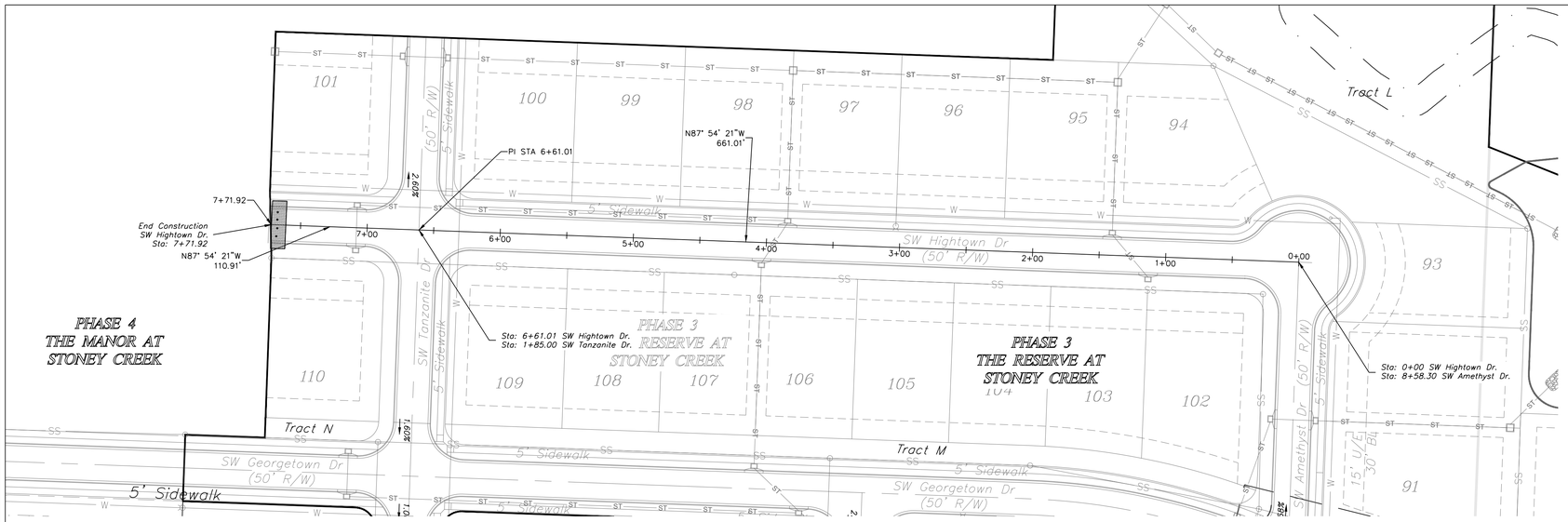
REVISIONS

9/24/19 – As-Built

11/7/19 – As-Built

11/14/19 – As-Built

C.202



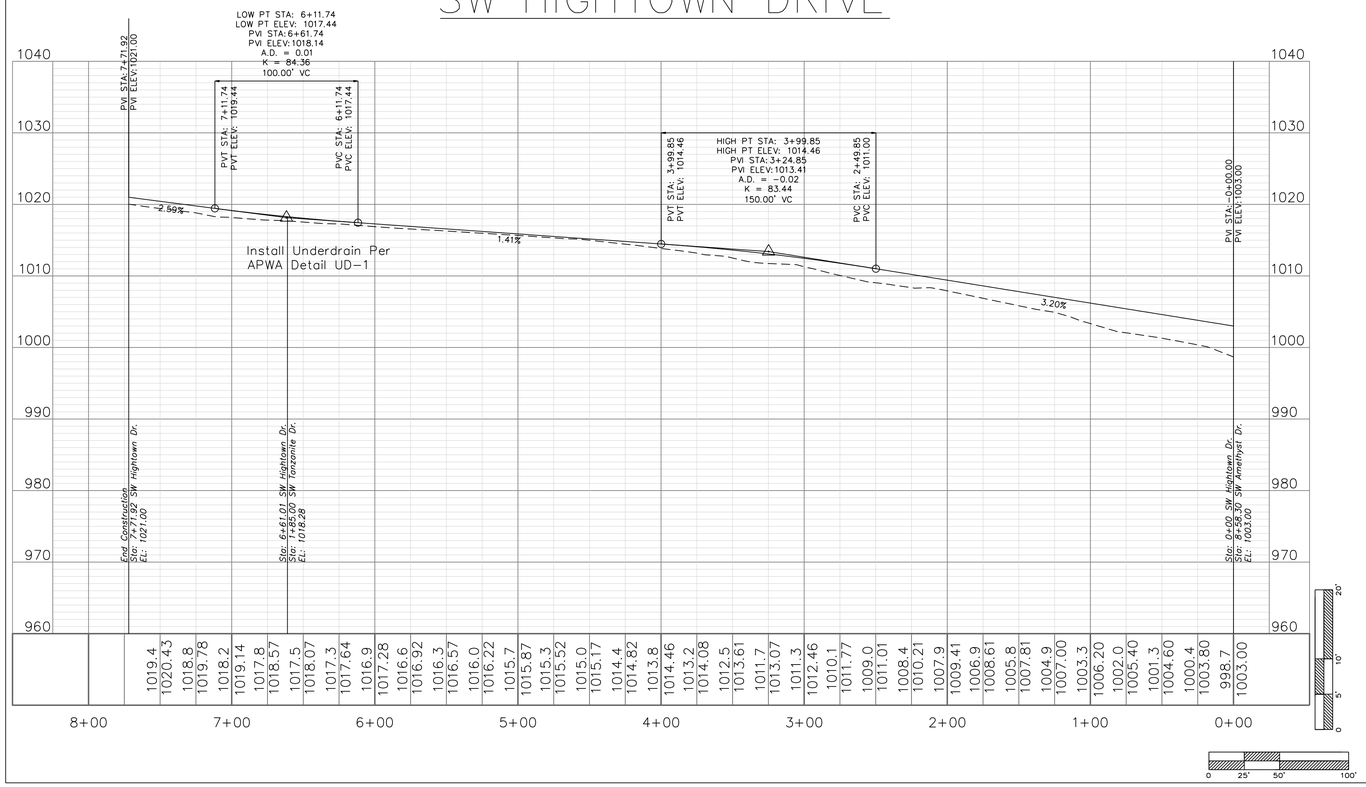

North

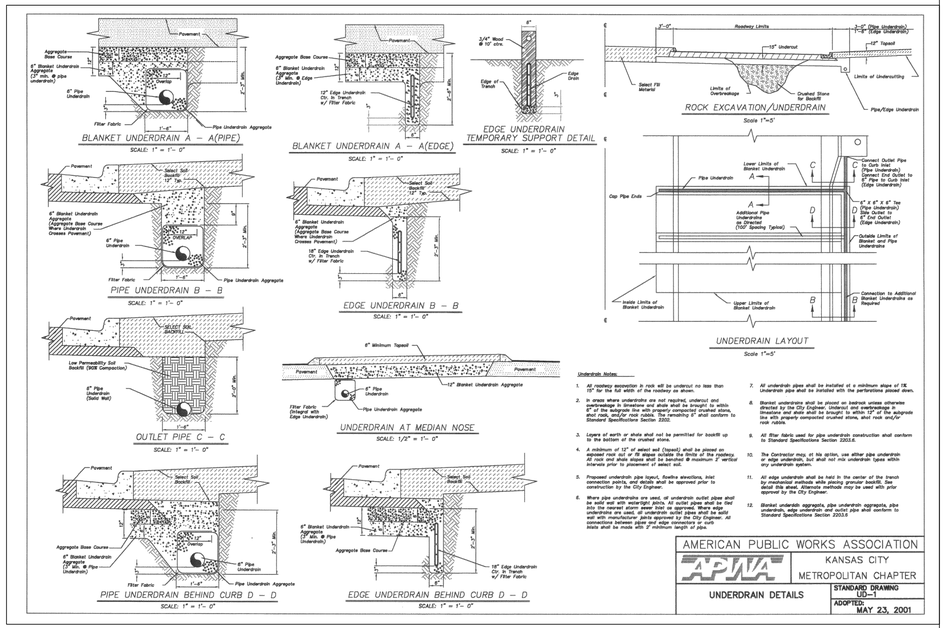
0 25' 50' 100'

## STREET PLAN & PROFILE

SCALE: 1" = 50'

# SW HIGHTOWN DRIVE




Underdrain Notes:

1. All roadway excavation in rock will be undercut no less than 10" for the full width of the roadway as shown.
2. In areas where underdrains are not required, undercut and overexcavation to elevations and depths shown on plans. Backfill with granular material or select excavated stone, shot rock, and/or rock rubble. The remaining 4" shall conform to Standard Specifications Section 2202.
3. Layers of earth or shale shall not be permitted for backfill up to the bottom of the crushed stone.
4. A minimum of 12" of select soil (topsoil) shall be placed on undisturbed soil, rock, or backfill material of shale at the planting. All rock and shale slopes shall be benched a minimum 2' vertical intervals prior to placement of select soil.
5. Proposed underdrain pipe layout, flowline elevations, inlet locations, and outlet locations shall be approved prior to construction by the City Engineer.
6. Where pipe underdrains are used, all underdrain outlet pipes shall be solid wall with watertight joints. All outlet pipes shall be flap tite the nearest storm sewer inlet as approved. Where edge underdrains are used, all underdrain outlet pipes shall be solid wall with manufacturer joints approved by the City Engineer. All underdrain outlets shall be made within 3' minimum length of pipe.
7. All underdrain pipes shall be installed at a minimum slope of 1%. Underdrain pipe shall be installed with the perforations placed down.
8. Blanket underdrains shall be placed on bedrock unless otherwise directed by the City Engineer. Undercut and overbreakage in bedrock areas of shale shall be brought to within 12" of the subgrade line with properly compacted crushed stone, shot rock and/or rock rubble.
9. All filter fabric used for pipe underdrain construction shall conform to Standard Specifications Section 2203.6.
10. The Contractor may, at his option, use either pipe underdrain or edge underdrain, but shall not mix underdrain types within any underdrain system.
11. All edge underdrain shall be held in the center of the trench with granular material placed on both sides of the pipe as detail this sheet. Alternate methods may be used with prior approval by the City Engineer.
12. Blanket underdrain aggregate, pipe underdrain aggregate, pipe underdrain, and edge underdrain backfill pipe shall conform to Standard Specifications Section 2203.3.

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
UNDERDRAIN DETAILS
STANDARD DRAWING NO.: UD-1
ADOPTED: MAY 23, 2001

## "AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

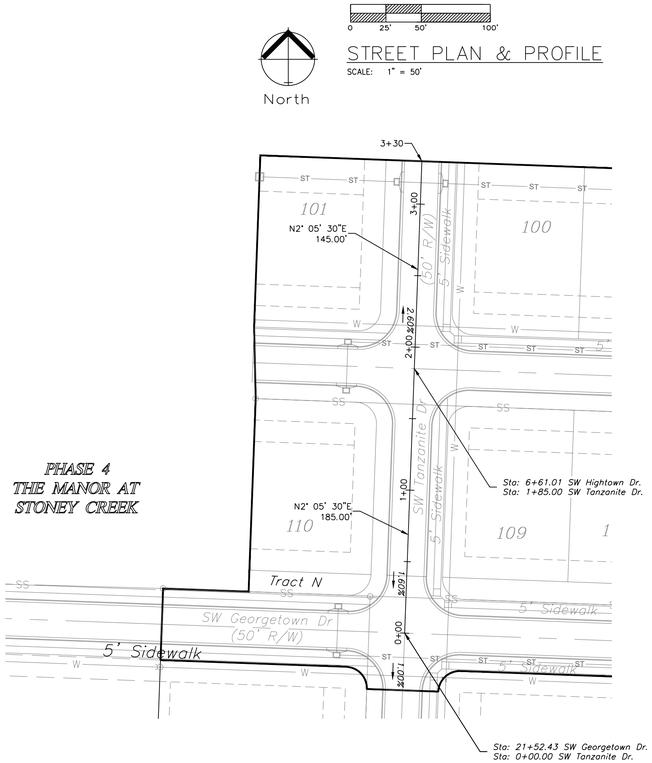
Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 19, 2017

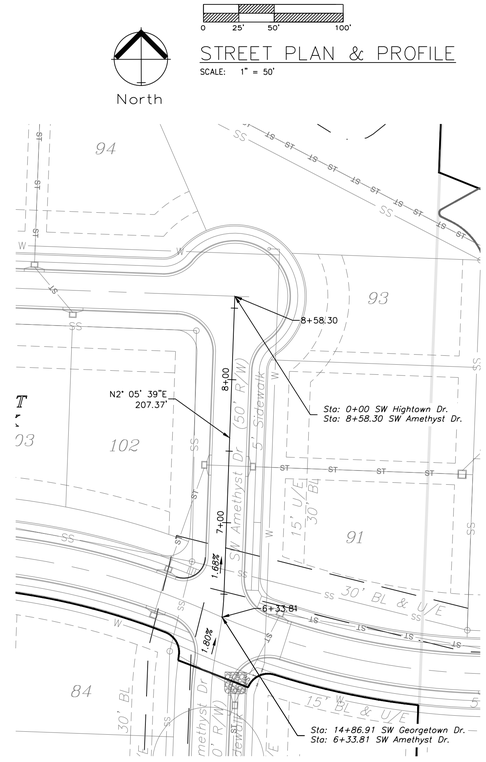
Street Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

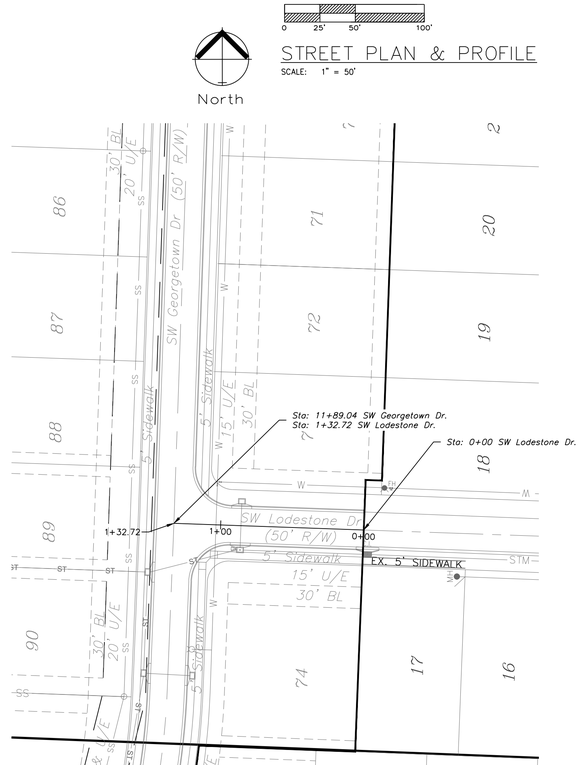
STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER


Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

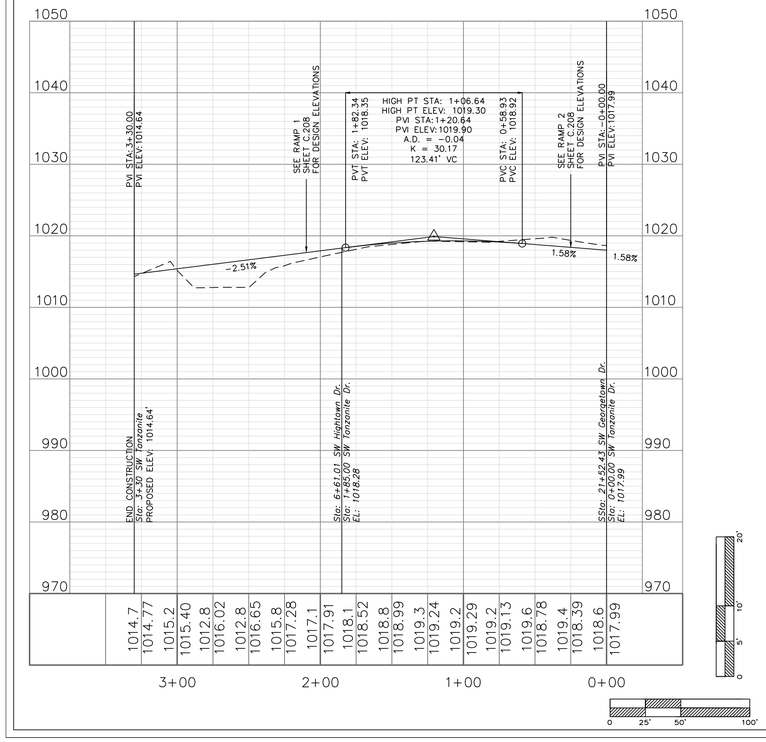

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built



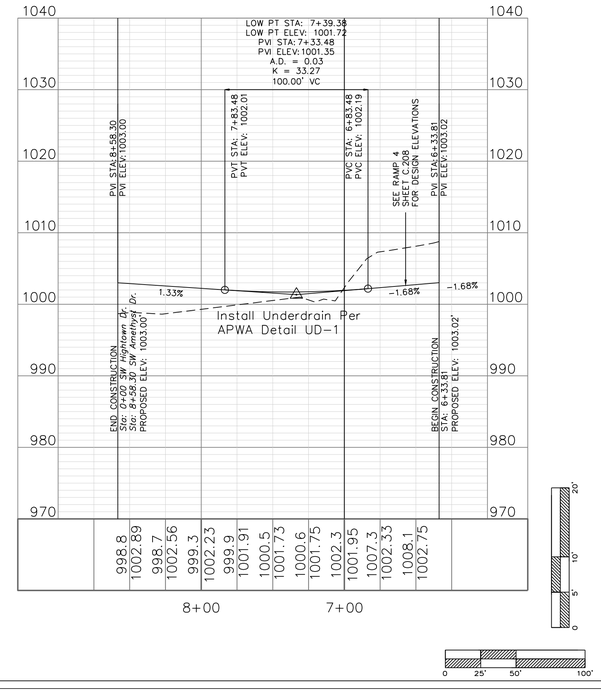



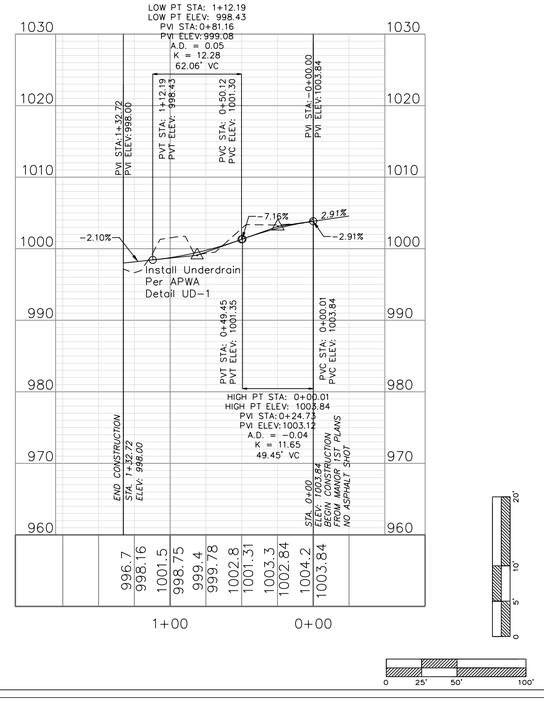

# SW TANZANITE




# SW AMETHYST DR




# SW LODESTONE DR




## "AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Street Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER
CONSTRUCTION PLANS

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

"AS-BUILT"

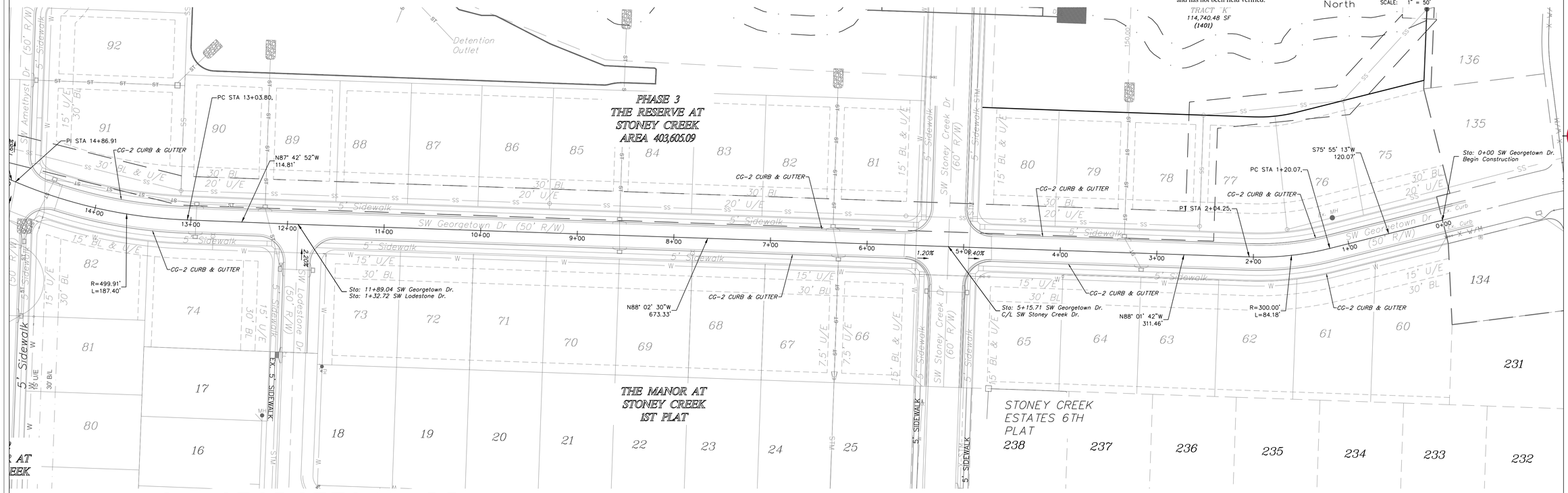
900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

North

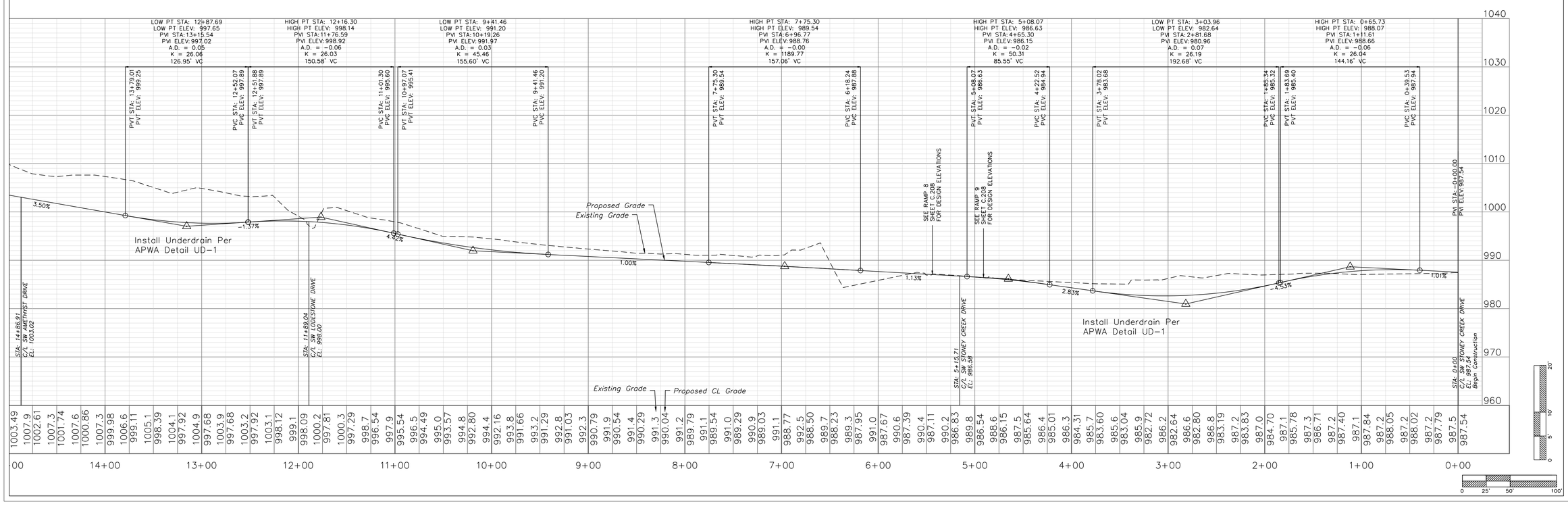
0 25' 50' 100'

# STREET PLAN & PROFILE

SCALE: 1" = 50'




SW GEORGETOWN DR





ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Street Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 19071
PE2006019708
PROFESSIONAL ENGINEER


Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226


REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built




North

0 25' 50' 100'

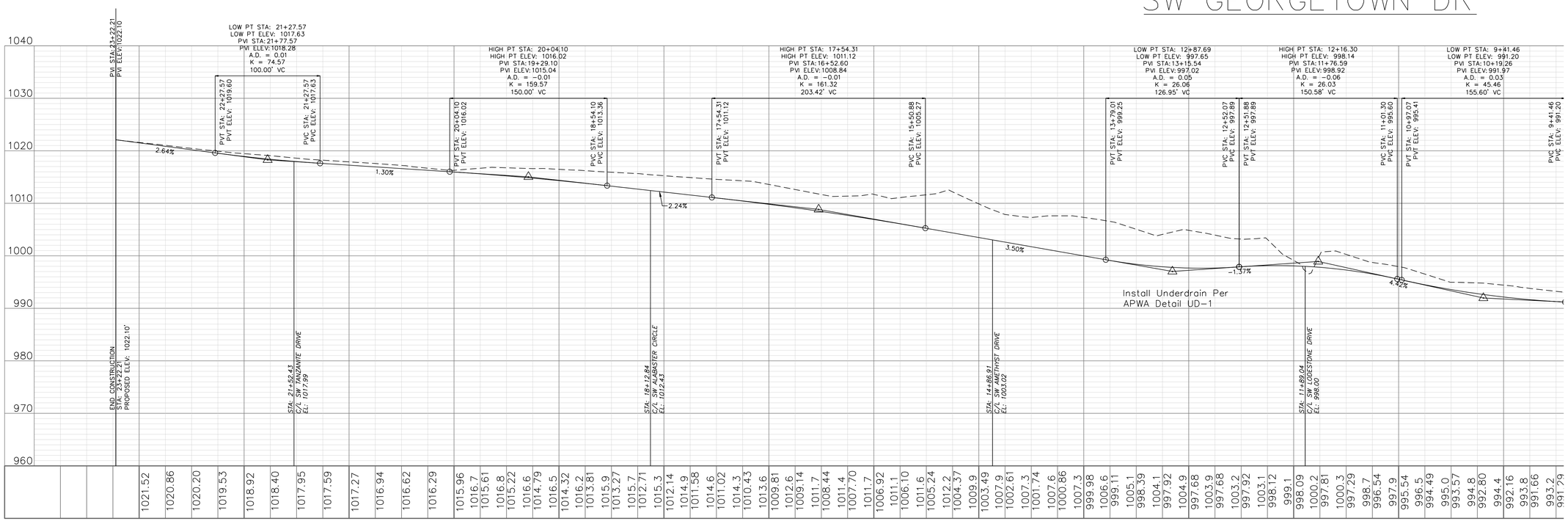
STREET PLAN & PROFILE

SCALE: 1" = 50'

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

# SW GEORGETOWN DR




ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
*Engineering 2005032186-D*
*Surveying 2005008319-D*
Kansas
*Engineering E-1695*
*Surveying LS-218*
Oklahoma
*Engineering 6254*
Nebraska
*Engineering CA2821*

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

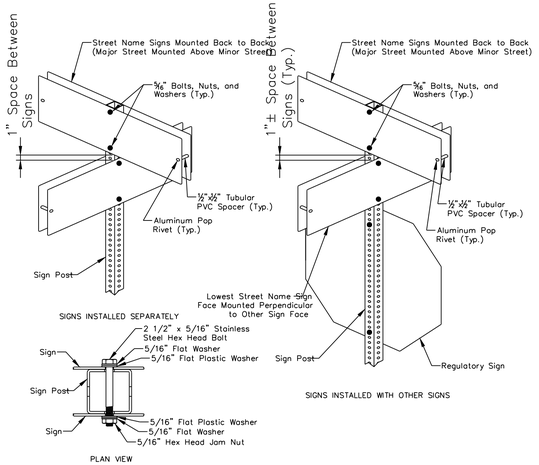
Street Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 19071
PROFESSIONAL ENGINEER

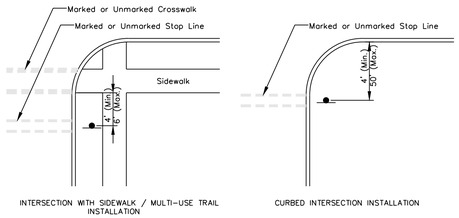
Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

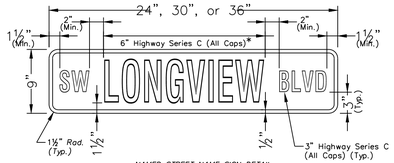
C.206




SQUARE STEEL POST MOUNTING DETAILS

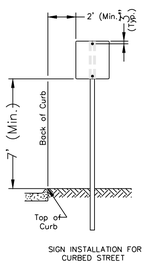



CONTROL SIGN LOCATION



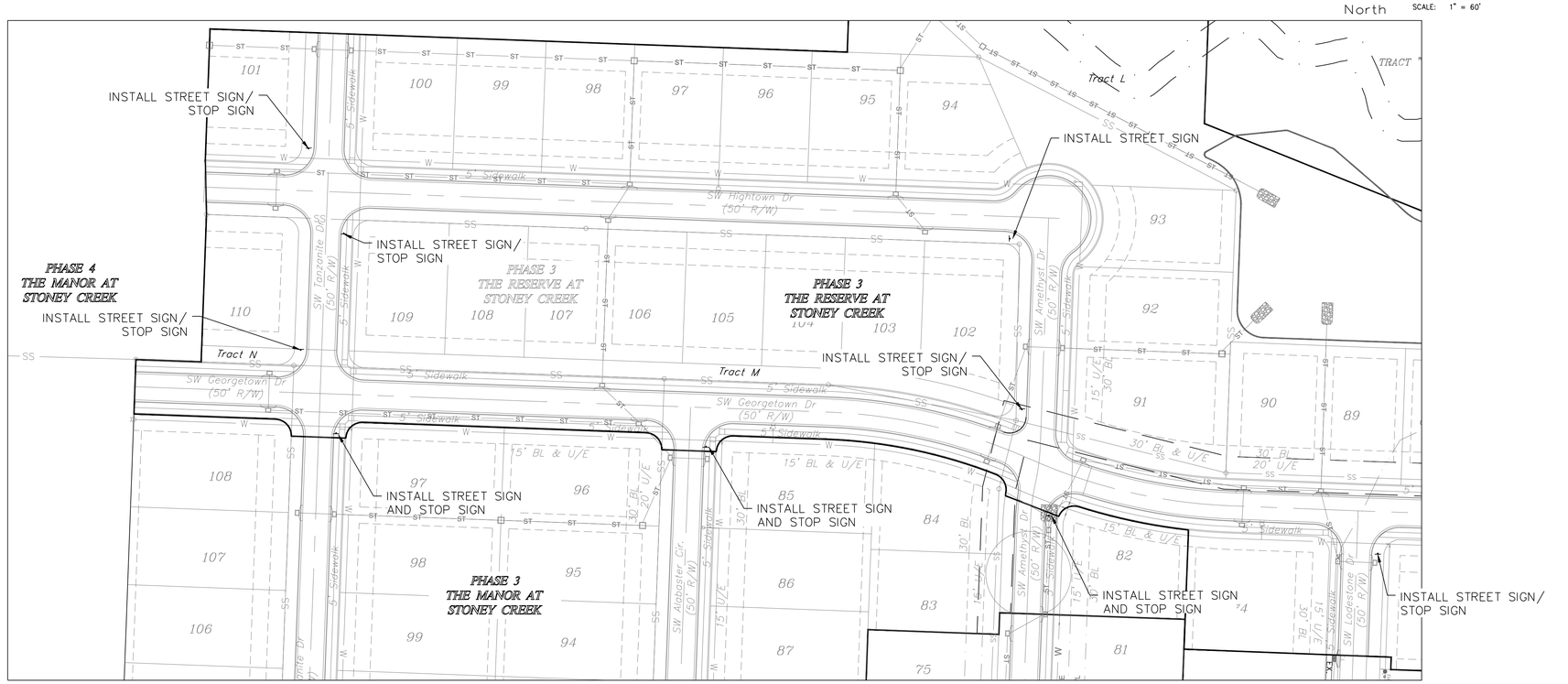

*NAMED STREET NAME SIGN DETAIL*

* Use Highway Series B (All Caps) in lieu of series C if necesary to fit text on a 36" sign blank.



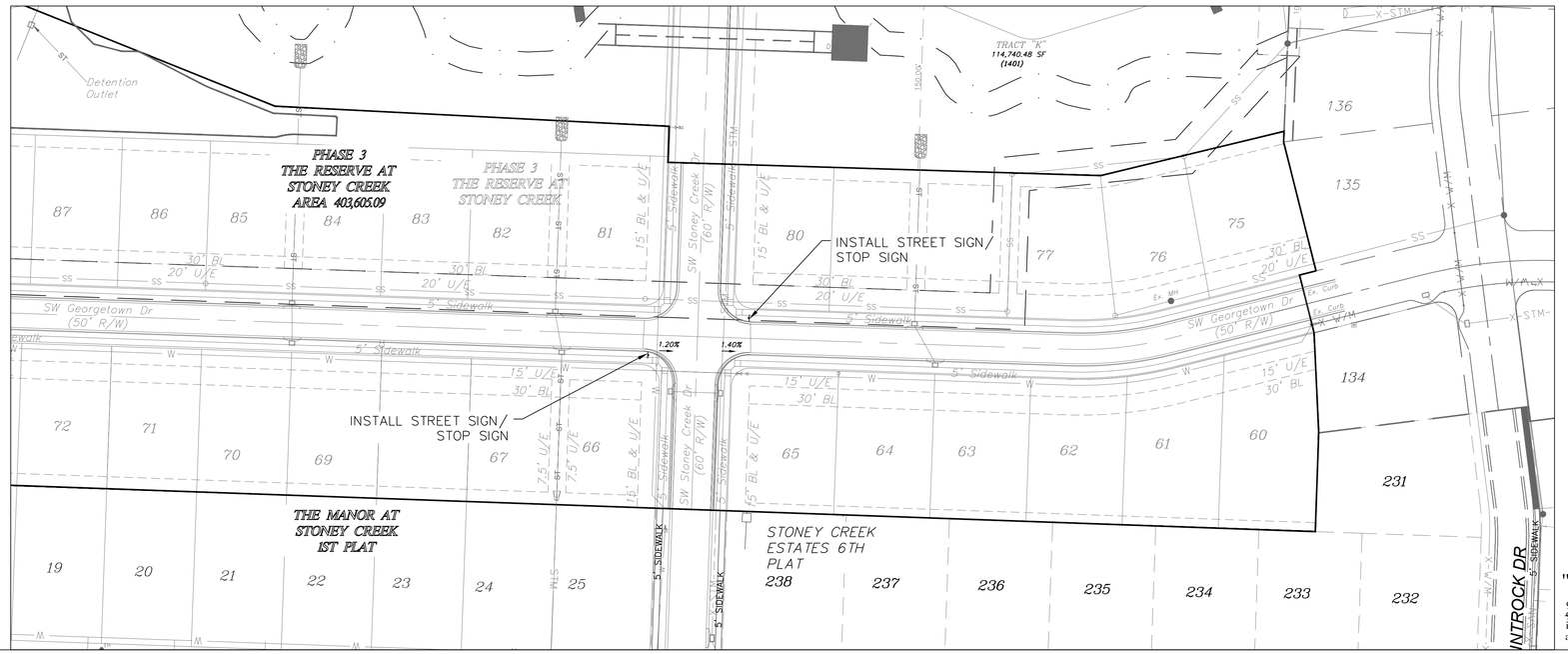

SIGN MOUNTING DETAILS

* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.




STREET SIGNAGE

SCALE: 1" = 60'




STREET SIGNAGE

SCALE: 1" = 60'

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 16, 2017

Street Signage Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

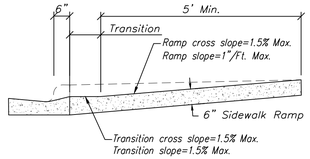



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

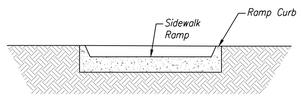
REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

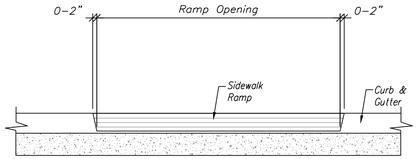
C.207



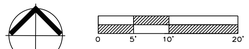

## Section A-A
NOT TO SCALE




## Section B-B
NOT TO SCALE




## Section C-C
NOT TO SCALE



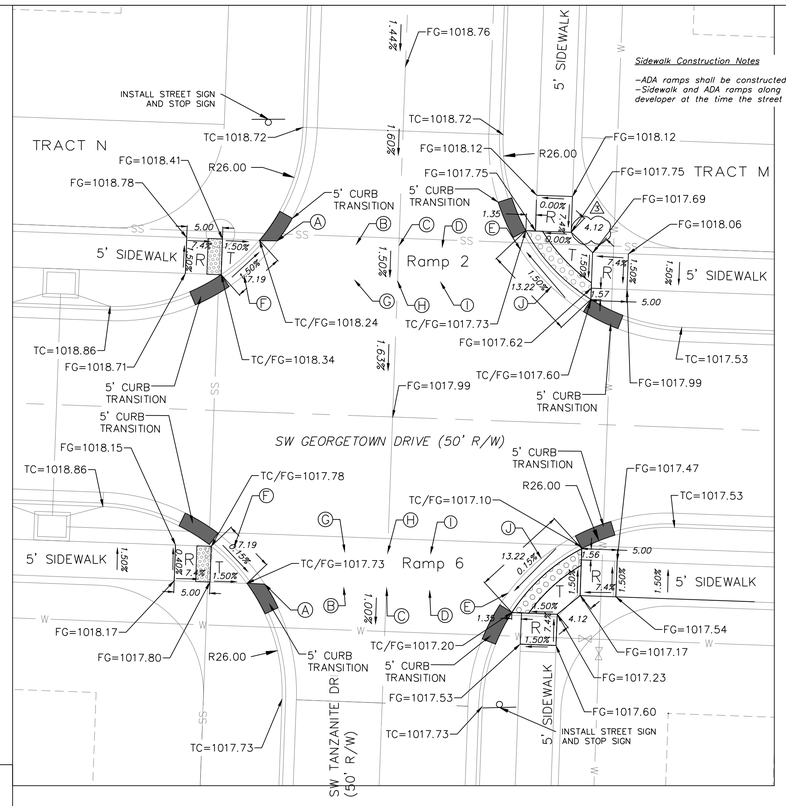

## INTERSECTION / ADA RAMP ELEVATIONS
SCALE: 1" = 10'

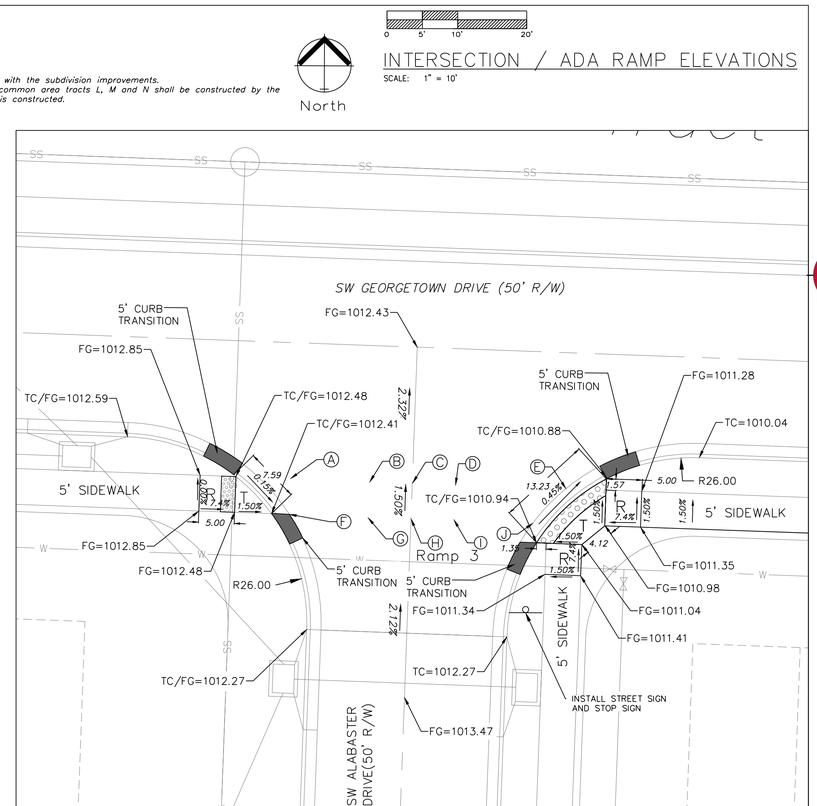
*Sidewalk Construction Notes*

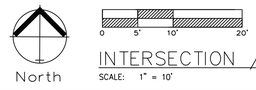
*–ADA ramps shall be constructed with the subdivision improvements.*
*–Sidewalk and ADA ramps along common area tracts L, M and N shall be constructed by the developer at the time the street is constructed.*

## "AS-BUILT"

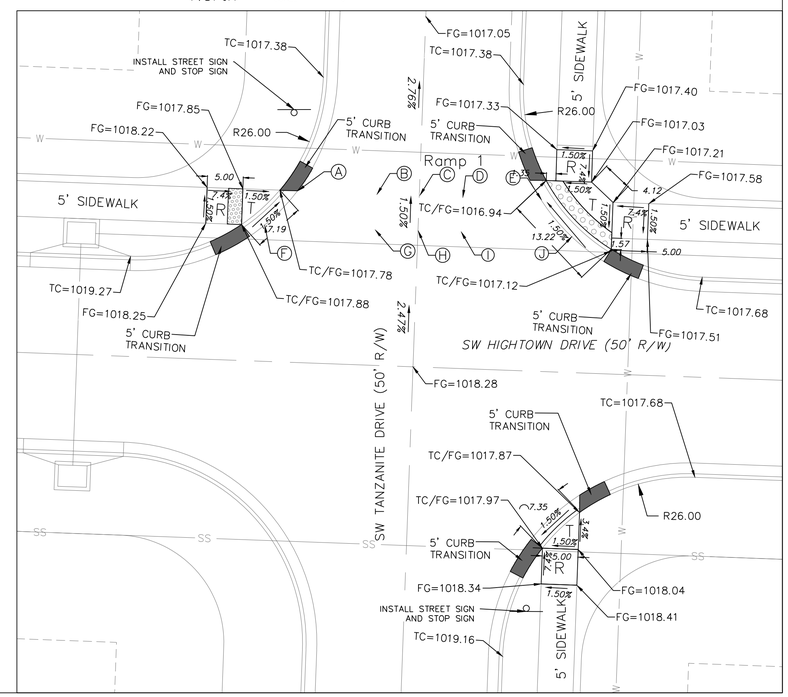
900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.




## INTERSECTION / ADA RAMP ELEVATIONS
SCALE: 1" = 10'

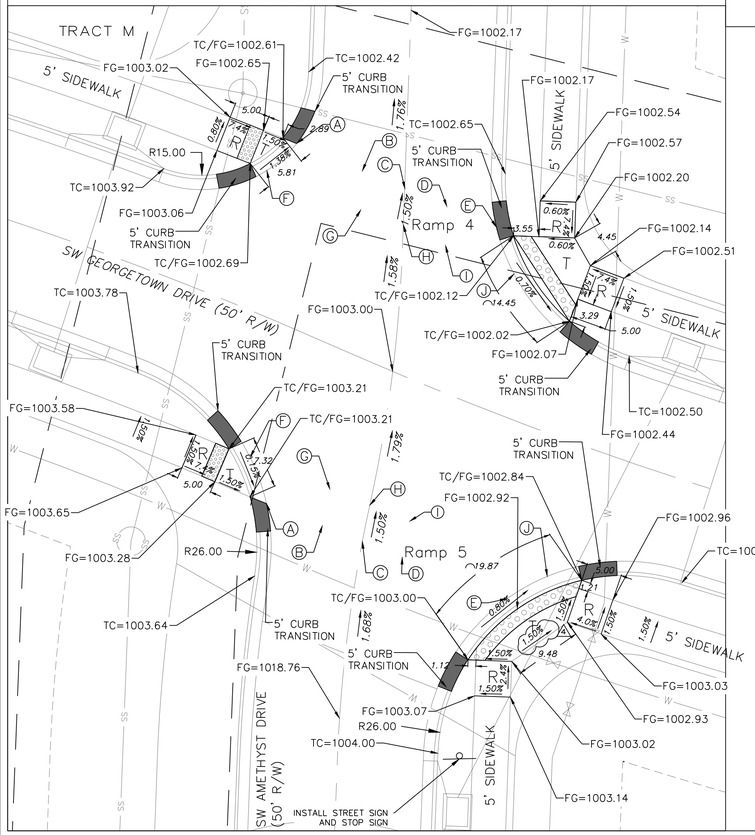


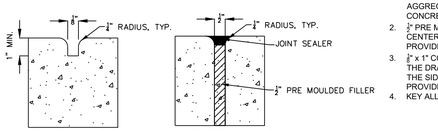

## SPOT ELEVATION TABLE

| | Ramp 1 | Ramp 2 | Ramp 3 | Ramp 4 | Ramp 5 | Ramp 6 |
|---|---|---|---|---|---|---|
| Spot | Elevation | Elevation | Elevation | Elevation | Elevation | Elevation |
| A | 1017.78 | 1018.24 | 1012.48 | 1002.61 | 1003.21 | 1017.73 |
| B | 1017.62 | 1018.25 | 1012.75 | 1002.49 | 1003.29 | 1017.74 |
| C | 1017.74 | 1018.37 | 1012.87 | 1002.61 | 1003.41 | 1017.75 |
| D | 1017.62 | 1018.25 | 1012.75 | 1002.49 | 1003.29 | 1017.55 |
| E | 1016.94 | 1017.73 | 1010.88 | 1002.12 | 1002.92 | 1017.20 |
| F | 1017.88 | 1018.34 | 1012.41 | 1002.69 | 1003.21 | 1017.78 |
| G | 1017.69 | 1018.18 | 1012.82 | 1002.56 | 1003.22 | 1017.79 |
| H | 1017.81 | 1018.30 | 1012.94 | 1002.68 | 1003.34 | 1017.80 |
| I | 1017.69 | 1018.18 | 1012.82 | 1002.56 | 1003.22 | 1017.60 |
| J | 1017.12 | 1017.62 | 1010.94 | 1002.08 | 1002.45 | 1017.10 |

*Sidewalk Construction Notes*

*–ADA ramps shall be constructed with the subdivision improvements.*
*–Sidewalk and ADA ramps along common area tracts L, M and N shall be constructed by the developer at the time the street is constructed.*




SIDEWALK NOTES:

1. CONCRETE SHALL BE CLASS A CONCRETE AIR ENTRAINED AGGREGATE SPECIFICATIONS PROVIDE 3000LB AIR ENTRAINED CONCRETE (6% AIR PLUS OR MINUS 1%)
2. ½" PRE MOULDED EXPANSION JOINTS SHALL BE PLACED AT 30'-0" CENTERS OR WHEN ABUTTING EXISTING CONCRETE/BRICK. PROVIDE SELF LEVELING SEALANT ABOVE JOINT
3. ¼" x 1" CONTRACTION JOINTS SHALL BE PLACED AS SHOWN ON THE DRAWINGS OR AT DISTANCE NOT EXCEEDING THE WIDTH OF THE SIDEWALK IF NOT SHOWN. SAW CUT ALL JOINTS AND PROVIDE A SMOOTH FINISH.
4. KEY ALL CONSTRUCTION JOINTS.




## SIDEWALK DETAIL
NOT TO SCALE

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

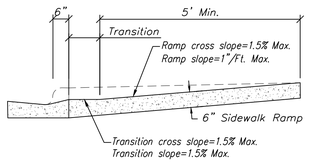
Project: THE RESERVE AT STONEY CREEK - 3RD PLAT
Issue Date: July 19, 2017

Intersection Details & ADA Ramp Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

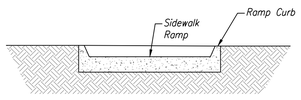



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

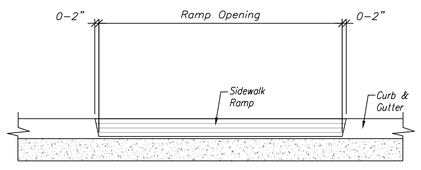
REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built



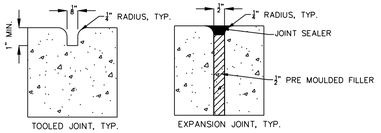

## Section A-A
NOT TO SCALE




## Section B-B
NOT TO SCALE

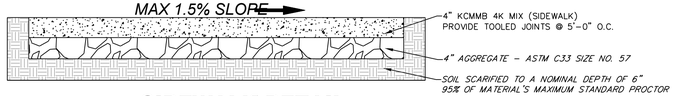



## Section C-C
NOT TO SCALE




SIDEWALK NOTES:

1. CONCRETE SHALL BE CLASS A CONCRETE AIR ENTRAINED AGGREGATE SPECIFICATIONS PROVIDE 3000LB AIR ENTRAINED CONCRETE (6% AIR PLUS OR MINUS 1%)
2. ½" PRE MOULDED EXPANSION JOINTS SHALL BE PLACED AT 30'-0" CENTERS OR WHEN ABUTTING EXISTING CONCRETE/BRICK. PROVIDE SELF LEVELING SEALANT ABOVE JOINT
3. ½" x 1" CONTRACTION JOINTS SHALL BE PLACED AS SHOWN ON THE DRAWINGS OR AT DISTANCE NOT EXCEEDING THE WIDTH OF THE SIDEWALK IF NOT SHOWN, SAW CUT ALL JOINTS AND PROVIDE A SMOOTH FINISH.
4. KEY ALL CONSTRUCTION JOINTS.

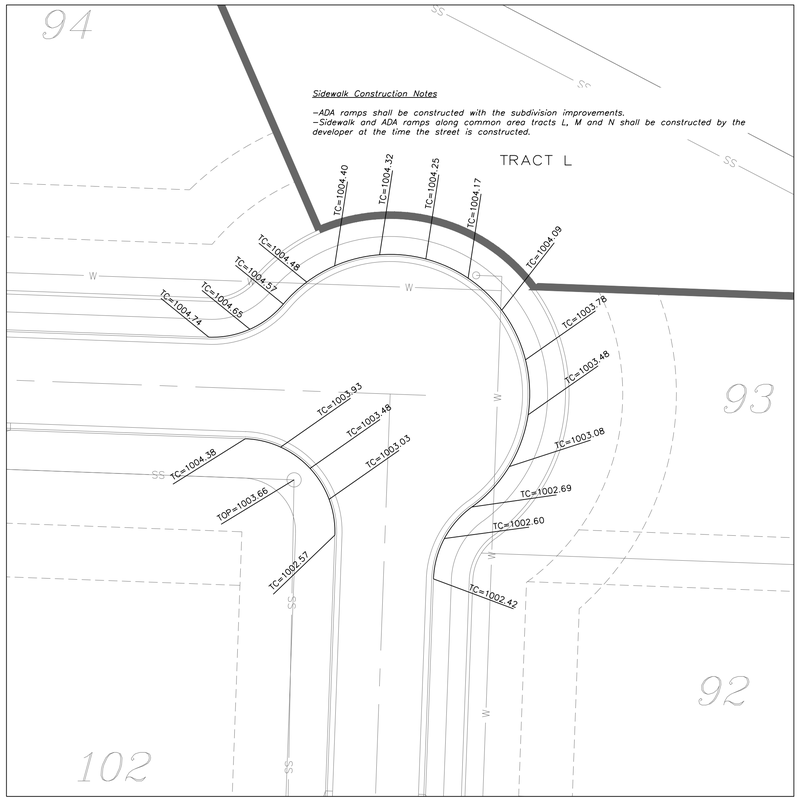



## SIDEWALK DETAIL
NOT TO SCALE

0 10' 20' 40'

## INTERSECTION ELEVATIONS
SCALE: 1" = 20'

North




## SPOT ELEVATION TABLE

| | Ramp 7 | Ramp 8 | Ramp 9 |
|---|---|---|---|
| Spot | Elevation | Elevation | Elevation |
| A | 997.91 | 986.69 | 986.47 |
| B | 998.31 | 986.93 | 986.41 |
| C | 998.43 | 987.05 | 986.35 |
| D | 998.31 | 986.93 | 986.23 |
| E | 997.28 | 986.54 | 985.73 |
| F | 998.05 | 986.76 | 986.56 |
| G | 998.38 | 986.87 | 986.49 |
| H | 998.50 | 986.99 | 986.42 |
| I | 998.38 | 986.87 | 986.30 |
| J | 997.34 | 986.48 | 985.83 |

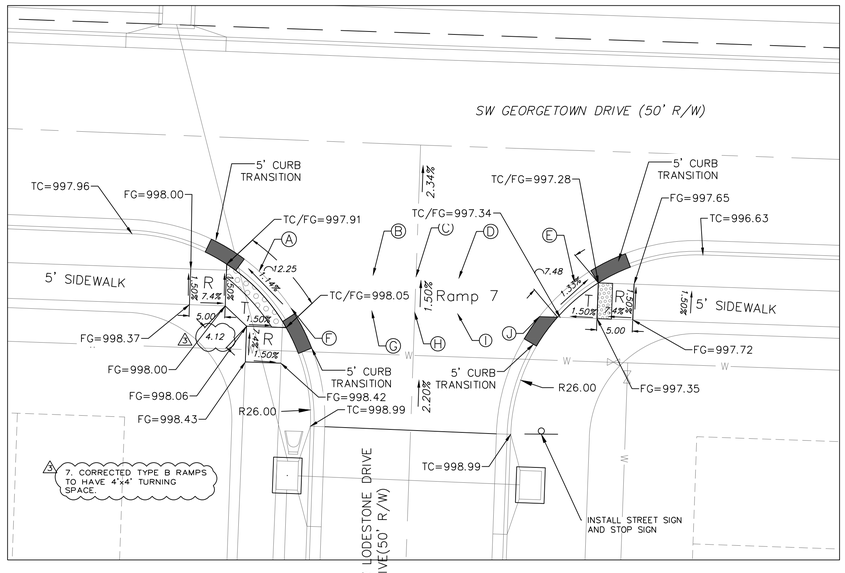
## "AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

0 5' 10' 20'

## INTERSECTION / ADA RAMP ELEVATIONS
SCALE: 1" = 10'

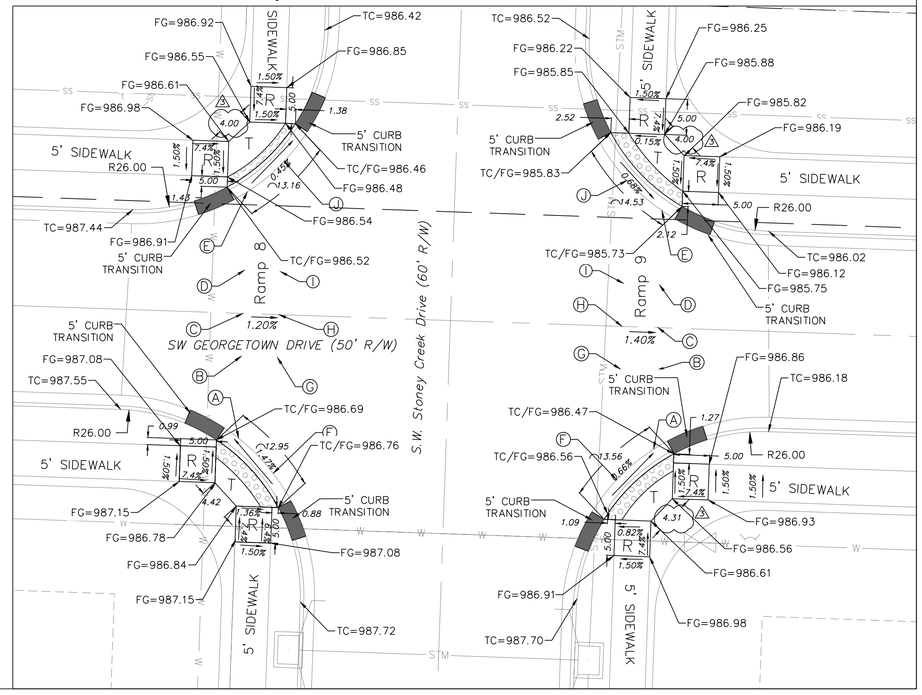
North




0 5' 10' 20'

## INTERSECTION / ADA RAMP ELEVATIONS
SCALE: 1" = 10'

North




ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

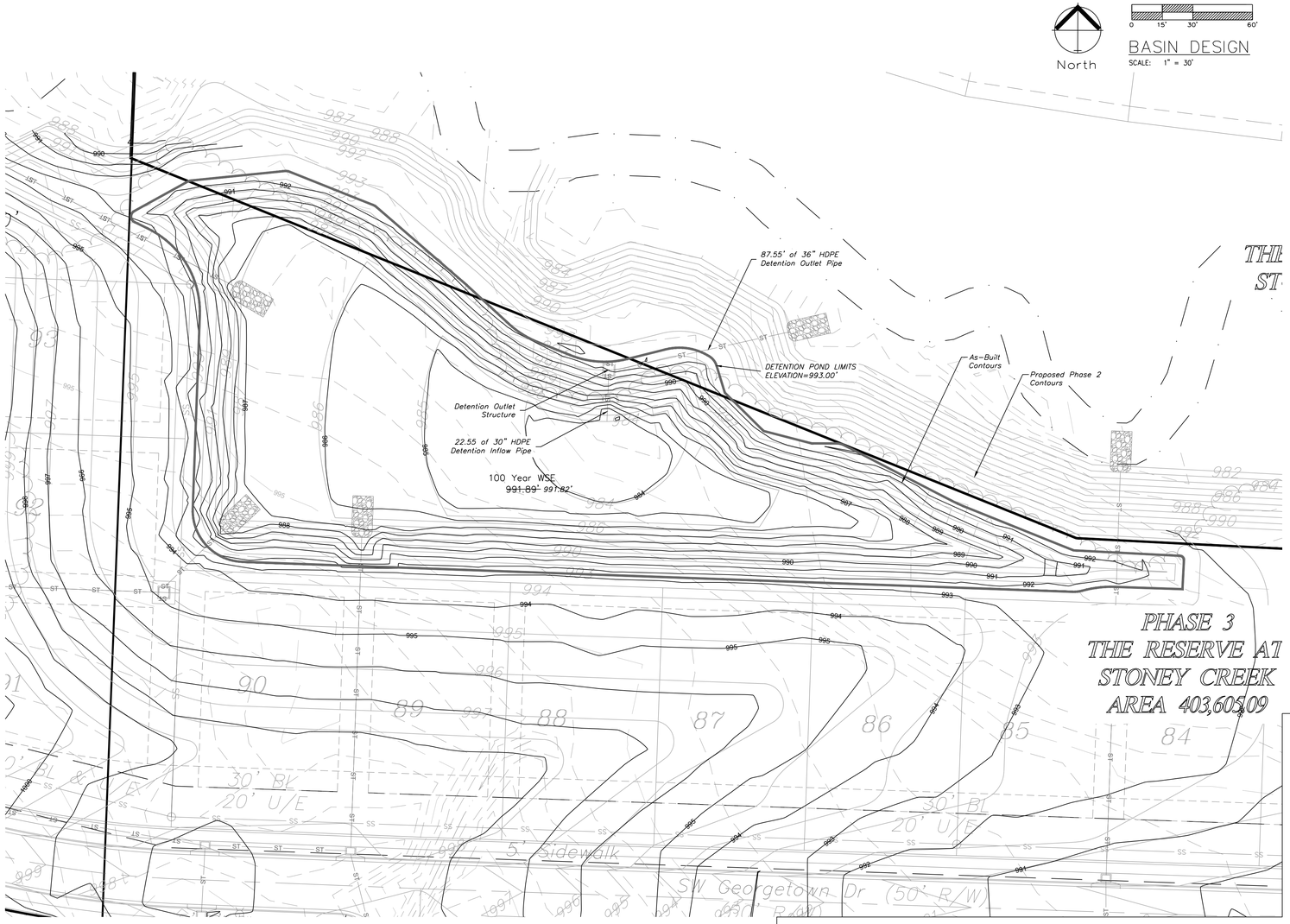
Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Intersection Details & ADA Ramp Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri




Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built




"AS-BUILT"

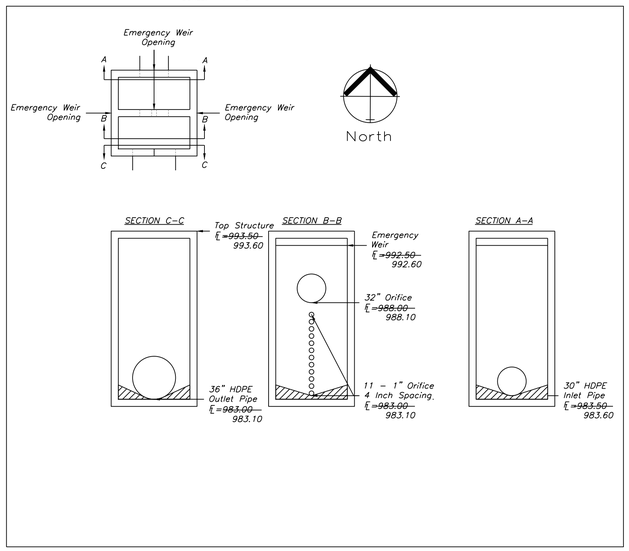
900.10

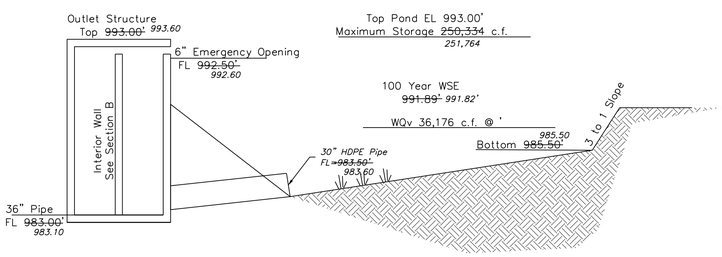
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

0 2.5' 5' 10'

DETENTION OUTLET STRUCTURE

SCALE: 1" = 5'



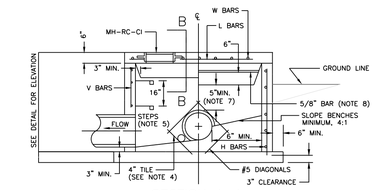




SECTION VIEW

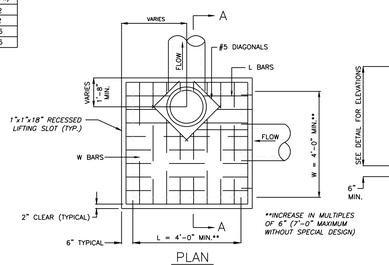
N.T.S.

REINFORCING

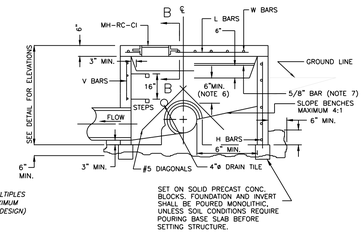
| BARS | SIZE | SPACING (IN.) |
|---|---|---|
| H | 4 | 12 |
| V | 4 | 12 |
| L | 5 | 6 |
| W | 5 | 6 |



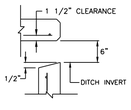

SECTION A–A
CAST IN PLACE



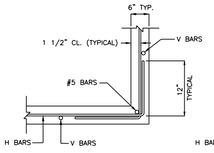

PLAN



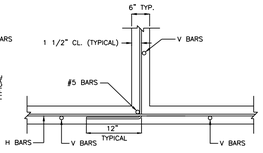

SECTION A–A




SECTION B–B




CORNER DETAIL




T–SECTION DETAIL

*GENERAL NOTES:*

1. Locate ring and cover over outlet.
2. All work and materials shall conform to APWA Sect. 2600.
3. Use 3/4" chamfer strip on all exposed concrete corners.
4. Steps required @ 16" O.C. when depth from top of casting to invert exceeds 4 feet.
5. Boxouts will not be allowed to project through the corners of the structure.
6. The minimum reinforcing shall be 1 H–bar over a cast–in place pipe and 2 H–bars over a precast boxout.
7. Limit opening height to 6" with No. 5 galvanized bars extending to corner rebars.
9. Show field inlet orientation on plans plus number and size of opening.
10. O.R. = one half outside pipe diameter (O.D.).
11. 4" ø field tile or precast hole shall be located at entering pipe and in the front face sump points. These tiles or openings shall be capped with ¼" galvanized wire mesh on the outside of the inlet and clear the invert and base concrete.
12. Location of the Manhole shall be located along the Northeast side of the structure.

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 19, 2017

DETENTION BASIN / BMP PLAN
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER IA-2006019708
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

9/24/19 – As–Built
11/7/19 – As–Built
11/14/19 – As–Built

C.210

North

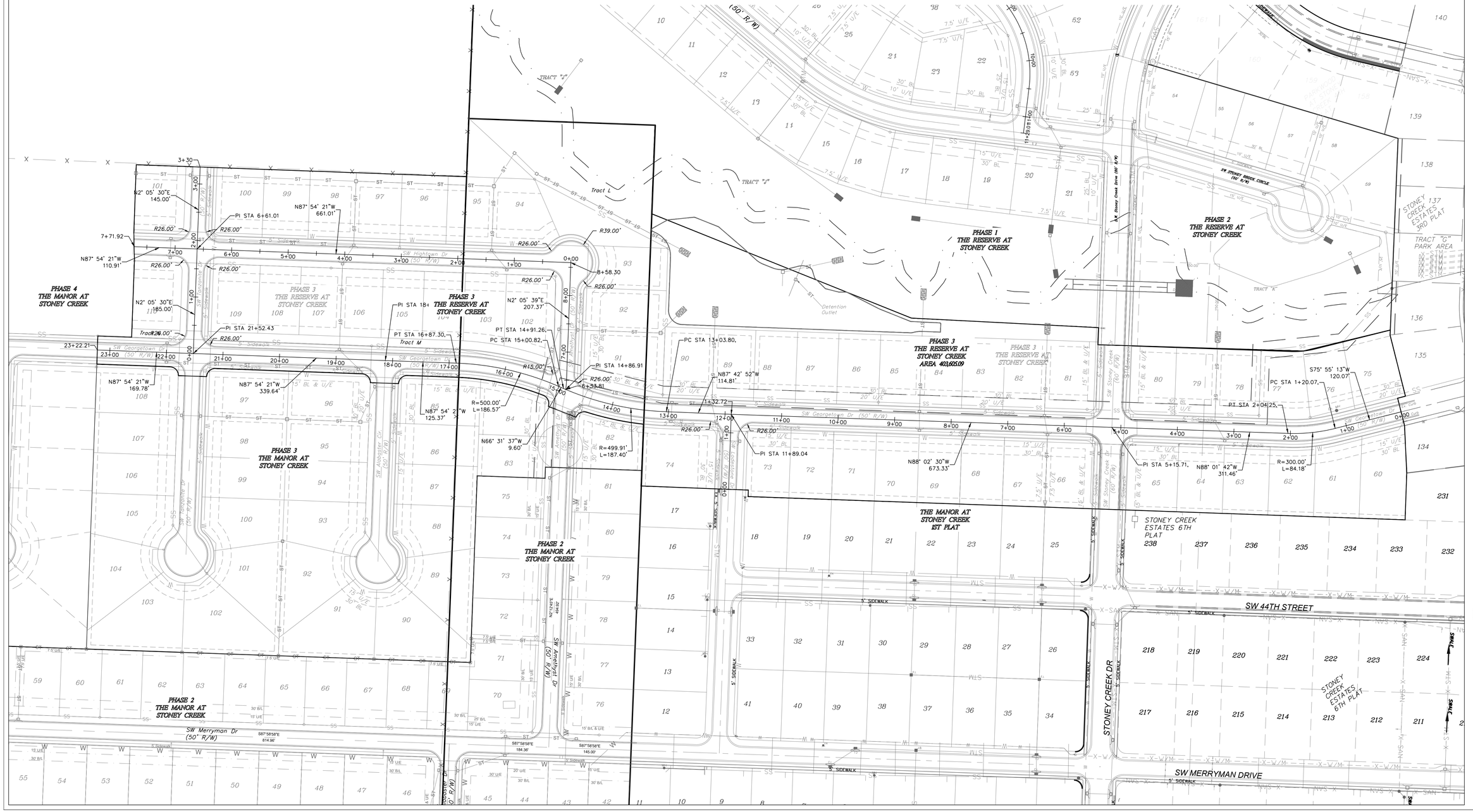
0 30' 60' 120'

# STREET ALIGNMENT PLAN

SCALE: 1" = 60'

## "AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.





ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT

Issue Date: July 18, 2017

Street Alignment Plan
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 019071
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

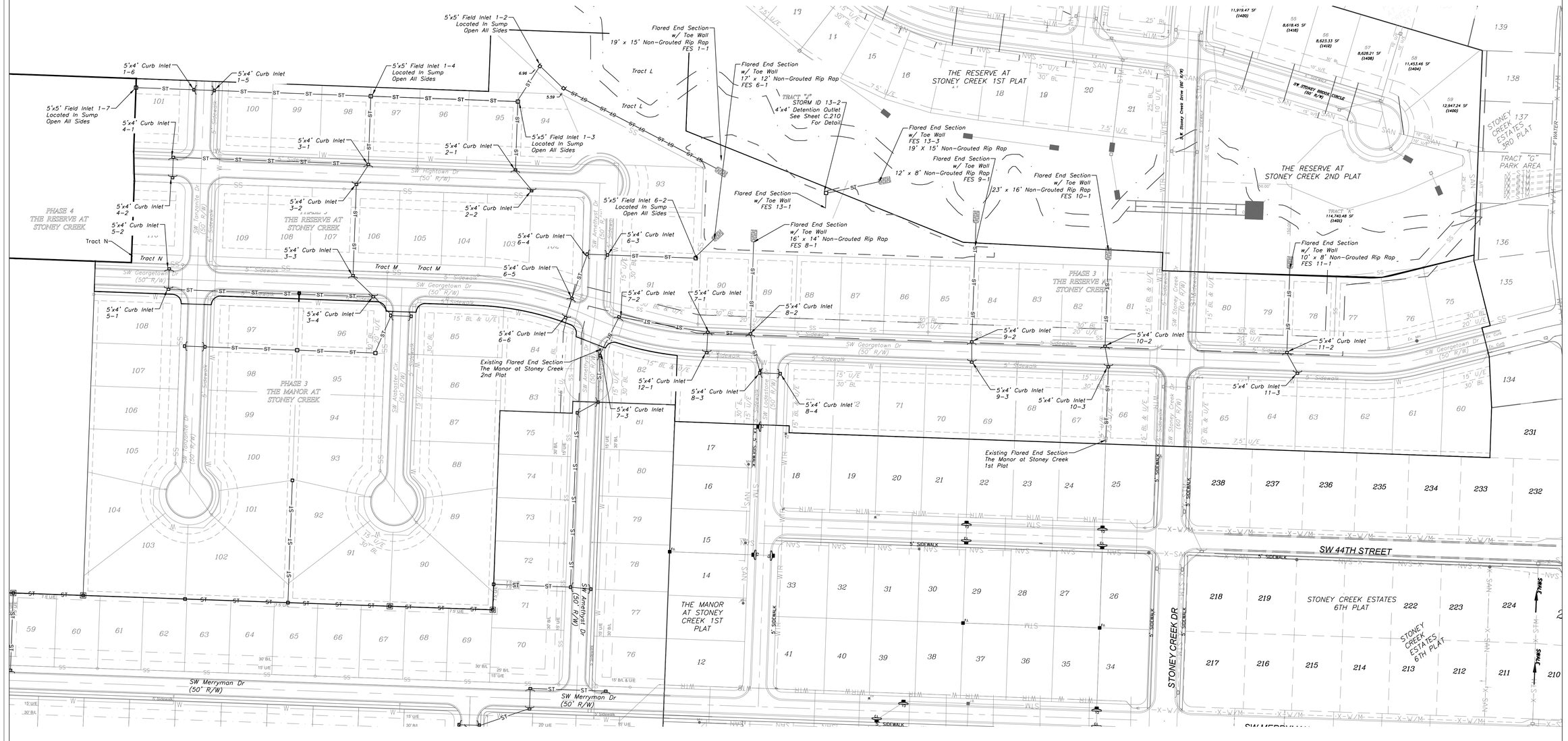
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

North

0 25' 50' 100'

# STORM SEWER GENERAL LAYOUT

SCALE: 1" = 50'




"AS-BUILT"

900.10

~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK - 3RD PLAT

Issue Date: July 16, 2017

Storm Sewer General Layout
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.300

"AS-BUILT"

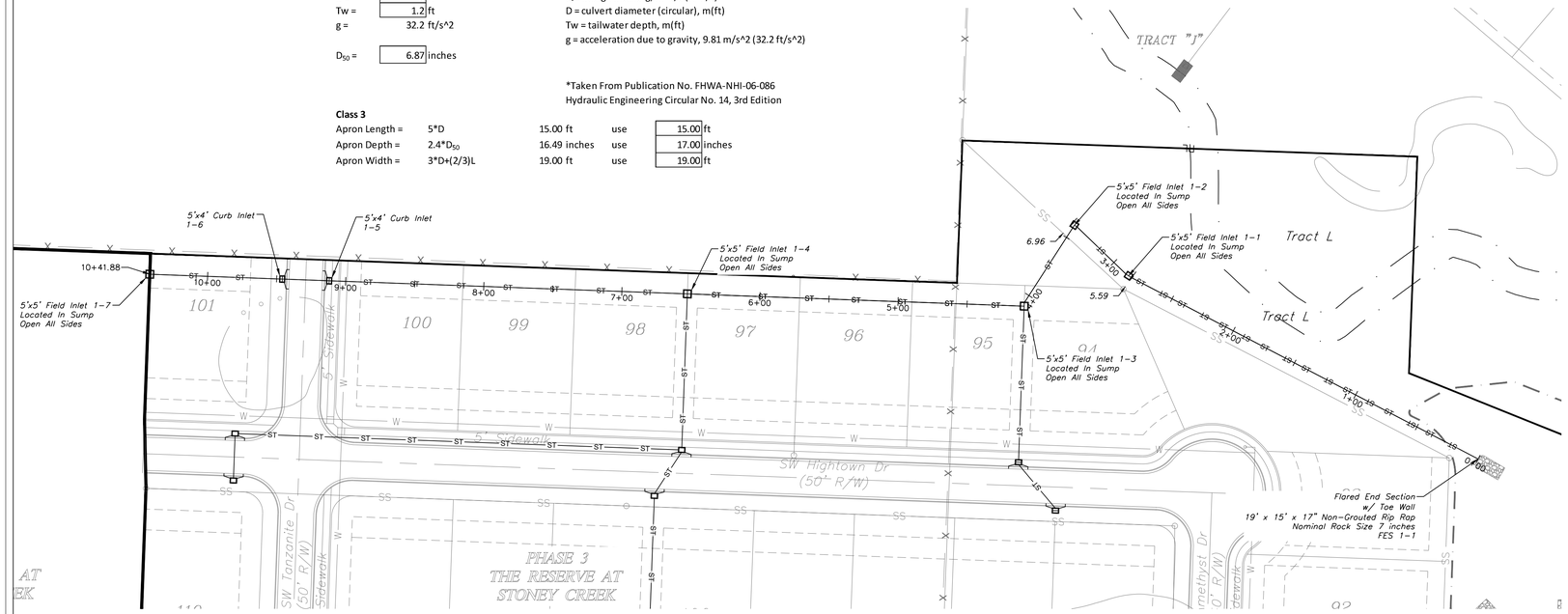
900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

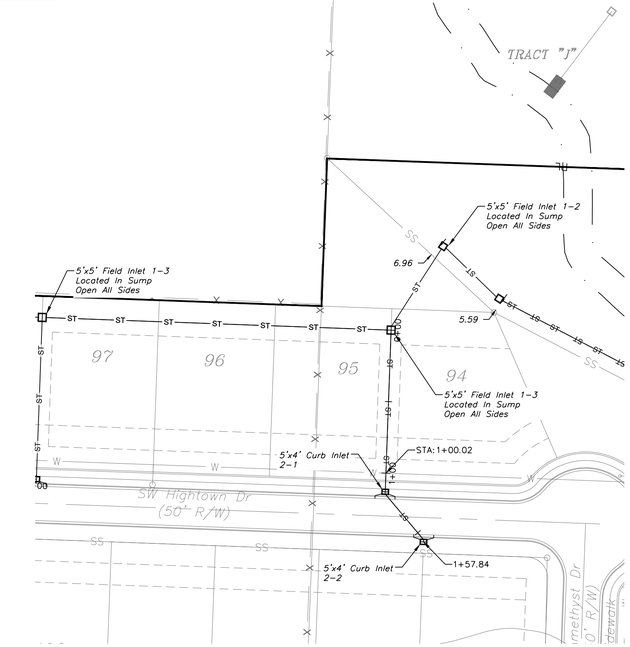
North

0 25' 50' 100'

## STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'



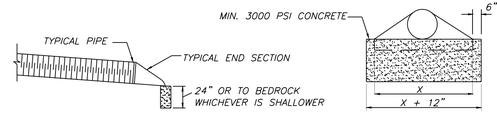

| Field End Section # | 1-1 |
|---|---|
| Q = | 42.95 cfs |
| D = | 3 ft |
| Tw = | 1.2 ft |
| g = | 32.2 ft/s^2 |
| $D_{50}$ = | 6.87 inches |

$D_{50}$ = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

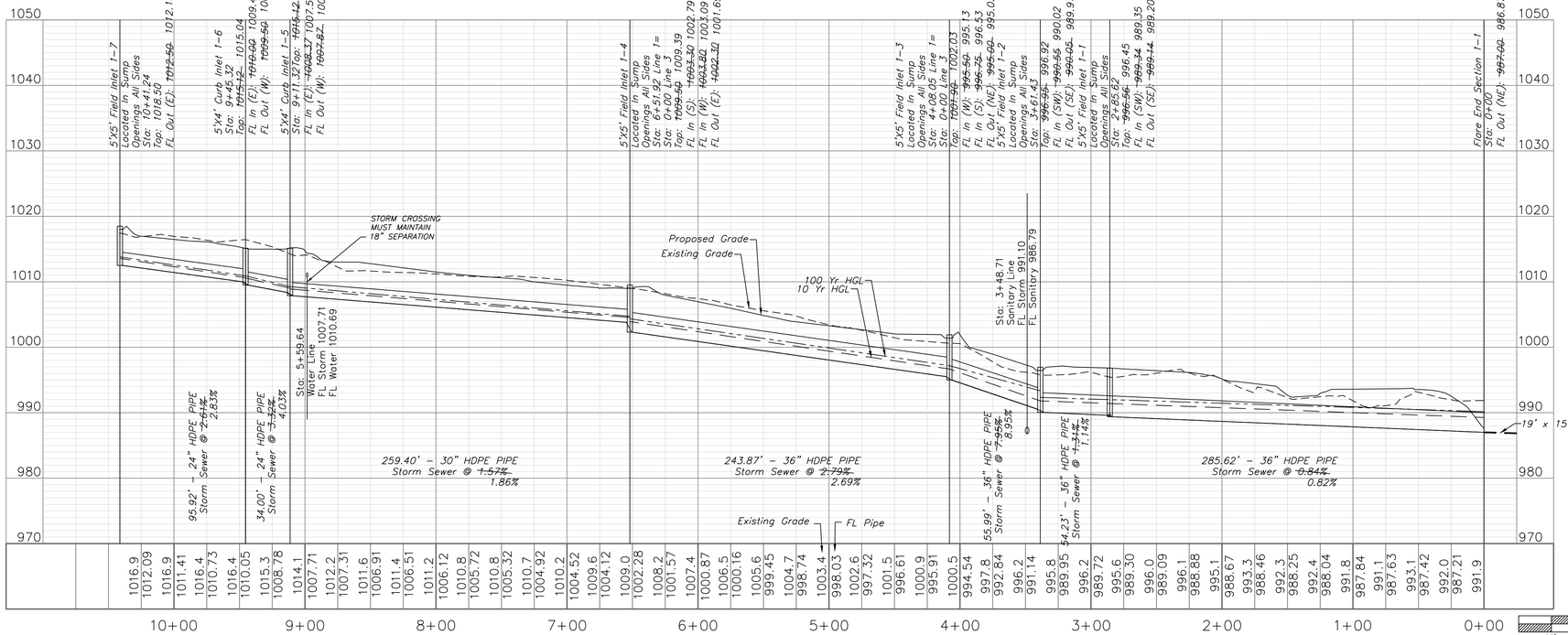
**Class 3**

| | | | | |
|---|---|---|---|---|
| Apron Length = | 5*D | 15.00 ft | use | 15.00 ft |
| Apron Depth = | 2.4*$D_{50}$ | 16.49 inches | use | 17.00 inches |
| Apron Width = | 3*D+(2/3)L | 19.00 ft | use | 19.00 ft |

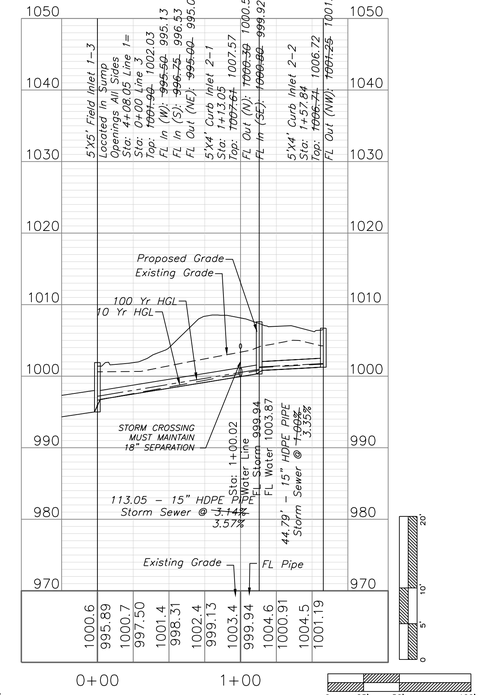



TYPICAL TOEWALL DETAIL
N.T.S.

## STORM LINE 1




## STORM LINE 2





ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Storm Sewer Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
NOTARIAL SEAL

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 - As-Built
11/7/19 - As-Built
11/14/19 - As-Built

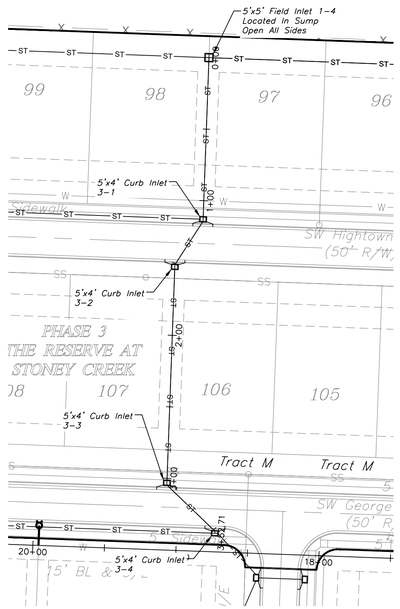
C.301

North

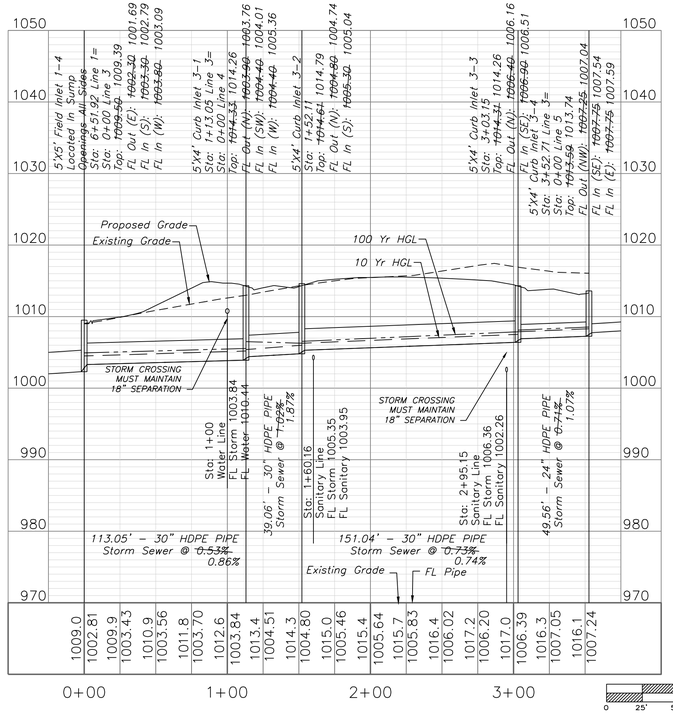
0 25' 50' 100'

## STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'




# STORM LINE 3

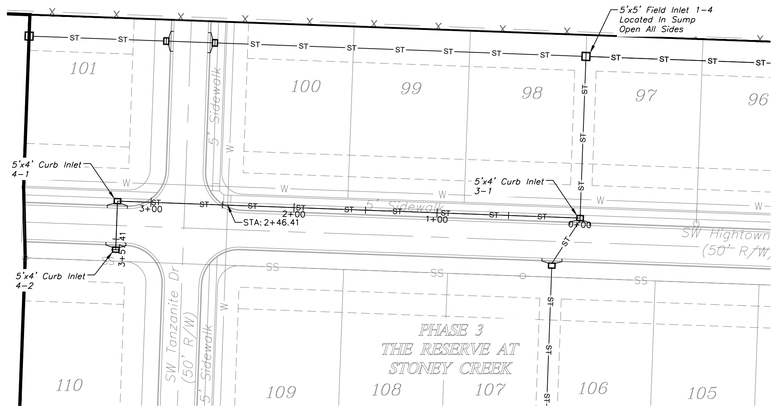



North

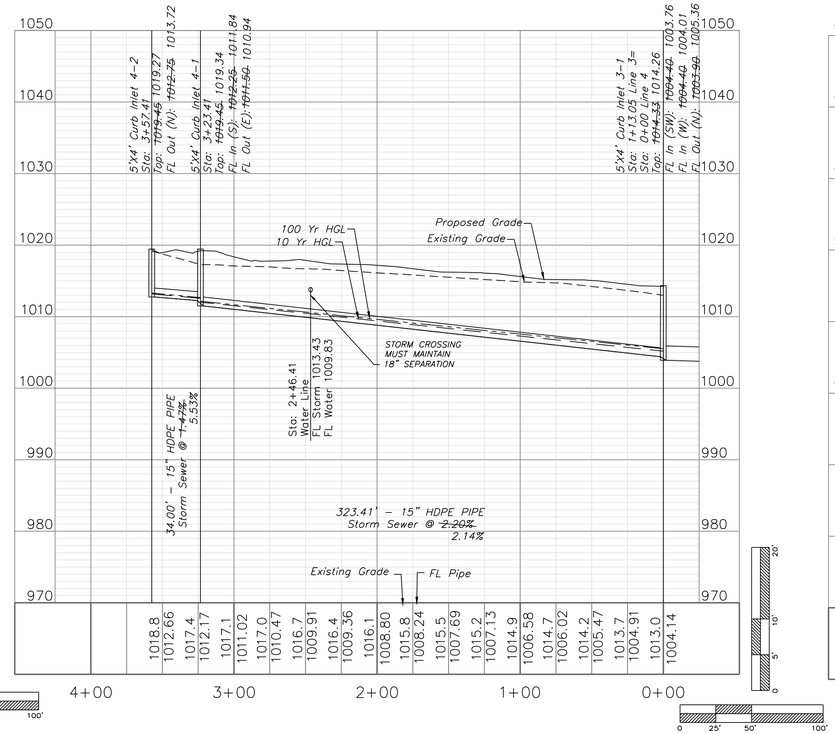
0 25' 50' 100'

## STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'




# STORM LINE 4

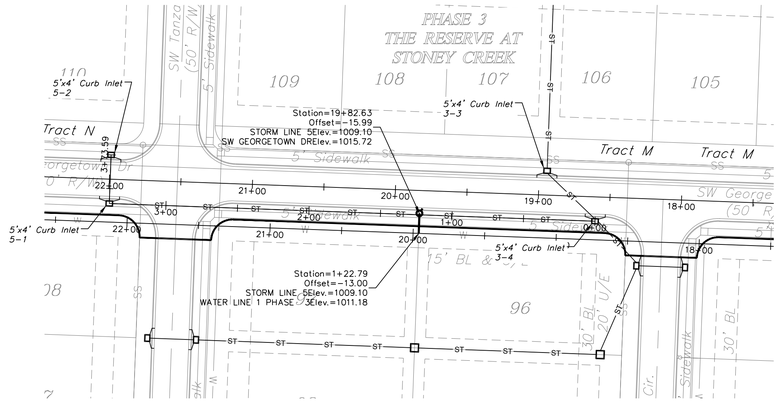



North

0 25' 50' 100'

## STORM SEWER PLAN & PROFILE

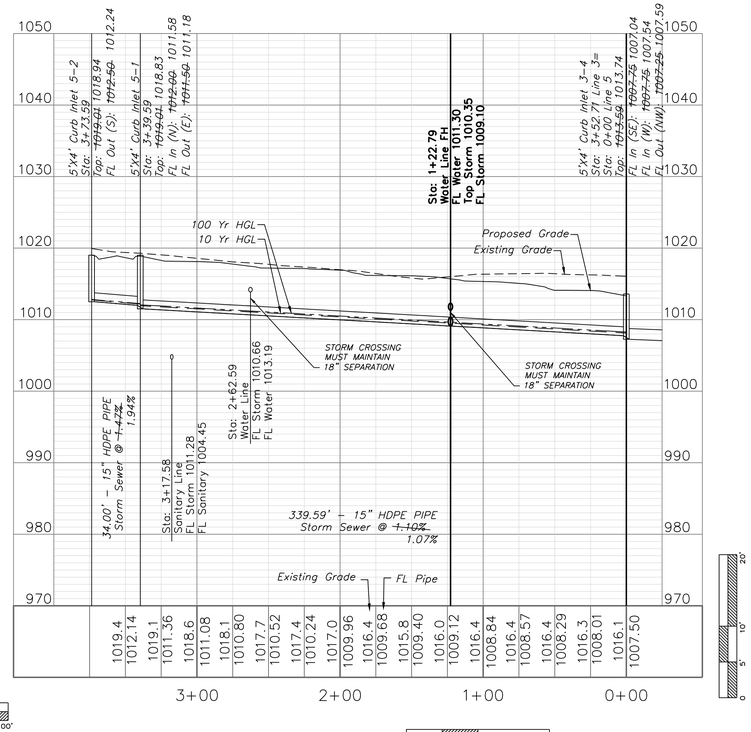
SCALE: 1" = 50'




"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

# STORM LINE 5





ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Storm Sewer Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

North

0 25' 50' 100'

## STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'

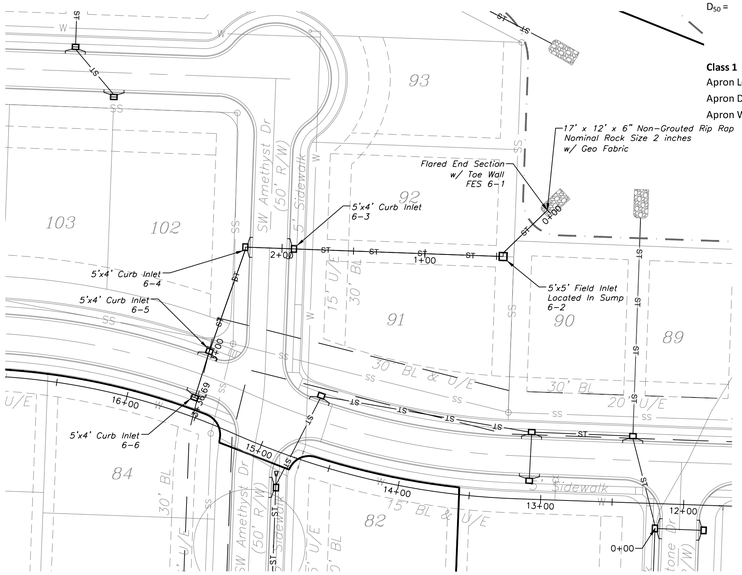
| Field End Section # | 6-1 |
|---|---|
| Q = | 14.93 cfs |
| D = | 3 ft |
| Tw = | 1.2 ft |
| g = | 32.2 ft/s^2 |
| $D_{50}$ = | 1.68 inches |

$D_{50}$ = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

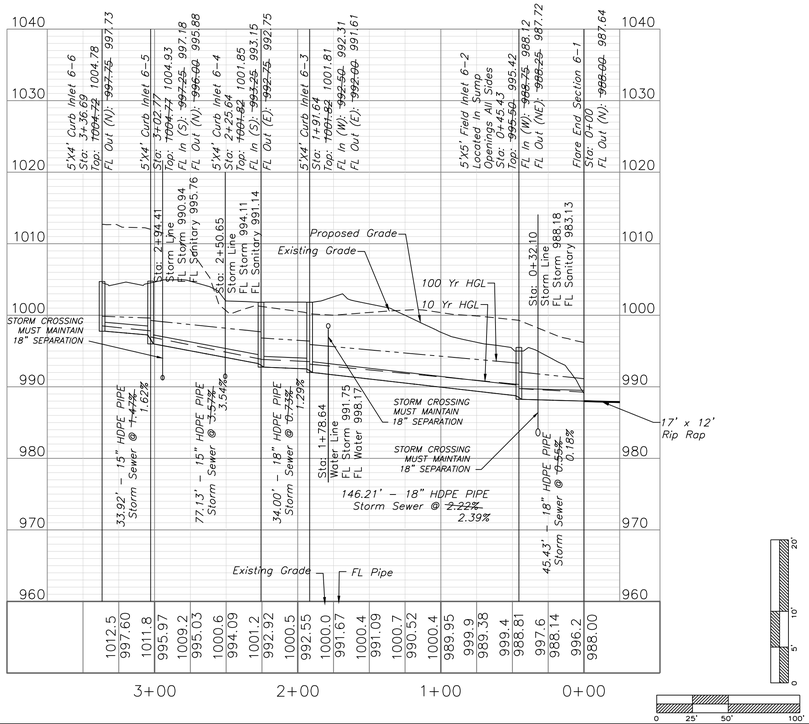
*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

**Class 1**

| | | | |
|---|---|---|---|
| Apron Length = | 4*D | 12.00 ft | use 12.00 ft |
| Apron Depth = | $3.5*D_{50}$ | 5.88 inches | use 6.00 inches |
| Apron Width = | 3*D+(2/3)L | 17.00 ft | use 17.00 ft |




## STORM LINE 6

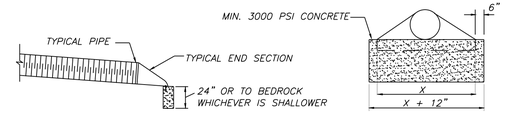



North

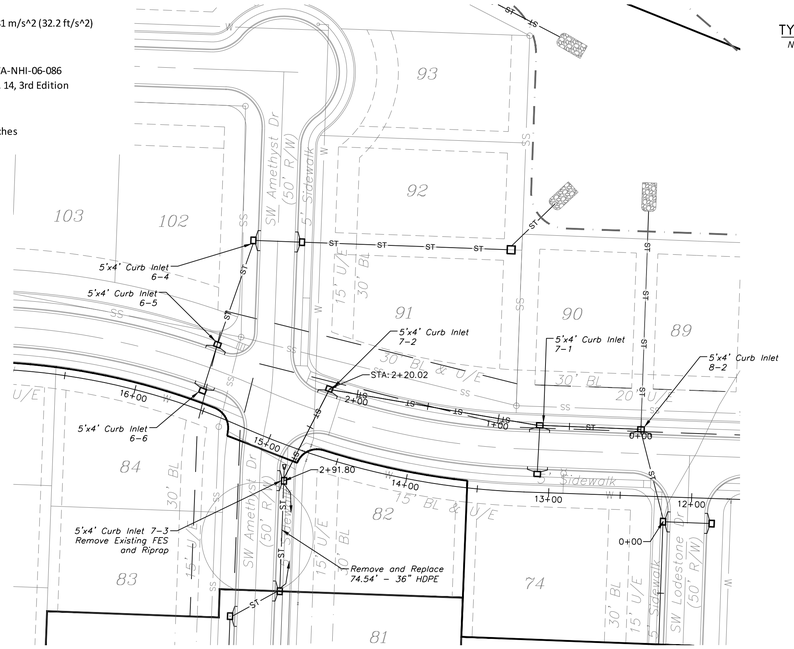
0 25' 50' 100'

## STORM SEWER PLAN & PROFILE

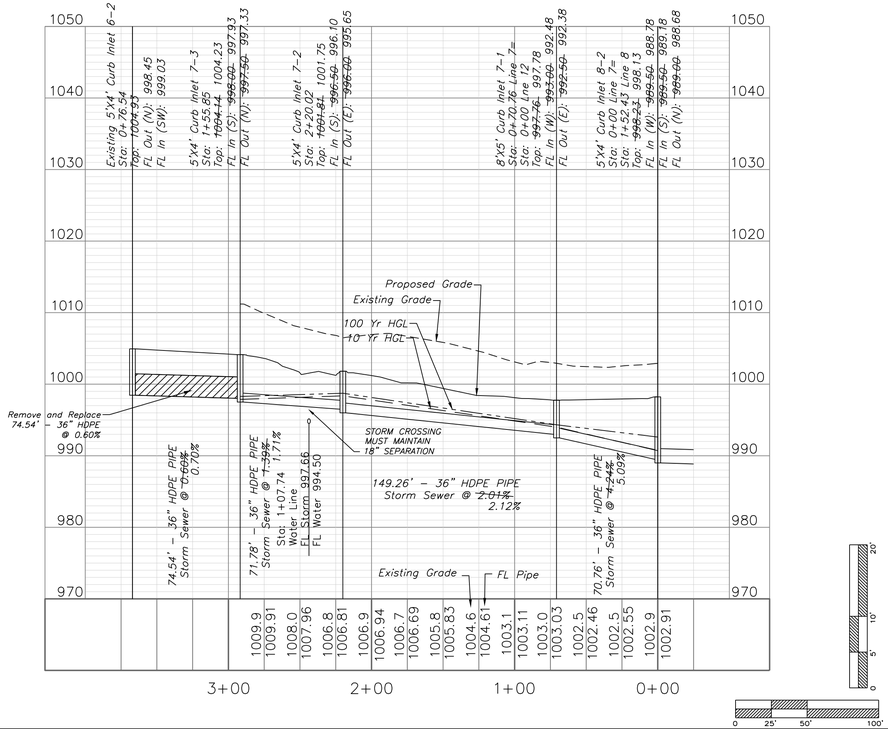
SCALE: 1" = 50'




TYPICAL TOEWALL DETAIL
N.T.S.




## STORM LINE 7




"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project:
THE RESERVE AT STONEY CREEK 3RD PLAT

Issue Date:
July 18, 2017

Storm Sewer Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 2006019708
PROFESSIONAL ENGINEER


Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226


REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

## STORM SEWER PLAN & PROFILE

North

0 25' 50' 100'

SCALE: 1" = 50'

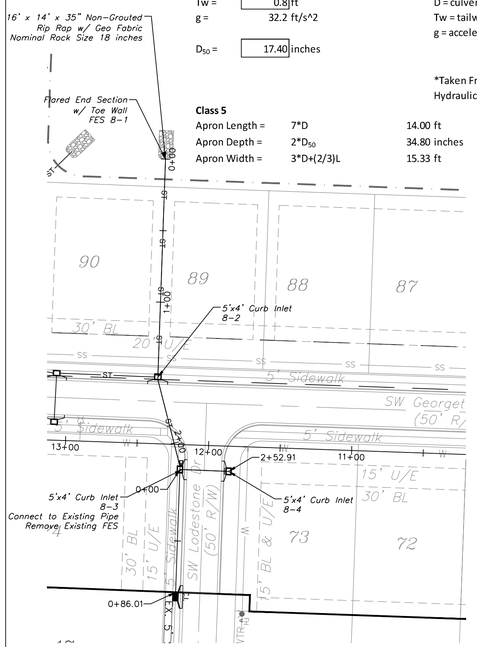
| Field End Section # | 8-1 |
|---|---|
| Q = | 42.42 cfs |
| D = | 2 ft |
| Tw = | 0.8 ft |
| g = | 32.2 ft/s^2 |
| $D_{50}$ = | 17.40 inches |

$D_{50}$ = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

**Class 5**

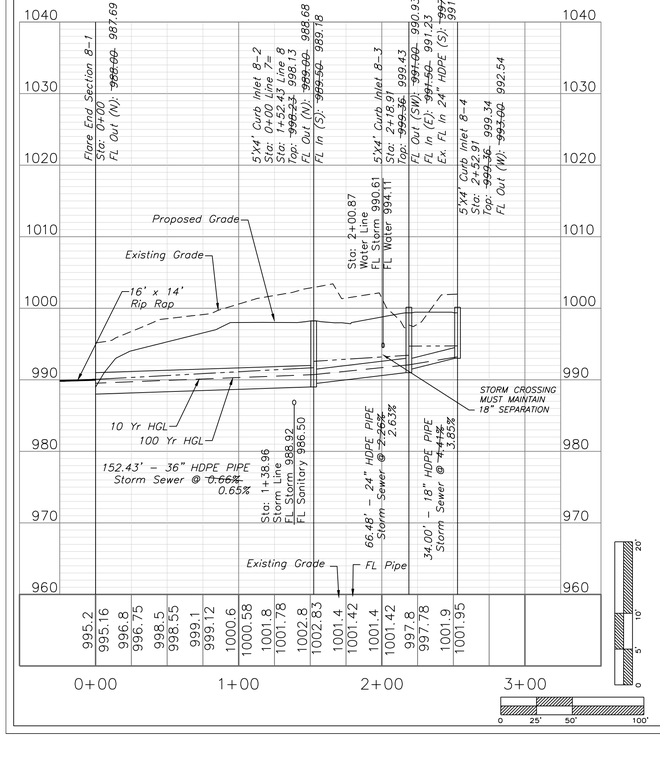
| | | | | |
|---|---|---|---|---|
| Apron Length = | 7*D | 14.00 ft | use | 14.00 ft |
| Apron Depth = | 2*$D_{50}$ | 34.80 inches | use | 35.00 inches |
| Apron Width = | 3*D+(2/3)L | 15.33 ft | use | 16.00 ft |




"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

## STORM LINE 8

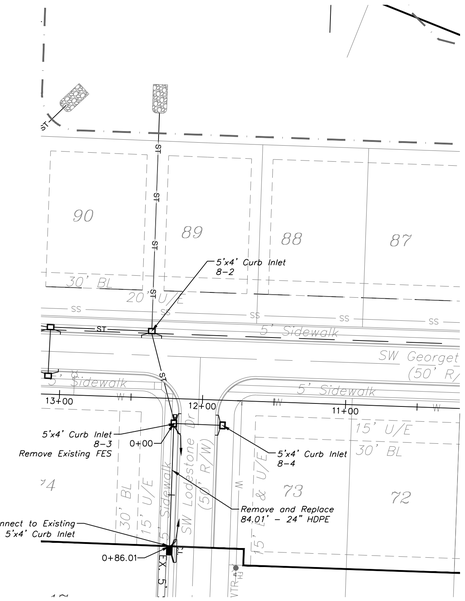



## STORM SEWER PLAN & PROFILE

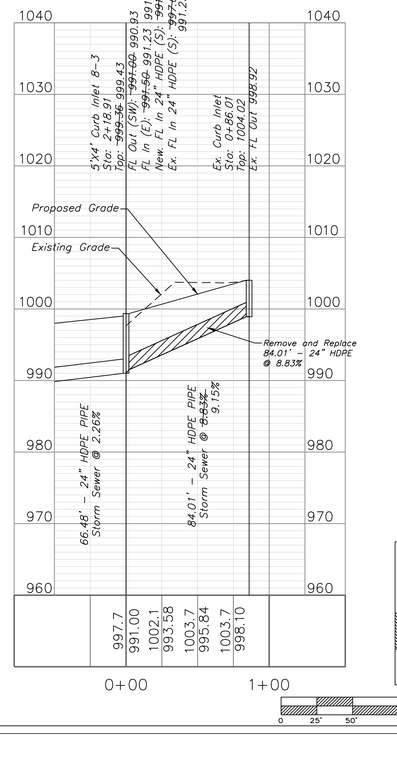
North

0 25' 50' 100'

SCALE: 1" = 50'




## STORM LINE 14




## STORM SEWER PLAN & PROFILE

North

0 25' 50' 100'

SCALE: 1" = 50'

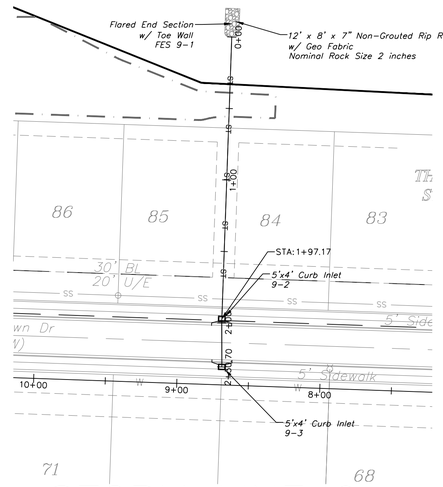
| Field End Section # | 9-1 |
|---|---|
| Q = | 7.49 cfs |
| D = | 2 ft |
| Tw = | 0.8 ft |
| g = | 32.2 ft/s^2 |
| $D_{50}$ = | 1.72 inches |

$D_{50}$ = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

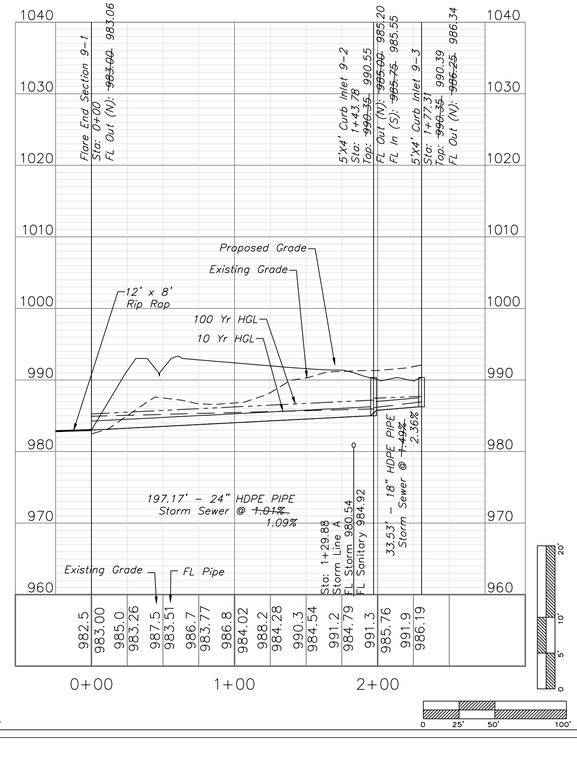
*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

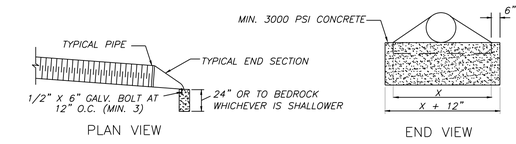
**Class 1**

| | | | | |
|---|---|---|---|---|
| Apron Length = | 4*D | 8.00 ft | use | 8.00 ft |
| Apron Depth = | 3.5*$D_{50}$ | 6.03 inches | use | 7.00 inches |
| Apron Width = | 3*D+(2/3)L | 11.33 ft | use | 12.00 ft |

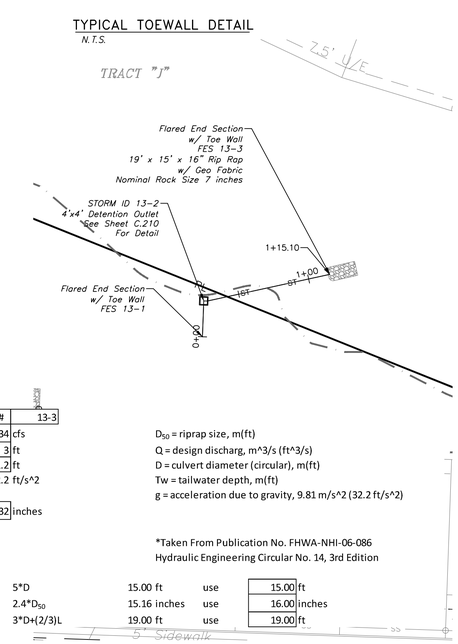



## STORM LINE 9




TYPICAL TOEWALL DETAIL
N.T.S.




| Field End Section # | 13-3 |
|---|---|
| Q = | 40.34 cfs |
| D = | 3 ft |
| Tw = | 1.2 ft |
| g = | 32.2 ft/s^2 |
| $D_{50}$ = | 6.32 inches |

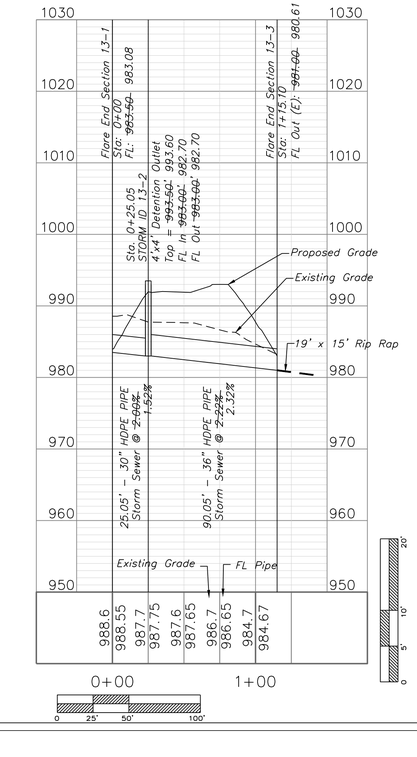
$D_{50}$ = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

**Class 3**

| | | | | |
|---|---|---|---|---|
| Apron Length = | 5*D | 15.00 ft | use | 15.00 ft |
| Apron Depth = | 2.4*$D_{50}$ | 15.16 inches | use | 16.00 inches |
| Apron Width = | 3*D+(2/3)L | 19.00 ft | use | 19.00 ft |

## STORM LINE 13





ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 19, 2017

Storm Sewer Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri





Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226


REVISIONS

9/24/19 - As-Built
11/7/19 - As-Built
11/14/19 - As-Built

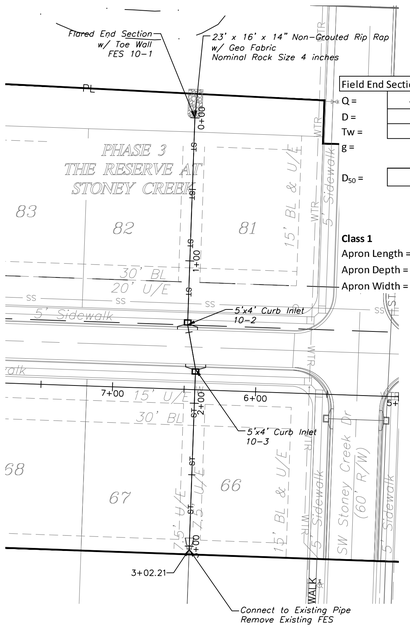
C.304

North

0 25' 50' 100'

## STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'




| Field End Section # | 10-1 |
|---|---|
| Q = | 46.35 cfs |
| D = | 4 ft |
| Tw = | 1.6 ft |
| g = | 32.2 ft/s^2 |
| $D_{50}$ = | 3.89 inches |

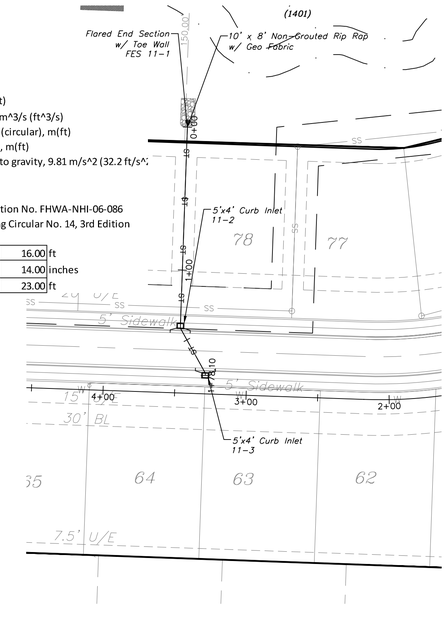
$D_{50}$ = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

| | | |
|---|---|---|
| 16.00 ft | use | 16.00 ft |
| 13.60 inches | use | 14.00 inches |
| 22.67 ft | use | 23.00 ft |

**Class 1**

| | |
|---|---|
| Apron Length = | 4*D |
| Apron Depth = | 3.5*$D_{50}$ |
| Apron Width = | 3*D+(2/3)L |




| Field End Section # | 11-1 |
|---|---|
| Q = | 14.05 cfs |
| D = | 1.25 ft |
| Tw = | 0.5 ft |
| g = | 32.2 ft/s^2 |
| $D_{50}$ = | 11.94 inches |

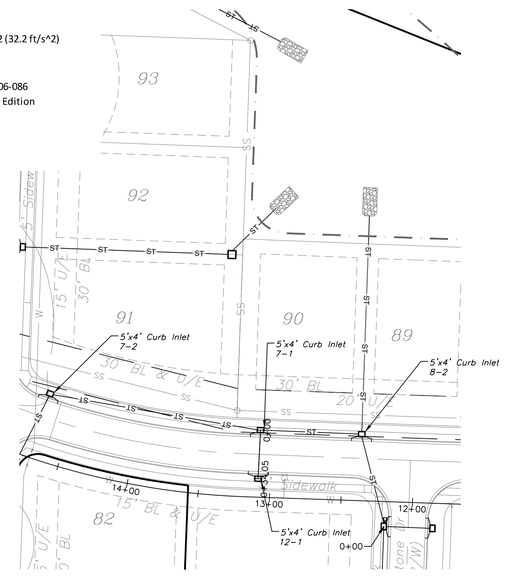
$D_{50}$ = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

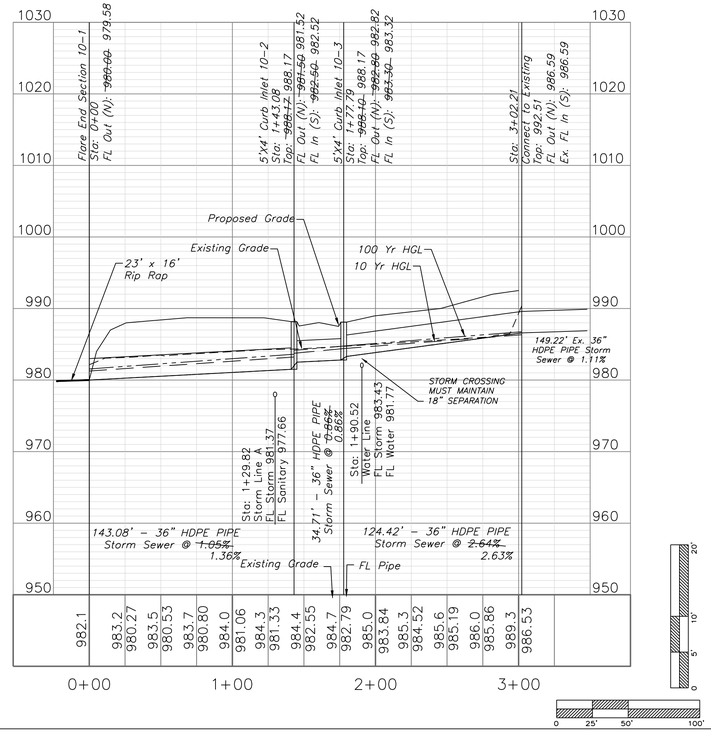
| | | |
|---|---|---|
| 7.50 ft | use | 8.00 ft |
| 26.27 inches | use | 27.00 inches |
| 9.08 ft | use | 10.00 ft |

**Class 4**

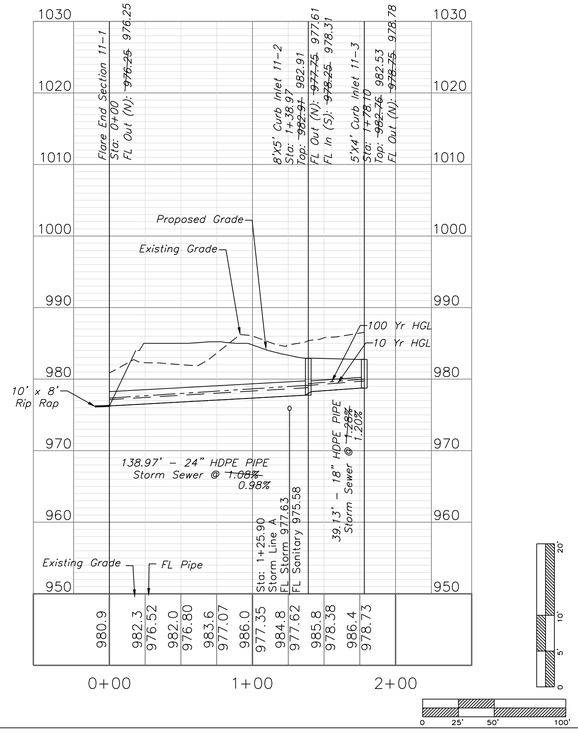
| | |
|---|---|
| Apron Length = | 6*D |
| Apron Depth = | 2.2*$D_{50}$ |
| Apron Width = | 3*D+(2/3)L |



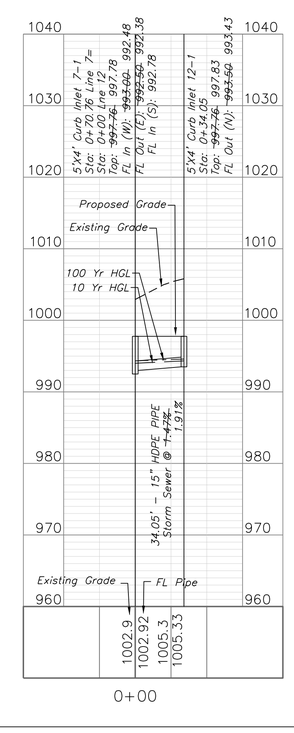

## STORM LINE 10




## STORM LINE 11




## STORM LINE 12




"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

Storm Sewer Plan and Profile
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri




Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.305

| | D.S Inlet | U.S Inlet | Area (ac) | InletTime (min) | Int. (in/hr) | RunoffCoeff. (C) | Q <CIA (cfs) | Q Carry-over (cfs) | QCaptured (cfs) | QBypassed (cfs) | JunctType | CurbHeight (in) | CurbLength (ft) | GutterSlope (ft/ft) | GutterWidth (ft) | CrossSlope, Sw (ft/ft) | CrossSlope, Sx (ft/ft) | InletDepth (ft) | BypassDepth (ft) | BypassSpread (ft) | GutterDepth (ft) | GutterSpread (ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Existing Storm Pipe Manor at Stoney Creek 2nd Plat | 8.1 | 8.2 | 0.1 | 5 | 7.27 | 0.51 | 0.37 | 0 | 0.35 | 0.02 | Curb | 10 | 5 | 0.04 | 2 | 0.15 | 0.02 | 0.15 | 0.05 | 0.36 | 0.15 | 1.01 |
| | 8.2 | 8.3 | 0.13 | 5 | 7.27 | 0.51 | 0.48 | 0 | 0.48 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.22 | 0 | 0 | 0.22 | 1.44 |
| | 8.3 | 8.4 | 0.1 | 8.2 | 6.47 | 0.51 | 0.33 | 0 | 0.33 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.19 | 0 | 0 | 0.19 | 1.25 |
| | 8.2 | 7.1 | 0.26 | 9.8 | 6.13 | 0.51 | 0.81 | 0.02 | 0.84 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.15 | n/a | n/a | 0.15 | 0.97 |
| | 7.1 | 7.2 | 0.06 | 11.4 | 5.83 | 0.51 | 0.18 | 0 | 0.18 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.15 | 0 | 0 | 0.15 | 0.99 |
| | 7.2 | 7.3 | 0.1 | 6.2 | 6.94 | 0.51 | 0.35 | 1.3 | 1.37 | 0.28 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.34 | 0.18 | 1.17 | 0.34 | 4.01 |
| | 7.3 | EX M6.2 | 0.81 | 5 | 7.27 | 0.51 | 3 | 0.41 | 2.12 | 1.3 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.42 | 0.31 | 2.65 | 0.42 | 7.88 |
| | EX M6.2 | EX M6.3 | 1.2 | 16 | 5.12 | 0.51 | 3.13 | 0.21 | 3.34 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.37 | n/a | n/a | 0.37 | 5.35 |
| | EX M6.3 | EX M6.4 | 0.48 | 10.4 | 6.01 | 0.51 | 1.47 | 0 | 1.27 | 0.21 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.33 | 0.16 | 1.05 | 0.33 | 3.36 |
| | EX M6.4 | EX M6.5 | 0.64 | 10.7 | 5.96 | 0.51 | 1.94 | 0 | 1.53 | 0.41 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.36 | 0.2 | 1.36 | 0.36 | 4.89 |
| | EX M6.4 | EX M3.1 | 0 | 8 | 0 | 0.51 | 0 | ---- | ---- | ---- | MH | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| | EX M3.1 | EX M3.2 | 0.79 | 8 | 6.51 | 0.51 | 2.62 | 0 | 2.62 | 0 | Dp-Curb | 10 | 2.47 | Sag | .... | 0.02 | 0.02 | 0.52 | n/a | n/a | 0.52 | 25.91 |
| | EX M3.2 | EX M3.3 | 0.95 | 16.6 | 5.04 | 0.51 | 2.44 | 0 | 2.44 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.17 | n/a | n/a | 0.17 | 8.3 |
| | EX M3.3 | EX M3.4 | 0.79 | 14.6 | 5.31 | 0.51 | 2.14 | 0 | 2.14 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.15 | n/a | n/a | 0.15 | 7.61 |
| | EX M3.4 | EX M3.5 | 0.72 | 7 | 6.74 | 0.51 | 2.48 | 0 | 2.48 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.17 | n/a | n/a | 0.17 | 8.39 |
| | EX M3.4 | EX M8.1 | 1.16 | 7 | 6.74 | 0.51 | 3.99 | 0 | 3.99 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.23 | n/a | n/a | 0.23 | 11.53 |
| Ex. Storm Sewer at Stoney Creek 1st Plat | 7.1 | 12.1 | 1.11 | 7.6 | 6.6 | 0.51 | 3.74 | 1.89 | 5.63 | 0 | Curb | 10 | 8 | Sag | 2 | 0.15 | 0.02 | 0.38 | n/a | n/a | 0.38 | 6 |
| | 8.3 | 54.1 | 0.72 | 9.5 | 6.19 | 0.51 | 2.27 | 0 | 2.27 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.28 | n/a | n/a | 0.28 | 1.89 |
| | 54.1 | 54.2 | 0.38 | 5.7 | 7.08 | 0.51 | 1.37 | 0 | 1.37 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.2 | n/a | n/a | 0.2 | 1.35 |
| | 54.2 | 54.3 | 0.95 | 5.6 | 7.1 | 0.51 | 3.44 | 0 | 3.44 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.21 | n/a | n/a | 0.21 | 10.44 |
| | 54.2 | 55.1 | 0.22 | 5.7 | 7.08 | 0.51 | 0.79 | 0 | 0.79 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.14 | n/a | n/a | 0.14 | 0.94 |
| | 1.1 | 1.2 | 0.13 | 5 | 7.27 | 0.51 | 0.47 | 0 | 0.47 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.06 | n/a | n/a | 0.06 | 2.78 |
| | 1.2 | 1.3 | 0.62 | 8.7 | 6.36 | 0.51 | 2.01 | 0.02 | 2.03 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.15 | n/a | n/a | 0.15 | 7.35 |
| | 1.3 | 1.4 | 0.5 | 9.3 | 6.23 | 0.51 | 1.59 | 0.18 | 1.77 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.13 | n/a | n/a | 0.13 | 6.69 |
| | 1.4 | 1.5 | 0.11 | 7.4 | 6.65 | 0.51 | 0.37 | 0 | 0.37 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.2 | 0 | 0 | 0.2 | 1.31 |
| | 1.5 | 1.6 | 0.14 | 6.8 | 6.79 | 0.51 | 0.49 | 0 | 0.49 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.22 | 0 | 0 | 0.22 | 1.44 |
| | 1.6 | 1.7 | 0.33 | 9.6 | 6.17 | 0.51 | 1.04 | 0 | 1.04 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.09 | n/a | n/a | 0.09 | 4.7 |
| | 1.3 | 2.1 | 0.21 | 7.9 | 6.53 | 0.51 | 0.7 | 0.09 | 0.77 | 0.02 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.26 | 0.07 | 0.44 | 0.26 | 1.73 |
| | 2.1 | 2.2 | 0.35 | 9.5 | 6.19 | 0.51 | 1.11 | 0 | 1.02 | 0.09 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.29 | 0.11 | 0.77 | 0.29 | 1.97 |
| | 1.4 | 3.1 | 0.25 | 9.9 | 6.11 | 0.51 | 0.78 | 0.61 | 1.21 | 0.18 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.32 | 0.15 | 0.99 | 0.32 | 3.04 |
| | 3.1 | 3.2 | 0.51 | 9.8 | 6.13 | 0.51 | 1.59 | 0.7 | 1.7 | 0.6 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.38 | 0.23 | 1.56 | 0.38 | 5.77 |
| | 3.2 | 3.3 | 0.78 | 10.1 | 6.07 | 0.51 | 2.42 | 0.06 | 1.77 | 0.7 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.38 | 0.25 | 1.66 | 0.38 | 6.17 |
| | 3.3 | 3.4 | 0.31 | 9.1 | 6.27 | 0.51 | 0.99 | 0 | 0.99 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.16 | n/a | n/a | 0.16 | 1.09 |
| | 3.1 | 4.1 | 0.22 | 12.4 | 5.66 | 0.51 | 0.63 | 0.1 | 0.72 | 0.01 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.25 | 0.06 | 0.37 | 0.25 | 1.68 |
| | 4.1 | 4.2 | 0.35 | 8.8 | 6.34 | 0.51 | 1.13 | 0 | 1.03 | 0.1 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.3 | 0.12 | 0.79 | 0.3 | 1.98 |
| | 3.4 | 5.1 | 0.34 | 12.4 | 5.66 | 0.51 | 0.98 | 0 | 0.92 | 0.06 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.28 | 0.1 | 0.65 | 0.28 | 1.88 |
| | 5.1 | 5.2 | 0.12 | 8.1 | 6.49 | 0.51 | 0.4 | 0 | 0.4 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.2 | 0 | 0 | 0.2 | 1.34 |
| Storm Manor at Stoney Creek 3rd Plat | 3.4 | MT.1 | 0.56 | 11.6 | 5.79 | 0.51 | 1.66 | 0 | 1.66 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.23 | n/a | n/a | 0.23 | 1.53 |
| | MT.1 | MT.2 | 0.4 | 10.9 | 5.92 | 0.51 | 1.69 | 0 | 1.69 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.23 | n/a | n/a | 0.23 | 1.55 |
| | MT.2 | MZ.1 | 0 | 0 | 0 | 0 | 0 | ---- | ---- | ---- | MH | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| | MZ.1 | MZ.2 | 0.69 | 9.9 | 6.11 | 0.51 | 2.15 | 0 | 2.15 | 0 | Dp-Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.27 | n/a | n/a | 0.27 | 1.83 |
| | MZ.2 | MZ.3 | 0.39 | 10.1 | 6.07 | 0.51 | 1.21 | 0 | 1.21 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.19 | n/a | n/a | 0.19 | 1.24 |
| | MZ.3 | MZ.4 | 0.39 | 10.1 | 6.07 | 0.51 | 1.21 | 0 | 1.21 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.19 | n/a | n/a | 0.19 | 1.24 |
| | 1.7 | Future | 2.78 | 9.6 | 6.17 | 0.51 | 8.75 | 0 | 8.75 | 0 | Hdwall | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| Existing Storm Pipe Manor at Stoney Creek 1st Plat | 6.1 | 6.2 | 0.24 | 5 | 7.27 | 0.51 | 0.89 | 0 | 0.89 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.08 | n/a | n/a | 0.08 | 4.24 |
| | 6.2 | 6.3 | 0.52 | 9.8 | 6.13 | 0.51 | 1.63 | 0 | 1.63 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.23 | n/a | n/a | 0.23 | 1.51 |
| | 6.3 | 6.4 | 0.77 | 11.4 | 5.83 | 0.51 | 2.29 | 0.42 | 2.71 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.32 | n/a | n/a | 0.32 | 2.97 |
| | 6.4 | 6.5 | 0.62 | 9.5 | 6.19 | 0.51 | 1.96 | 0 | 1.54 | 0.42 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.36 | 0.21 | 1.37 | 0.36 | 4.92 |
| | 6.5 | 6.6 | 1.21 | 8.3 | 6.44 | 0.51 | 3.98 | 0.28 | 2.37 | 1.89 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.44 | 0.35 | 4.73 | 0.44 | 9.07 |
| | 9.1 | 9.2 | 0.64 | 10.5 | 6 | 0.51 | 1.96 | 0 | 1.96 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.26 | n/a | n/a | 0.26 | 1.71 |
| | 9.2 | 9.3 | 0.98 | 7.6 | 6.6 | 0.51 | 3.3 | 0 | 3.3 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.36 | n/a | n/a | 0.36 | 5.21 |
| | 10.1 | 10.2 | 0.28 | 11.1 | 5.88 | 0.51 | 0.84 | 0 | 0.84 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.15 | n/a | n/a | 0.15 | 0.98 |
| | 10.2 | 10.3 | 0.7 | 8.9 | 6.32 | 0.51 | 2.25 | 0 | 2.25 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.28 | n/a | n/a | 0.28 | 1.88 |
| | 10.3 | 10.4 | 0 | 8.8 | 0 | 0.51 | 0 | ---- | ---- | ---- | None | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| | 10.4 | 51.1 | 0.69 | 8.1 | 6.49 | 0.51 | 2.28 | 0 | 2.28 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.28 | n/a | n/a | 0.28 | 1.9 |
| | 51.1 | 51.2 | 1.1 | 6 | 7 | 0.51 | 3.92 | 0 | 3.92 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.41 | n/a | n/a | 0.41 | 7.45 |
| | 51.2 | 51.1 | 0.57 | 8 | 6.51 | 0.51 | 1.89 | 0 | 1.89 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.14 | n/a | n/a | 0.14 | 7.01 |
| | 51.1 | 51.3 | 0.7 | 6.5 | 6.87 | 0.51 | 2.45 | 0 | 2.45 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.3 | n/a | n/a | 0.3 | 1.99 |
| | 51.3 | 51.4 | 0 | 0 | 0 | 0 | 0 | ---- | ---- | ---- | MH | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| | 51.4 | 56.1 | 1.09 | 8.8 | 6.34 | 0.51 | 3.52 | 0 | 3.52 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.21 | n/a | n/a | 0.21 | 10.61 |
| | 56.1 | 56.2 | 0.49 | 8.8 | 6.34 | 0.51 | 1.58 | 0 | 1.58 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.12 | n/a | n/a | 0.12 | 6.22 |
| | 56.2 | 56.3 | 0.91 | 5.8 | 7.05 | 0.51 | 3.27 | 0 | 3.27 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.2 | n/a | n/a | 0.2 | 10.1 |
| | 51.1 | 53.1 | 0.58 | 7.1 | 6.72 | 0.51 | 1.99 | 0 | 1.99 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.26 | n/a | n/a | 0.26 | 1.73 |
| | 53.1 | 53.2 | 0.66 | 7.1 | 6.72 | 0.51 | 2.26 | 0 | 2.26 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.28 | n/a | n/a | 0.28 | 1.89 |
| | 51.1 | 57.1 | 0.65 | 7.5 | 6.68 | 0.51 | 2.2 | 0 | 2.2 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.28 | n/a | n/a | 0.28 | 1.85 |
| | 51.4 | 52.1 | 0.39 | 6.2 | 6.94 | 0.51 | 1.38 | 0 | 1.38 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.2 | n/a | n/a | 0.2 | 1.36 |
| | 11.1 | 11.2 | 0.33 | 6.2 | 6.94 | 0.51 | 1.17 | 0 | 1.17 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.18 | n/a | n/a | 0.18 | 1.22 |
| | 51.3 | 51.6 | 1.13 | 6.2 | 6.94 | 0.51 | 4 | 0 | 4 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.41 | n/a | n/a | 0.41 | 7.71 |
| | 11.1 | 11.2 | 0.7 | 10.1 | 6.07 | 0.51 | 2.17 | 0 | 2.17 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.28 | n/a | n/a | 0.28 | 1.83 |
| | 11.2 | 11.3 | 2.3 | 10 | 6.09 | 0.51 | 7.15 | 0 | 7.15 | 0 | Curb | 10 | 8 | Sag | 2 | 0.15 | 0.02 | 0.45 | n/a | n/a | 0.45 | 9.28 |

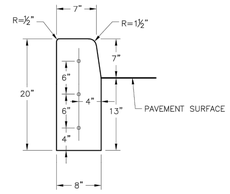
| | | | | 10 Year Storm Pipe | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D.S Inlet | U.S Inlet | Structure Type | LineLength (ft) | Incr Area (ac) | TotalArea (ac) | RunoffCoeff. (C) | InletTime (min) | TimeConc (min) | TotalRunoff (cfs) | TotalFlow (cfs) | CapacFull (cfs) | Veloc (ft/s) | PipeSize (in) | PipeSlope (%) | Inv ElevDn (ft) | Inv ElevUp (ft) | HGLDn (ft) | HGLUp (ft) |
| Existing Storm Pipe Manor at Stoney Creek 2nd Plat | 8.1 | 8.2 | Curb Inlet | 152.43 | 0.1 | 11.67 | 0.51 | 5 | 19.5 | 27.86 | 27.86 | 54.02 | 7.21 | 36 | 0.66 | 988 | 989 | 989.53 | 990.71 |
| | 8.2 | 8.3 | Curb Inlet | 66.48 | 0.13 | 2.5 | 0.51 | 5 | 9.7 | 7.84 | 7.84 | 15.77 | 5.44 | 24 | 2.26 | 989.5 | 991 | 990.71 | 992.08 |
| | 8.3 | 8.4 | Curb Inlet | 34 | 0.1 | 0.1 | 0.51 | 8.2 | 8.2 | 0.33 | 0.33 | 13.56 | 1.41 | 15 | 4.41 | 991.5 | 993 | 992.08 | 993.22 |
| | 8.2 | 7.1 | Curb Inlet | 70.76 | 0.26 | 9.07 | 0.51 | 9.8 | 19.4 | 21.74 | 21.74 | 137.33 | 7.17 | 36 | 4.24 | 989.5 | 992.5 | 990.71 | 994 |
| | 7.1 | 7.2 | Curb Inlet | 149.26 | 0.06 | 7.7 | 0.51 | 11.4 | 19 | 18.61 | 18.61 | 109.18 | 7.45 | 36 | 2.01 | 993 | 996 | 994 | 998.38 |
| | 7.2 | 7.3 | Curb Inlet | 71.78 | 0.1 | 7.64 | 0.51 | 6.2 | 18.8 | 18.58 | 18.58 | 55.66 | 4.47 | 36 | 1.39 | 996.5 | 997.5 | 998.38 | 997.88 |
| Existing Storm Pipe Manor at Stoney Creek 3rd Plat | 7.3 | EX M6.2 | Curb Inlet | 74.54 | 0.81 | 7.54 | 0.51 | 5 | 18.6 | 18.43 | 18.43 | 54.62 | 6.41 | 36 | 0.67 | 998 | 998.93 | 998.2 | 998.87 |
| | EX M6.2 | EX M6.3 | Curb Inlet | 36.16 | 1.2 | 6.73 | 0.51 | 16 | 18.5 | 16.49 | 16.49 | 49.6 | 5.97 | 36 | 0.55 | 999.03 | 999.25 | 1000.14 | 1000.45 |
| | EX M6.3 | EX M6.4 | Curb Inlet | 285.2 | 0.48 | 5.53 | 0.51 | 10.4 | 17.6 | 13.83 | 13.83 | 51.49 | 5.75 | 36 | 0.6 | 999.59 | 1001.35 | 1000.71 | 1002.53 |
| | EX M6.4 | EX M6.5 | Curb Inlet | 31.07 | 0.64 | 0.64 | 0.51 | 10.7 | 10.7 | 1.94 | 1.94 | 15.97 | 6.25 | 15 | 6.12 | 1003.1 | 1005 | 1003.4 | 1005.56 |
| | EX M6.4 | EX M3.1 | Manhole | 124.5 | 0 | 4.41 | 0.51 | 8 | 17.3 | 11.14 | 11.14 | 51.76 | 5.42 | 36 | 0.6 | 1001.85 | 1002.6 | 1002.8 | 1003.66 |
| | EX M3.1 | EX M3.2 | Field Inlet | 38.33 | 0.79 | 4.41 | 0.51 | 8 | 17.1 | 11.17 | 11.17 | 33.12 | 5.67 | 30 | 0.65 | 1003.1 | 1003.35 | 1004.1 | 1004.47 |
| | EX M3.2 | EX M3.3 | Field Inlet | 170.58 | 0.95 | 3.62 | 0.51 | 16.6 | 16.6 | 9.3 | 9.3 | 31.71 | 5.29 | 30 | 0.6 | 1003.85 | 1004.87 | 1004.78 | 1005.89 |
| | EX M3.3 | EX M3.4 | Field Inlet | 168.99 | 0.79 | 2.67 | 0.51 | 14.6 | 14.6 | 7.23 | 7.23 | 17.57 | 5.11 | 24 | 0.6 | 1005.12 | 1006.14 | 1006.01 | 1007.09 |
| | EX M3.4 | EX M3.5 | Field Inlet | 170.61 | 0.72 | 0.72 | 0.51 | 7 | 7 | 2.48 | 2.48 | 8.12 | 3.42 | 18 | 0.6 | 1006.39 | 1007.41 | 1007.09 | 1008.01 |
| | EX M3.4 | EX M8.1 | Field Inlet | 50 | 1.16 | 1.16 | 0.51 | 7 | 7 | 3.99 | 3.99 | 16.34 | 6.02 | 18 | 2.42 | 1006.64 | 1007.85 | 1007.15 | 1008.61 |
| Ex. Storm Sewer at Stoney Creek 1st Plat | 7.1 | 12.1 | Curb Inlet | 34.05 | 1.11 | 1.11 | 0.51 | 7.6 | 7.6 | 3.74 | 3.74 | 7.83 | 4.1 | 15 | 1.47 | 993 | 993.5 | 994 | 994.28 |
| | 8.3 | 54.1 | Curb Inlet | 93.81 | 0.72 | 2.27 | 0.51 | 9.5 | 9.5 | 7.17 | 7.17 | 15.56 | 7.06 | 18 | 2.2 | 996.86 | 998.92 | 997.58 | 999.96 |
| | 54.1 | 54.2 | Curb Inlet | 212.58 | 0.38 | 1.55 | 0.51 | 5.7 | 6.1 | 5.51 | 5.51 | 15.93 | 4.85 | 18 | 2.3 | 999.02 | 1003.91 | 999.96 | 1004.81 |
| | 54.2 | 54.3 | Field Inlet | 137.96 | 0.95 | 0.95 | 0.51 | 5.6 | 5.6 | 3.44 | 3.44 | 7.13 | 4.51 | 15 | 1.22 | 1004.07 | 1005.75 | 1004.81 | 1006.5 |
| | 54.2 | 55.1 | Curb Inlet | 34 | 0.22 | 0.22 | 0.51 | 5.7 | 5.7 | 0.79 | 0.79 | 8.79 | 3.64 | 15 | 1.85 | 1004.58 | 1005.21 | 1004.83 | 1005.56 |
| | 1.1 | 1.2 | Field Inlet | 338.71 | 0.13 | 10.64 | 0.51 | 5 | 5 | 15.4 | 28.21 | 28.21 | 6.29 | 36 | 0.9 | 987 | 990.05 | 989.22 | 991.77 |
| | 1.2 | 1.3 | Field Inlet | 69.34 | 0.62 | 10.51 | 0.51 | 8.7 | 15.3 | 27.97 | 27.97 | 168.96 | 8.56 | 36 | 6.42 | 990.55 | 995 | 991.77 | 996.71 |
| | 1.3 | 1.4 | Field Inlet | 243.87 | 0.5 | 9.33 | 0.51 | 9.3 | 14.7 | 25.18 | 25.18 | 111.37 | 7.96 | 36 | 2.79 | 995.5 | 1002.3 | 996.71 | 1003.92 |
| | 1.4 | 1.5 | Curb Inlet | 239.4 | 0.11 | 3.36 | 0.51 | 7.4 | 10 | 10.43 | 10.43 | 51.37 | 6.67 | 30 | 1.57 | 1003.8 | 1007.87 | 1004.57 | 1008.95 |
| | 1.5 | 1.6 | Curb Inlet | 34 | 0.14 | 3.25 | 0.51 | 6.8 | 9.9 | 10.11 | 10.11 | 41.23 | 8.16 | 24 | 3.32 | 1008.37 | 1009.5 | 1009.05 | 1010.64 |
| | 1.6 | 1.7 | Field Inlet | 95.92 | 0.33 | 3.11 | 0.51 | 9.6 | 9.7 | 9.74 | 9.74 | 36.51 | 7.62 | 24 | 2.61 | 1010 | 1012.5 | 1010.71 | 1013.62 |
| | 1.3 | 2.1 | Curb Inlet | 113.05 | 0.21 | 0.56 | 0.51 | 7.9 | 9.7 | 1.76 | 1.76 | 12.95 | 2.66 | 15 | 3.14 | 996.75 | 1000.3 | 996.71 | 1000.83 |
| | 2.1 | 2.2 | Curb Inlet | 44.79 | 0.35 | 0.35 | 0.51 | 9.5 | 9.5 | 1.11 | 1.11 | 6.47 | 3.53 | 15 | 1 | 1000.8 | 1001.25 | 1001.15 | 1001.66 |
| | 1.4 | 3.1 | Curb Inlet | 113.05 | 0.25 | 5.47 | 0.51 | 9.9 | 14.4 | 14.89 | 14.89 | 29.88 | 5.93 | 30 | 0.53 | 1003.3 | 1003.9 | 1004.55 | 1005.2 |
| | 3.1 | 3.2 | Curb Inlet | 39.06 | 0.51 | 4.65 | 0.51 | 9.8 | 14.3 | 12.7 | 12.7 | 41.5 | 6.45 | 30 | 1.02 | 1004.4 | 1004.8 | 1005.35 | 1006 |
| | 3.2 | 3.3 | Curb Inlet | 151.04 | 0.78 | 4.14 | 0.51 | 10.1 | 13.9 | 11.44 | 11.44 | 35 | 5.83 | 30 | 0.73 | 1005.3 | 1006.4 | 1006.28 | 1007.53 |
| | 3.3 | 3.4 | Curb Inlet | 49.56 | 0.31 | 2.9 | 0.51 | 9.1 | 11.7 | 8.54 | 8.54 | 19.01 | 5.53 | 24 | 0.71 | 1006.9 | 1007.25 | 1007.84 | 1008.29 |
| | 3.1 | 4.1 | Curb Inlet | 323.41 | 0.22 | 0.57 | 0.51 | 12.4 | 12.4 | 1.64 | 1.64 | 9.57 | 2.75 | 15 | 2.2 | 1004.4 | 1011.5 | 1005.2 | 1012.01 |
| | 4.1 | 4.2 | Curb Inlet | 34 | 0.35 | 0.35 | 0.51 | 8.8 | 8.8 | 1.13 | 1.13 | 7.83 | 3.84 | 15 | 1.47 | 1012.25 | 1012.75 | 1012.57 | 1013.17 |
| | 3.4 | 5.1 | Curb Inlet | 339.59 | 0.12 | 0.46 | 0.51 | 12.4 | 12.4 | 1.33 | 1.33 | 6.79 | 3.79 | 15 | 1.1 | 1007.75 | 1011.5 | 1008.13 | 1011.96 |
| | 5.1 | 5.2 | Curb Inlet | 34 | 0.34 | 0.12 | 0.51 | 8.1 | 8.1 | 0.4 | 0.4 | 7.83 | 2.84 | 15 | 1.47 | 1012 | 1012.5 | 1012.19 | 1012.74 |
| Storm Manor at Stoney Creek 3rd Plat | 3.4 | MT.1 | Curb Inlet | 43.6 | 0.56 | 2.59 | 0.51 | 11.6 | 11.6 | 7.65 | 7.65 | 21.66 | 5.64 | 18 | 0.92 | 1007.75 | 1008.15 | 1008.57 | 1009.13 |
| | MT.1 | MT.2 | Curb Inlet | 34 | 0.4 | 0.56 | 0.51 | 10.9 | 10.9 | 1.69 | 1.69 | 6.07 | 3.7 | 15 | 0.88 | 1008.65 | 1008.95 | 1009.13 | 1009.47 |
| | MT.2 | MZ.1 | Manhole | 52.28 | 0 | 1.47 | 0 | 0 | 11 | 4.43 | 4.43 | 8.7 | 6.05 | 15 | 1.82 | 1008.65 | 1009.6 | 1009.28 | 1010.45 |
| | MZ.1 | MZ.2 | Field Inlet | 144.79 | 0.69 | 1.47 | 0.51 | 9.9 | 10.5 | 4.49 | 4.49 | 5.5 | 4.99 | 15 | 0.73 | 1010.1 | 1011.15 | 1010.96 | 1012.01 |
| | MZ.2 | MZ.3 | Curb Inlet | 52.8 | 0.39 | 0.78 | 0.51 | 10.1 | 10.2 | 2.4 | 2.4 | 9.53 | 3.33 | 15 | 0.8 | 1011.35 | 1012.5 | 1012.2 | 1013.12 |
| | MZ.3 | MZ.4 | Curb Inlet | 34 | 0.39 | 0.39 | 0.51 | 10.1 | 10.1 | 1.21 | 1.21 | 7.83 | 3.91 | 15 | 1.47 | 1013 | 1013.5 | 1013.33 | 1013.93 |
| | 1.7 | Future | Future Pipe | 50 | 2.78 | 2.78 | 0.51 | 9.6 | 9.6 | 8.75 | 8.75 | 22.62 | 5.97 | 24 | 1 | 1013 | 1013.5 | 1013.86 | 1014.55 |
| Existing Storm Pipe Manor at Stoney Creek 1st Plat | 6.1 | 6.2 | Field Inlet | 45.43 | 0.24 | 3.36 | 0.51 | 5 | 11.9 | 9.83 | 9.83 | 7.79 | 5.98 | 18 | 0.55 | 988 | 988.25 | 989.22 | 989.74 |
| | 6.2 | 6.3 | Curb Inlet | 146.21 | 0.52 | 3.12 | 0.51 | 9.8 | 11.5 | 9.25 | 9.25 | 15.66 | 5.73 | 18 | 2.22 | 988.75 | 992 | 990.29 | 993.17 |
| | 6.3 | 6.4 | Curb Inlet | 34 | 0.77 | 2.6 | 0.51 | 11.4 | 11.4 | 7.73 | 7.73 | 9 | 5.71 | 18 | 0.74 | 992.5 | 992.75 | 993.57 | 993.83 |
| | 6.4 | 6.5 | Curb Inlet | 77.13 | 0.62 | 1.83 | 0.51 | 9.5 | 9.5 | 5.78 | 5.78 | 12.19 | 7.72 | 15 | 3.57 | 993.25 | 996 | 993.86 | 996.97 |
| | 6.5 | 6.6 | Curb Inlet | 33.92 | 1.21 | 1.21 | 0.51 | 8.3 | 8.3 | 3.98 | 3.98 | 7.84 | 5.58 | 15 | 1.47 | 997.25 | 997.75 | 997.88 | 998.56 |
| | 9.1 | 9.2 | Curb Inlet | 197.17 | 0.64 | 1.62 | 0.51 | 10.5 | 10.5 | 4.95 | 4.95 | 5.39 | 4.98 | 24 | 1.01 | 983 | 985 | 984.94 | 985.95 |
| | 9.2 | 9.3 | Curb Inlet | 33.53 | 0.98 | 0.98 | 0.51 | 7.6 | 7.6 | 3.3 | 3.3 | 9.66 | 4.83 | 18 | 1.49 | 985.5 | 986.25 | 986.14 | 986.98 |
| | 10.1 | 10.2 | Curb Inlet | 143.08 | 0.28 | 10.27 | 0.51 | 11.1 | 11.9 | 30.12 | 30.12 | 147.08 | 7.73 | 48 | 1.05 | 980 | 981.5 | 981.23 | 983.13 |
| | 10.2 | 10.3 | Curb Inlet | 34.71 | 0.7 | 9.99 | 0.51 | 8.9 | 11.8 | 29.37 | 29.37 | 133.54 | 7.37 | 48 | 0.86 | 982.5 | 982.8 | 983.78 | 984.41 |
| | 10.3 | 10.4 | No Structure | 124.42 | 0 | 9.29 | 0.51 | 8.8 | 11.7 | 27.35 | 27.35 | 153.88 | 9.12 | 36 | 2.6 | 983.3 | 986.6 | 984.41 | 986.29 |
| Existing Storm Pipe Manor at Stoney Creek 1st Plat | 10.4 | 51.1 | Curb Inlet | 149.22 | 0.69 | 9.29 | 0.51 | 8.1 | 11.4 | 27.6 | 27.6 | 70.34 | 8.02 | 36 | 1.11 | 986.59 | 988.25 | 987.9 | 989.95 |
| | 51.1 | 51.2 | Curb Inlet | 34.01 | 1.1 | 7.36 | 0.51 | 6 | 11.3 | 21.93 | 21.93 | 79.23 | 6.31 | 36 | 1.41 | 988.49 | 988.97 | 989.95 | 990.47 |
| | 51.2 | 51.1 | Field Inlet | 133 | 0.57 | 6.26 | 0.51 | 8 | 11.1 | 18.81 | 18.81 | 100.5 | 8.25 | 36 | 2.27 | 989.58 | 992.6 | 990.47 | 993.99 |
| | 51.1 | 51.3 | Curb Inlet | 133 | 0.7 | 5.04 | 0.51 | 6.5 | 10.8 | 15.29 | 15.29 | 44.85 | 7.09 | 24 | 3.93 | 992.78 | 998.01 | 993.99 | 999.42 |
| | 51.3 | 51.4 | Manhole | 207.64 | 0 | 3.23 | 0 | 0 | 10.2 | 9.9 | 9.9 | 27.14 | 6.7 |

100 Year Inlet

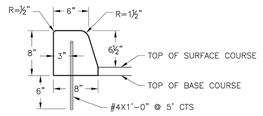
| | D.S Inlet | U.S Inlet | Area | InletTime | Int. | RunoffCoeff. | Q =CIA | Q Carry-over | QCaptured | QBypassed | JunctType | CurbHeight | CurbLength | GutterSlope | GutterWidth | CrossSlope, Sw | CrossSlope, Sx | InletDepth | BypassDepth | BypassSpread | GutterDepth | GutterSpread |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (ac) | (min) | (in/hr) | (C) | (cfs) | (cfs) | (cfs) | (cfs) | | (in) | (ft) | (ft/ft) | (ft) | (ft/ft) | (ft/ft) | (ft) | (ft) | (ft) | (ft) | (ft) |
| | 8.1 | 8.2 | 0.1 | 5 | 11 | 0.51 | 0.56 | 0 | 0.48 | 0.08 | Curb | 10 | 5 | 0.04 | 2 | 0.15 | 0.02 | 0.18 | 0.09 | 0.57 | 0.18 | 1.18 |
| | 8.2 | 8.3 | 0.13 | 5 | 11 | 0.51 | 0.73 | 0 | 0.72 | 0.01 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.25 | 0.05 | 0.36 | 0.25 | 1.68 |
| | 8.3 | 8.4 | 0.1 | 8.2 | 9.78 | 0.51 | 0.5 | 0 | 0.5 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.22 | 0 | 0 | 0.22 | 1.46 |
| | 8.2 | 7.1 | 0.26 | 9.8 | 9.27 | 0.51 | 1.23 | 0.08 | 1.31 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.2 | n/a | n/a | 0.2 | 1.31 |
| | 7.1 | 7.2 | 0.06 | 11.4 | 8.82 | 0.51 | 0.27 | 0 | 0.27 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.17 | 0 | 0 | 0.17 | 1.16 |
| | 7.2 | 7.3 | 0.1 | 6.2 | 10.5 | 0.51 | 0.54 | 2.85 | 2.11 | 1.28 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.42 | 0.31 | 2.55 | 0.42 | 7.83 |
| Existing Storm Pipe Manor at Stoney Creek 2nd Plat | 7.3 | EX M6.2 | 0.81 | 5 | 11 | 0.51 | 4.54 | 0.99 | 2.68 | 2.85 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.47 | 0.4 | 6.91 | 0.47 | 10.54 |
| | EX M6.2 | EX M6.3 | 1.2 | 16 | 7.74 | 0.51 | 4.73 | 0.56 | 5.3 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.5 | n/a | n/a | 0.5 | 11.97 |
| | EX M6.3 | EX M6.4 | 0.48 | 10.4 | 9.1 | 0.51 | 2.23 | 0 | 1.67 | 0.56 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.37 | 0.23 | 1.52 | 0.37 | 5.61 |
| | EX M6.4 | EX M6.5 | 0.64 | 10.7 | 9.01 | 0.51 | 2.94 | 0 | 1.95 | 0.99 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.4 | 0.28 | 1.88 | 0.4 | 7.08 |
| | EX M6.4 | EX M3.1 | 0 | 8 | 0 | 0.51 | 0 | .... | .... | .... | MH | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | EX M3.1 | EX M3.2 | 0.79 | 8 | 9.85 | 0.51 | 3.97 | 0 | 3.97 | 0 | Dp-Curb | 4 | 2.42 | Sag | .... | 0.02 | 0.02 | 0.97 | n/a | n/a | 0.97 | 48.55 |
| | EX M3.2 | EX M3.3 | 0.95 | 16.6 | 7.61 | 0.51 | 3.69 | 0 | 3.69 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.22 | n/a | n/a | 0.22 | 10.94 |
| | EX M3-3 | EX M3.4 | 0.79 | 14.6 | 8.03 | 0.51 | 3.24 | 0 | 3.24 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.2 | n/a | n/a | 0.2 | 10.03 |
| | EX M3.4 | EX M3.5 | 0.72 | 7 | 10.2 | 0.51 | 3.75 | 0 | 3.75 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.22 | n/a | n/a | 0.22 | 11.05 |
| | EX M3.4 | EX M8.1 | 1.16 | 7 | 10.2 | 0.51 | 6.04 | 0 | 6.04 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.3 | n/a | n/a | 0.3 | 15.39 |
| | 7.1 | 12.1 | 1.11 | 7.6 | 9.99 | 0.51 | 5.65 | 4.26 | 9.92 | 0 | Curb | 10 | 8 | Sag | 2 | 0.15 | 0.02 | 0.55 | n/a | n/a | 0.55 | 14.73 |
| Ex. Storm Manor at Stoney Creek 1st Plat | 8.3 | S4.1 | 0.72 | 9.5 | 9.36 | 0.51 | 3.44 | 0 | 3.44 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.37 | n/a | n/a | 0.37 | 5.72 |
| | S4.1 | S4.2 | 0.38 | 5.7 | 10.7 | 0.51 | 2.07 | 0 | 2.07 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.27 | n/a | n/a | 0.27 | 1.78 |
| | S4.2 | S4.3 | 0.95 | 5.6 | 10.74 | 0.51 | 5.21 | 0 | 5.21 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.28 | n/a | n/a | 0.28 | 13.77 |
| | S4.2 | S5.1 | 0.22 | 5.7 | 10.7 | 0.51 | 1.2 | 0 | 1.2 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.19 | n/a | n/a | 0.19 | 1.24 |
| | 1.1 | 1.2 | 0.13 | 5 | 11 | 0.5 | 0.71 | 0 | 0.71 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.07 | n/a | n/a | 0.07 | 3.66 |
| | 1.2 | 1.3 | 0.62 | 8.7 | 9.62 | 0.51 | 3.04 | 0.16 | 3.2 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.2 | n/a | n/a | 0.2 | 9.95 |
| | 1.3 | 1.4 | 0.5 | 9.3 | 9.43 | 0.51 | 2.4 | 1.05 | 3.45 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.21 | n/a | n/a | 0.21 | 10.46 |
| | 1.4 | 1.5 | 0.11 | 7.4 | 10.06 | 0.51 | 0.56 | 0 | 0.56 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.23 | 0 | 0.02 | 0.23 | 1.53 |
| | 1.5 | 1.6 | 0.14 | 6.8 | 10.28 | 0.51 | 0.73 | 0 | 0.72 | 0.01 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.25 | 0.06 | 0.37 | 0.25 | 1.69 |
| | 1.6 | 1.7 | 0.33 | 9.6 | 9.33 | 0.51 | 1.57 | 0 | 1.57 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.12 | n/a | n/a | 0.12 | 6.19 |
| | 1.3 | 2.1 | 0.21 | 7.9 | 9.88 | 0.51 | 1.06 | 0.29 | 1.18 | 0.16 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.32 | 0.14 | 0.96 | 0.32 | 2.85 |
| | 2.1 | 2.2 | 0.35 | 9.5 | 9.36 | 0.51 | 1.67 | 0 | 1.38 | 0.29 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.34 | 0.18 | 1.19 | 0.34 | 4.06 |
| | 1.4 | 3.1 | 0.25 | 9.9 | 9.24 | 0.51 | 1.18 | 1.86 | 1.99 | 1.05 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.4 | 0.29 | 1.93 | 0.4 | 7.25 |
| | 3.1 | 3.2 | 0.51 | 9.8 | 9.27 | 0.51 | 2.41 | 1.61 | 2.3 | 1.72 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.44 | 0.34 | 4.22 | 0.44 | 8.76 |
| | 3.2 | 3.3 | 0.78 | 10.1 | 9.18 | 0.51 | 3.65 | 0.21 | 2.26 | 1.61 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.43 | 0.34 | 3.86 | 0.43 | 8.54 |
| | 3.3 | 3.4 | 0.31 | 9.1 | 9.49 | 0.51 | 1.5 | 0 | 1.5 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.22 | n/a | n/a | 0.22 | 1.44 |
| | 3.1 | 4.1 | 0.22 | 12.4 | 8.56 | 0.51 | 0.96 | 0.3 | 1.13 | 0.14 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.31 | 0.13 | 0.89 | 0.31 | 2.5 |
| | 4.1 | 4.2 | 0.35 | 8.8 | 9.58 | 0.51 | 1.71 | 0 | 1.41 | 0.3 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.34 | 0.18 | 1.21 | 0.34 | 4.19 |
| | 3.4 | 5.1 | 0.34 | 12.4 | 8.56 | 0.51 | 1.48 | 0 | 1.27 | 0.21 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.33 | 0.16 | 1.06 | 0.33 | 3.41 |
| | 5.1 | 5.2 | 0.12 | 8.1 | 9.81 | 0.51 | 0.6 | 0 | 0.6 | 0 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.23 | 0.02 | 0.14 | 0.23 | 1.56 |
| Storm Manor At Stoney Creek 1st Plat | 3.4 | MI.1 | 0.56 | 11.6 | 8.76 | 0.51 | 2.5 | 0 | 2.5 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.3 | n/a | n/a | 0.3 | 2.15 |
| | MI.1 | MI.2 | 0.4 | 10.9 | 8.95 | 0.51 | 2.56 | 0 | 2.56 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.31 | n/a | n/a | 0.31 | 2.36 |
| | MI.2 | M2.1 | 0 | 0 | 0 | 0 | 0 | .... | .... | .... | MH | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | M2.1 | M2.2 | 0.69 | 9.9 | 9.24 | 0.51 | 3.25 | 0 | 3.25 | 0 | Dp-Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.36 | n/a | n/a | 0.36 | 5.04 |
| | M2.2 | M2.3 | 0.39 | 10.1 | 9.18 | 0.51 | 1.83 | 0 | 1.83 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.25 | n/a | n/a | 0.25 | 1.64 |
| | M2.3 | M2.4 | 0.39 | 10.1 | 9.18 | 0.51 | 1.83 | 0 | 1.83 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.25 | n/a | n/a | 0.25 | 1.64 |
| | 1.7 | future | 2.78 | 9.6 | 9.33 | 0.51 | 13.23 | 0 | 13.23 | 0 | Holwall | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | 6.1 | 6.2 | 0.24 | 5 | 11 | 0.51 | 1.35 | 0 | 1.35 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.11 | n/a | n/a | 0.11 | 5.58 |
| | 6.2 | 6.3 | 0.52 | 9.8 | 9.27 | 0.51 | 2.46 | 0 | 2.46 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.3 | n/a | n/a | 0.3 | 2 |
| | 6.3 | 6.4 | 0.77 | 11.4 | 8.82 | 0.51 | 3.46 | 1 | 4.46 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.45 | n/a | n/a | 0.45 | 9.27 |
| | 6.4 | 6.5 | 0.62 | 9.5 | 9.36 | 0.51 | 2.96 | 0 | 1.96 | 1 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.4 | 0.28 | 1.89 | 0.4 | 7.12 |
| | 6.5 | 6.6 | 1.21 | 8.3 | 9.75 | 0.51 | 6.01 | 1.28 | 3.04 | 4.25 | Curb | 10 | 5 | 0.01 | 2 | 0.15 | 0.02 | 0.5 | 0.44 | 9.07 | 0.5 | 12.18 |
| | 9.1 | 9.2 | 0.64 | 10.5 | 9.07 | 0.51 | 2.96 | 0 | 2.96 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.34 | n/a | n/a | 0.34 | 3.94 |
| | 9.2 | 9.3 | 0.98 | 7.6 | 9.99 | 0.51 | 4.99 | 0 | 4.99 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.48 | n/a | n/a | 0.48 | 11 |
| | 10.1 | 10.2 | 0.28 | 11.1 | 8.9 | 0.51 | 1.27 | 0 | 1.27 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.19 | n/a | n/a | 0.19 | 1.28 |
| | 10.2 | 10.3 | 0.7 | 8.9 | 9.55 | 0.51 | 3.41 | 0 | 3.41 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.37 | n/a | n/a | 0.37 | 5.61 |
| | 10.3 | 10.4 | 0 | 8.8 | 0 | 0.51 | 0 | .... | .... | .... | None | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Existing Storm Pipe Manor at Stoney Creek 1st Plat | 10.4 | S1.1 | 0.69 | 8.1 | 9.81 | 0.51 | 3.45 | 0 | 3.45 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.38 | n/a | n/a | 0.38 | 5.77 |
| | S1.1 | S1.2 | 1.1 | 6 | 10.58 | 0.51 | 5.94 | 0 | 5.94 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.54 | n/a | n/a | 0.54 | 13.95 |
| | S1.2 | S1.1 | 0.57 | 8 | 9.85 | 0.51 | 2.86 | 0 | 2.86 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.18 | n/a | n/a | 0.18 | 9.24 |
| | S1.1 | S1.3 | 0.7 | 6.5 | 10.39 | 0.51 | 3.71 | 0 | 3.71 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.39 | n/a | n/a | 0.39 | 6.69 |
| | S1.3 | S1.4 | 0 | 0 | 0 | 0 | 0 | .... | .... | .... | MH | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | S1.4 | S6.1 | 1.09 | 8.8 | 9.58 | 0.51 | 5.33 | 0 | 5.33 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.28 | n/a | n/a | 0.28 | 13.98 |
| | S6.1 | S6.2 | 0.49 | 8.8 | 9.58 | 0.51 | 2.39 | 0 | 2.39 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.16 | n/a | n/a | 0.16 | 8.2 |
| | S6.2 | S6.3 | 0.91 | 5.8 | 10.66 | 0.51 | 4.95 | 0 | 4.95 | 0 | Dp-Curb | 10 | 12 | Sag | .... | 0.02 | 0.02 | 0.27 | n/a | n/a | 0.27 | 13.31 |
| | S1.1 | S3.1 | 0.58 | 7.1 | 10.17 | 0.51 | 3.01 | 0 | 3.01 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.34 | n/a | n/a | 0.34 | 4.12 |
| | S3.1 | S3.2 | 0.66 | 7.1 | 10.17 | 0.51 | 3.42 | 0 | 3.42 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.37 | n/a | n/a | 0.37 | 5.66 |
| | S1.1 | S7.1 | 0.65 | 7.5 | 10.02 | 0.51 | 3.32 | 0 | 3.32 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.37 | n/a | n/a | 0.37 | 5.29 |
| | S1.4 | S2.1 | 0.39 | 6.2 | 10.5 | 0.51 | 2.09 | 0 | 2.09 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.27 | n/a | n/a | 0.27 | 1.79 |
| | S1.1 | S1.2 | 0.33 | 6.2 | 10.5 | 0.51 | 1.77 | 0 | 1.77 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.24 | n/a | n/a | 0.24 | 1.6 |
| | S1.3 | S1.6 | 1.13 | 6.2 | 10.5 | 0.51 | 6.05 | 0 | 6.05 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.55 | n/a | n/a | 0.55 | 14.3 |
| | 11.1 | 11.2 | 0.7 | 10.1 | 9.18 | 0.51 | 3.28 | 0 | 3.28 | 0 | Curb | 10 | 5 | Sag | 2 | 0.15 | 0.02 | 0.36 | n/a | n/a | 0.36 | 5.13 |
| | 11.2 | 11.3 | 2.3 | 10 | 9.21 | 0.51 | 10.81 | 0 | 10.81 | 0 | Curb | 10 | 8 | Sag | 2 | 0.15 | 0.02 | 0.59 | n/a | n/a | 0.59 | 16.37 |

100 Year Storm Pipe

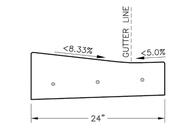
| | D.S Inlet | U.S Inlet | Structure Type | LineLength | Incr.Area | TotalArea | RunoffCoeff. | IncrC x A | TotalC x A | InletTime | TimeConc | TotalRunoff | TotalFlow | CapacFull | Veloc | PipeSize | PipeSlope | Inv ElevDn | Inv ElevUp | HGLDn | HGLUp |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (ft) | (ac) | (ac) | (C) | | | (min) | (min) | (cfs) | (cfs) | (cfs) | (ft/s) | (in) | (%) | (ft) | (ft) | (ft) | (ft) |
| | 8.1 | 8.2 | Curb Inlet | 152.43 | 0.1 | 11.67 | 0.51 | 0.05 | 5.95 | 5 | 19.2 | 42.42 | 42.42 | 54.02 | 6.22 | 36 | 0.66 | 988 | 989 | 991.14 | 991.64 |
| | 8.2 | 8.3 | Curb Inlet | 66.48 | 0.13 | 2.5 | 0.51 | 0.07 | 1.28 | 5 | 9.7 | 11.86 | 11.86 | 15.77 | 6.71 | 18 | 2.26 | 989.5 | 991 | 992.61 | 993.46 |
| | 8.3 | 8.4 | Curb Inlet | 34 | 0.1 | 0.1 | 0.51 | 0.05 | 0.05 | 8.2 | 8.2 | 0.5 | 0.5 | 13.56 | 0.41 | 15 | 4.41 | 991.5 | 993 | 994.77 | 994.78 |
| | 8.2 | 7.1 | Curb Inlet | 70.76 | 0.26 | 9.07 | 0.51 | 0.13 | 4.63 | 9.8 | 19 | 33.13 | 33.13 | 137.33 | 5.93 | 36 | 4.24 | 989.5 | 992.5 | 992.61 | 994.37 |
| | 7.1 | 7.2 | Curb Inlet | 149.26 | 0.06 | 7.7 | 0.51 | 0.03 | 3.93 | 11.4 | 18.7 | 28.34 | 28.34 | 109.18 | 7.9 | 36 | 2.01 | 993 | 996 | 994.37 | 998.72 |
| | 7.2 | 7.3 | Curb Inlet | 71.78 | 0.1 | 7.64 | 0.51 | 0.05 | 3.9 | 6.2 | 18.5 | 28.27 | 28.27 | 55.66 | 5.47 | 36 | 1.39 | 996.5 | 997.5 | 998.72 | 998.22 |
| | 7.3 | EX M6.2 | Curb Inlet | 74.54 | 0.81 | 7.54 | 0.51 | 0.41 | 3.85 | 5 | 18.3 | 28.02 | 28.02 | 54.62 | 7.25 | 36 | 0.67 | 997 | 997.5 | 998.52 | 999.21 |
| | EX M6.2 | EX M6.3 | Curb Inlet | 36.16 | 1.2 | 6.73 | 0.51 | 0.61 | 3.43 | 16 | 18.2 | 25.06 | 25.06 | 49.6 | 6.75 | 36 | 0.55 | 998.95 | 999.15 | 1000.46 | 1000.76 |
| | EX M6.3 | EX M6.4 | Curb Inlet | 285.2 | 0.48 | 5.53 | 0.51 | 0.24 | 2.82 | 10.4 | 17.5 | 20.98 | 20.98 | 51.49 | 6.5 | 36 | 0.6 | 999.65 | 1001.35 | 1003.98 | 1002.82 |
| | EX M6.4 | EX M6.5 | Curb Inlet | 31.07 | 0.64 | 0.64 | 0.51 | 0.33 | 0.33 | 10.7 | 10.7 | 2.94 | 2.94 | 15.97 | 7.08 | 15 | 6.12 | 1003.1 | 1005 | 1003.46 | 1005.69 |
| | EX M6.4 | EX M3.1 | Manhole | 124.5 | 0 | 4.41 | 0.51 | 0 | 2.25 | 8 | 17.2 | 16.87 | 16.87 | 51.76 | 6.11 | 36 | 0.6 | 1001.85 | 1002.6 | 1003.03 | 1003.91 |
| | EX M3.1 | EX M3.2 | Field Inlet | 38.33 | 0.79 | 4.41 | 0.51 | 0.4 | 2.25 | 8 | 17.1 | 16.92 | 16.92 | 33.12 | 6.41 | 30 | 0.65 | 1003.1 | 1003.95 | 1004.37 | 1004.74 |
| | EX M3.2 | EX M3.3 | Field Inlet | 170.58 | 0.95 | 3.62 | 0.51 | 0.48 | 1.85 | 16.6 | 16.6 | 14.06 | 14.06 | 31.71 | 5.96 | 30 | 0.6 | 1003.85 | 1004.87 | 1005.02 | 1006.13 |
| | EX M3-3 | EX M3.4 | Field Inlet | 168.99 | 0.79 | 2.67 | 0.51 | 0.4 | 1.36 | 14.6 | 14.6 | 10.94 | 10.94 | 17.57 | 5.77 | 24 | 0.6 | 1005.12 | 1006.14 | 1006.26 | 1007.33 |
| | EX M3.4 | EX M3.5 | Field Inlet | 170.61 | 0.72 | 0.72 | 0.51 | 0.37 | 0.37 | 7 | 7 | 3.75 | 3.75 | 8.12 | 3.78 | 18 | 0.6 | 1006.39 | 1007.41 | 1007.33 | 1008.15 |
| | EX M3.4 | EX M8.1 | Field Inlet | 50 | 1.16 | 1.16 | 0.51 | 0.59 | 0.59 | 7 | 7 | 6.04 | 6.04 | 16.34 | 6.4 | 18 | 2.42 | 1006.64 | 1007.85 | 1007.33 | 1008.8 |
| | 7.1 | 12.1 | Curb Inlet | 34.05 | 1.11 | 1.11 | 0.51 | 0.57 | 0.57 | 7.6 | 7.6 | 5.65 | 5.65 | 7.83 | 4.91 | 15 | 1.47 | 993 | 993.5 | 994.37 | 994.53 |
| | 8.3 | 54.1 | Curb Inlet | 93.81 | 0.72 | 2.27 | 0.51 | 0.37 | 1.16 | 9.5 | 9.5 | 10.84 | 10.84 | 15.56 | 8.18 | 18 | 2.2 | 996.86 | 998.92 | 997.78 | 1000.18 |
| | S4.1 | S4.2 | Curb Inlet | 212.58 | 0.38 | 1.55 | 0.51 | 0.19 | 0.79 | 5.7 | 6 | 8.35 | 8.35 | 15.93 | 5.8 | 18 | 2.3 | 999.02 | 1003.91 | 1000.18 | 1005.03 |
| | S4.2 | S4.3 | Field Inlet | 137.96 | 0.95 | 0.95 | 0.51 | 0.48 | 0.48 | 5.6 | 5.6 | 5.21 | 5.21 | 7.13 | 5.25 | 15 | 1.22 | 1004.07 | 1005.75 | 1005.03 | 1006.67 |
| | S4.2 | S5.1 | Field Inlet | 34 | 0.22 | 0.22 | 0.51 | 0.11 | 0.11 | 5.7 | 5.7 | 1.2 | 1.2 | 8.79 | 3.11 | 15 | 1.85 | 1004.58 | 1005.21 | 1005.03 | 1005.64 |
| | 1.1 | 1.2 | Field Inlet | 338.71 | 0.13 | 10.64 | 0.5 | 0.07 | 5.43 | 5 | 15.1 | 42.95 | 42.95 | 63.26 | 6.69 | 36 | 0.9 | 987 | 990.05 | 991.14 | 992.37 |
| | 1.2 | 1.3 | Field Inlet | 69.34 | 0.62 | 10.51 | 0.51 | 0.32 | 5.36 | 8.7 | 15 | 42.62 | 42.62 | 168.96 | 7.11 | 36 | 6.42 | 990.55 | 995 | 993.31 | 997.12 |
| | 1.3 | 1.4 | Field Inlet | 243.87 | 0.5 | 9.33 | 0.51 | 0.26 | 4.76 | 9.3 | 14.5 | 38.32 | 38.32 | 111.37 | 8.7 | 36 | 2.79 | 995.5 | 1002.3 | 997.12 | 1004.31 |
| | 1.4 | 1.5 | Curb Inlet | 259.4 | 0.11 | 3.36 | 0.51 | 0.06 | 1.71 | 7.4 | 10 | 15.8 | 15.8 | 51.37 | 7.55 | 30 | 1.57 | 1003.8 | 1007.87 | 1004.75 | 1009.21 |
| | 1.5 | 1.6 | Curb Inlet | 34 | 0.14 | 3.25 | 0.51 | 0.07 | 1.66 | 6.8 | 9.9 | 15.31 | 15.31 | 41.23 | 9.31 | 24 | 3.32 | 1008.37 | 1009.5 | 1009.21 | 1010.91 |
| | 1.6 | 1.7 | Field Inlet | 95.92 | 0.33 | 3.11 | 0.51 | 0.17 | 1.59 | 9.6 | 9.7 | 14.74 | 14.74 | 36.51 | 8.49 | 24 | 2.61 | 1010 | 1012.5 | 1010.91 | 1013.88 |
| | 1.3 | 2.1 | Curb Inlet | 113.05 | 0.21 | 0.56 | 0.51 | 0.11 | 0.29 | 7.9 | 9.7 | 2.66 | 2.66 | 12.95 | 3.13 | 15 | 3.14 | 996.75 | 1000.3 | 997.12 | 1000.95 |
| | 2.1 | 2.2 | Curb Inlet | 44.79 | 0.35 | 0.35 | 0.51 | 0.18 | 0.18 | 9.5 | 9.5 | 1.67 | 1.67 | 6.47 | 3.97 | 15 | 1 | 1000.8 | 1001.25 | 1001.23 | 1001.76 |
| | 1.4 | 3.1 | Curb Inlet | 113.05 | 0.25 | 5.47 | 0.51 | 0.13 | 2.79 | 9.9 | 14.2 | 22.65 | 22.65 | 29.88 | 6.69 | 30 | 0.53 | 1003.3 | 1003.9 | 1004.93 | 1005.53 |
| | 3.1 | 3.2 | Curb Inlet | 39.06 | 0.51 | 4.65 | 0.51 | 0.26 | 2.37 | 9.8 | 14.1 | 19.32 | 19.32 | 41.5 | 5.3 | 30 | 1.02 | 1004.4 | 1004.8 | 1006.57 | 1006.29 |
| | 3.2 | 3.3 | Curb Inlet | 151.04 | 0.78 | 4.14 | 0.51 | 0.4 | 2.11 | 10.1 | 13.7 | 17.38 | 17.38 | 35 | 6.61 | 30 | 0.73 | 1005.3 | 1006.4 | 1006.55 | 1007.81 |
| | 3.3 | 3.4 | Curb Inlet | 49.56 | 0.31 | 2.9 | 0.51 | 0.16 | 1.48 | 9.1 | 11.7 | 12.92 | 12.92 | 19.01 | 6.26 | 24 | 0.71 | 1006.9 | 1007.25 | 1008.11 | 1008.54 |
| | 3.1 | 4.1 | Curb Inlet | 323.41 | 0.22 | 0.57 | 0.51 | 0.11 | 0.29 | 12.4 | 12.4 | 2.49 | 2.49 | 9.57 | 3.02 | 15 | 2.2 | 1004.4 | 1011.5 | 1006.57 | 1012.13 |
| | 4.1 | 4.2 | Curb Inlet | 34 | 0.35 | 0.35 | 0.51 | 0.18 | 0.18 | 8.8 | 8.8 | 1.71 | 1.71 | 7.83 | 4.33 | 15 | 1.47 | 1012.25 | 1012.75 | 1012.65 | 1013.27 |
| | 3.4 | 5.1 | Curb Inlet | 339.59 | 0.12 | 0.46 | 0.51 | 0.17 | 0.23 | 12.4 | 12.4 | 2.01 | 2.01 | 6.79 | 4.27 | 15 | 1.1 | 1007.75 | 1011.5 | 1008.22 | 1012.06 |
| | 5.1 | 5.2 | Curb Inlet | 34 | 0.34 | 0.12 | 0.51 | 0.06 | 0.06 | 8.1 | 8.1 | 0.6 | 0.6 | 7.83 | 3.2 | 15 | 1.47 | 1012 | 1012.5 | 1012.23 | 1012.8 |
| Storm Manor at Stoney Creek 3rd Plat | 3.4 | MI.1 | Curb Inlet | 43.6 | 0.56 | 2.59 | 0.51 | 0.29 | 1.32 | 11.6 | 11.6 | 11.58 | 11.58 | 21.66 | 6.39 | 18 | 0.92 | 1007.75 | 1008.15 | 1008.79 | 1009.37 |
| | MI.1 | MI.2 | Curb Inlet | 34 | 0.4 | 0.56 | 0.51 | 0.29 | 0.29 | 10.9 | 10.9 | 2.56 | 2.56 | 6.07 | 3.77 | 15 | 0.88 | 1008.65 | 1008.95 | 1009.37 | 1009.59 |
| | MI.2 | M2.1 | Manhole | 52.28 | 0 | 1.47 | 0 | 0 | 0.75 | 0 | 10.9 | 6.71 | 6.71 | 8.7 | 6.99 | 15 | 1.82 | 1008.65 | 1009.6 | 1009.47 | 1010.64 |
| | M2.1 | M2.2 | Field Inlet | 144.79 | 0.69 | 1.47 | 0.51 | 0.35 | 0.75 | 9.9 | 10.5 | 6.8 | 6.8 | 5.5 | 5.55 | 15 | 0.73 | 1010.1 | 1011.15 | 1011.35 | 1012.96 |
| | M2.2 | M2.3 | Curb Inlet | 52.8 | 0.39 | 0.78 | 0.51 | 0.2 | 0.4 | 10.1 | 10.2 | 3.64 | 3.64 | 9.53 | 3.77 | 15 | 0.8 | 1011.35 | 1012.5 | 1013.2 | 1013.27 |
| | M2.3 | M2.4 | Curb Inlet | 34 | 0.39 | 0.39 | 0.51 | 0.2 | 0.2 | 10.1 | 10.1 | 1.83 | 1.83 | 7.83 | 4.22 | 15 | 1.47 | 1013 | 1013.5 | 1013.44 | 1014.04 |
| | 1.7 | Future | Future Pipe | 50 | 2.78 | 2.78 | 0.51 | 1.42 | 1.42 | 9.6 | 9.6 | 13.23 | 13.23 | 22.62 | 6.78 | 24 | 1 | 1013 | 1013.5 | 1014.1 | 1014.81 |
| | 6.1 | 6.2 | Field Inlet | 45.43 | 0.24 | 3.36 | 0.51 | 0.12 | 1.71 | 5 | 11.8 | 14.93 | 14.93 | 7.79 | 8.45 | 18 | 0.55 | 988 | 988.25 | 991.14 | 992.06 |
| | 6.2 | 6.3 | Curb Inlet | 146.21 | 0.52 | 3.12 | 0.51 | 0.27 | 1.59 | 9.8 | 11.5 | 13.99 | 13.99 | 15.66 | 7.92 | 18 | 2.22 | 988.75 | 992 | 993.31 | 995.91 |
| | 6.3 | 6.4 | Curb Inlet | 34 | 0.77 | 2.6 | 0.51 | 0.39 | 1.33 | 11.4 | 11.4 | 11.69 | 11.69 | 9 | 6.62 | 18 | 0.74 | 992.5 | 992.75 | 996.4 | 996.82 |
| | 6.4 | 6.5 | Curb Inlet | 77.13 | 0.62 | 1.83 | 0.51 | 0.32 | 0.93 | 9.5 | 9.5 | 8.74 | 8.74 | 12.19 | 7.12 | 15 | 3.57 | 993.25 | 996 | 997.83 | 999.24 |
| | 6.5 | 6.6 | Curb Inlet | 33.92 | 1.21 | 1.21 | 0.51 | 0.62 | 0.62 | 8.3 | 8.3 | 6.01 | 6.01 | 7.84 | 4.9 | 15 | 1.47 | 997.25 | 997.75 | 998.63 | 999.93 |
| | 9.1 | 9.2 | Curb Inlet | 197.2 | 0.64 | 1.62 | 0.51 | 0.33 | 0.83 | 10.5 | 10.5 | 7.49 | 7.49 | 5.39 | 6.11 | 24 | 1.01 | 983 | 985 | 985.25 | 987.19 |
| | 9.2 | 9.3 | Curb Inlet | 33.53 | 0.98 | 0.98 | 0.51 | 0.5 | 0.5 | 7.6 | 7.6 | 4.99 | 4.99 | 9.66 | 4.07 | 18 | 1.49 | 985.5 | 986.25 | 987.48 | 987.68 |
| | 10.1 | 10.2 | Curb Inlet | 143.08 | 0.28 | 10.27 | 0.51 | 0.14 | 5.24 | 11.1 | 11.3 | 46.35 | 46.35 | 147.08 | 8.78 | 48 | 1.05 | 980 | 981.5 | 983.54 | 983.54 |
| | 10.2 | 10.3 | Curb Inlet | 34.71 | 0.7 | 9.99 | 0.51 | 0.36 | 5.09 | 8.9 | 11.2 | 45.18 | 45.18 | 133.54 | 8.37 | 48 | 0.86 | 982.5 | 982.8 | 984.1 | 984.81 |
| Existing Storm Pipe Manor at Stoney Creek 1st Plat | 10.3 | 10.4 | No Structure | 124.42 | 0 | 9.29 | 0.51 | 0 | 4.74 | 8.8 | 11.2 | 42.07 | 42.07 | 153.88 | 9.86 | 36 | 2.6 | 983.3 | 986.6 | 984.81 | 986.71 |
|



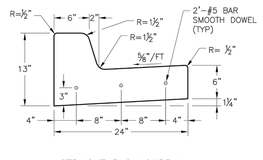

STRAIGHT CURB
(TYPE C-1)



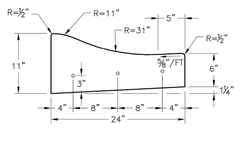

DOWELLED CURB
(TYPE DC)



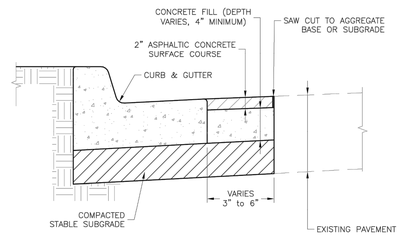

CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



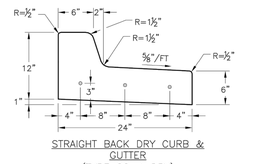

STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



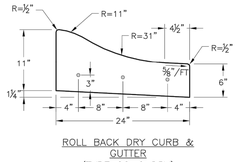

ROLL BACK CURB & GUTTER
(TYPE CG-2)




CURB REPLACEMENT DETAIL




STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)




ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

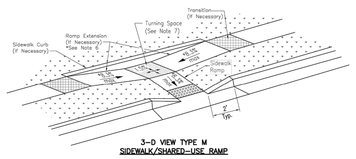
LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

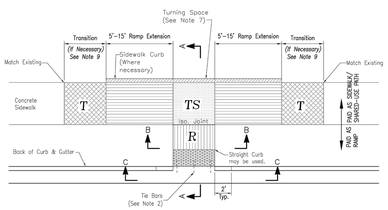
Project:
Sheet Name:

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #

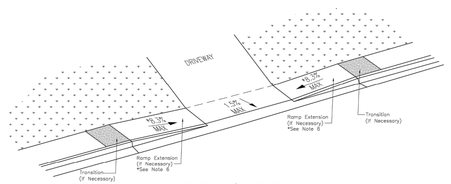
GEN-4



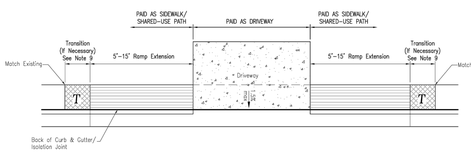

3-D VIEW TYPE M
SIDEWALK/SHARED-USE RAMP



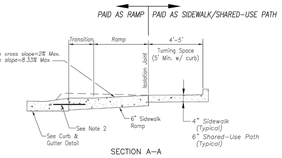

TYPE M SIDEWALK/SHARED-USE RAMP
Not to Scale



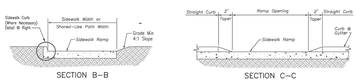

3-D VIEW SIDEWALK/SHARED-USE RAMP
AT DRIVEWAY




SIDEWALK/SHARED USE RAMP
AT DRIVEWAY WITH ADJOINING CURB




SECTION A-A

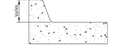



SECTION B-B SECTION C-C

TYPE M SIDEWALK RAMP
Not to Scale




CURB & GUTTER DETAIL AT RAMP
Not to Scale




SIDEWALK CURB DETAIL
Not to Scale

LEGEND

| | |
|---|---|
| R | SIDEWALK RAMP |
| TS | TURNING SPACE |
| | DETECTABLE WARNING SURFACE |
| T | TRANSITION |

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

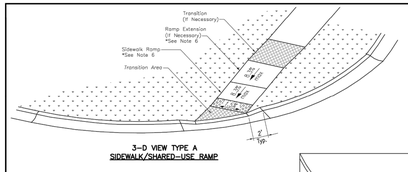
LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
ADA RAMP RETROFIT DETAIL

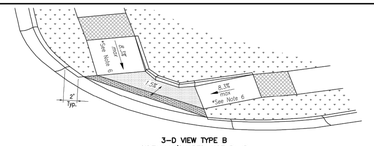
Project:
Sheet Name:

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #

GEN-3B



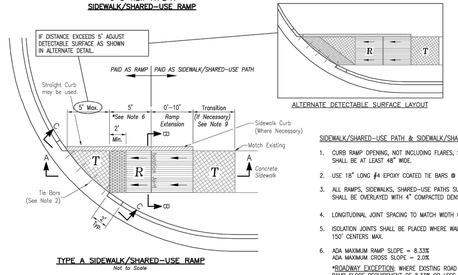

3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP




3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

LEGEND

| | |
|---|---|
| R | SIDEWALK RAMP |
| TS | TURNING SPACE |
| | DETECTABLE WARNING SURFACE |
| T | TRANSITION |



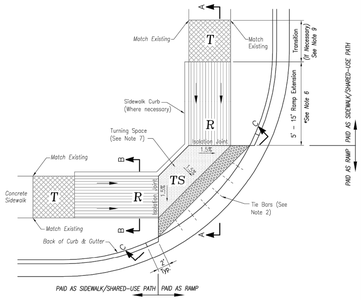

TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale



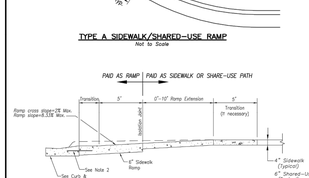

ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

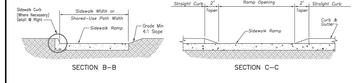
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).




TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

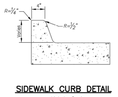



SECTION A-A

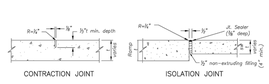



SECTION B-B SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale




SIDEWALK CURB DETAIL
Not to Scale




CONTRACTION JOINT ISOLATION JOINT

JOINT DETAILS
Not to Scale




CURB & GUTTER DETAIL AT RAMP
Not to Scale

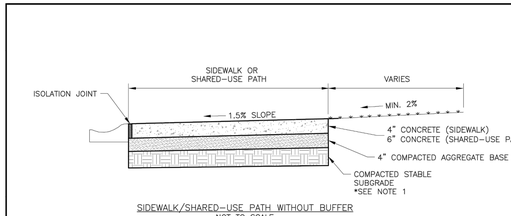
LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
ADA RAMP RETROFIT DETAIL

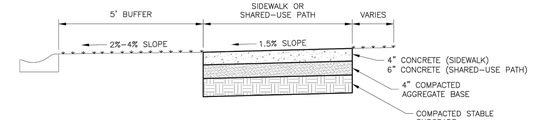
Project:
Sheet Name:

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #

GEN-3A




SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE




SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
6. SHARED-USE PATH PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SIDEWALK/SHARED-USE PATH DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

GEN-2

GENERAL NOTE:

1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
*Engineering 2005002186-D*
*Surveying 2005008319-D*
Kansas
*Engineering E-1695*
*Surveying LS-218*
Oklahoma
*Engineering 6254*
Nebraska
*Engineering CA2821*


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK - 3RD PLAT
Issue Date: July 16, 2019

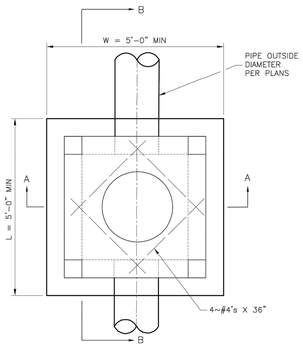
Construction Details
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER LEC PE-2006019708
PROFESSIONAL ENGINEER

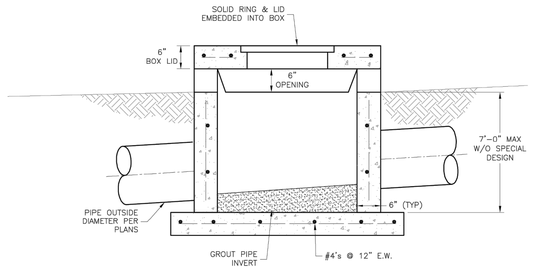
Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 - As-Built
11/7/19 - As-Built
11/14/19 - As-Built

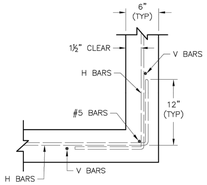
C.600



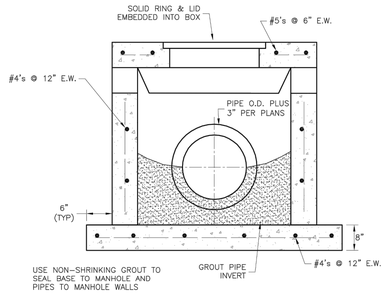

PLAN VIEW




SECTION B–B




WALL CORNER DETAIL




SECTION A–A

GENERAL NOTES:

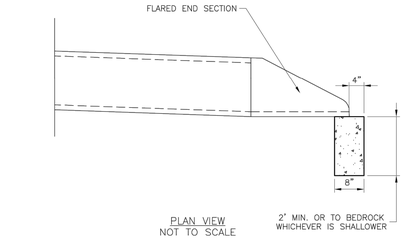
1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
6. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

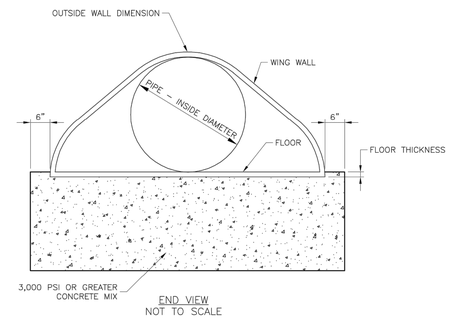
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
FIELD INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #

STM-2




PLAN VIEW
NOT TO SCALE



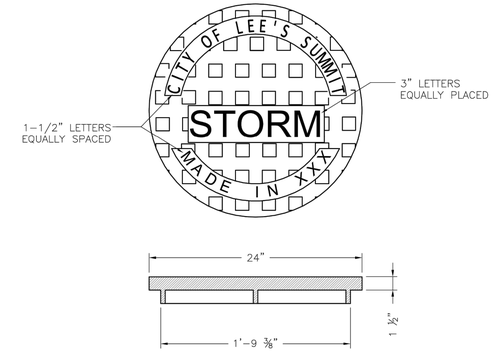

END VIEW
NOT TO SCALE

LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

FLARED END SECTION SUPPORT DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-5




STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

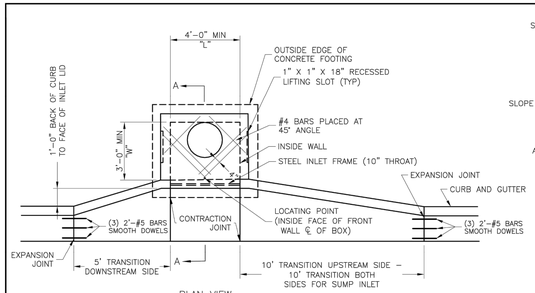
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

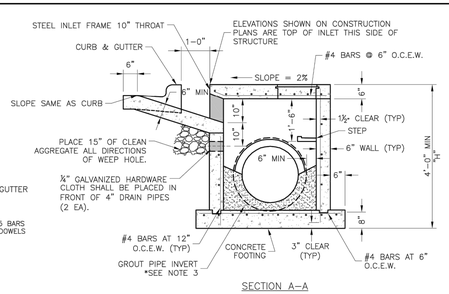
STORM MANHOLE COVER DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

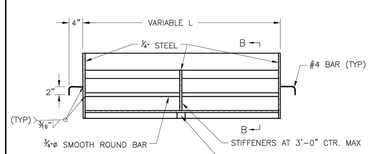
STM-6



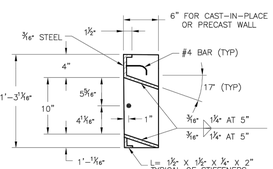

PLAN VIEW



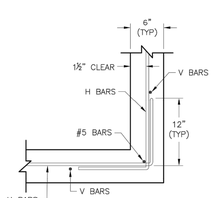

SECTION A–A



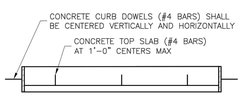

FRONT ELEVATION




SECTION B–B




WALL CORNER DETAIL




PLAN VIEW

STEEL FRAME NOTES:

1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

GENERAL NOTES:

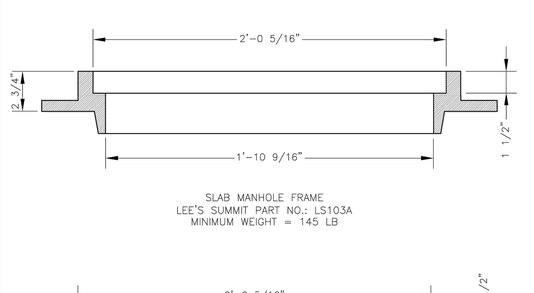
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

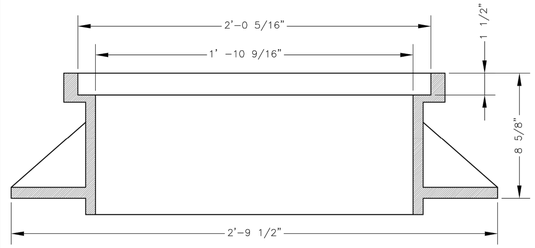
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #

STM-1




SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB




STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STORM MANHOLE FRAME DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-7

GENERAL NOTE:

1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005032186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK 3RD PLAT
Issue Date: July 18, 2017

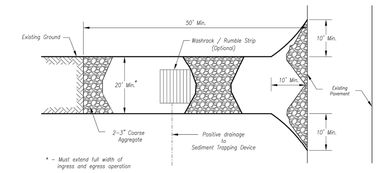
Construction Details
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI
MATTHEW J. SCHLICHT
NUMBER 19071
PE
PROFESSIONAL ENGINEER

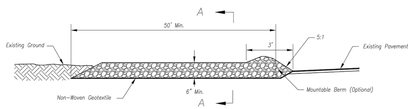
Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS
9/24/19 – As–Built
11/7/19 – As–Built
11/14/19 – As–Built

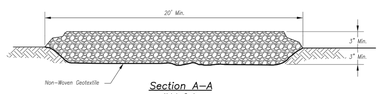
C.601




Plan View
Not to Scale




Side Elevation
Not to Scale




Section A–A
Not to Scale

*Notes for Construction Entrance:*

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

*Maintenance for Construction Entrance:*

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

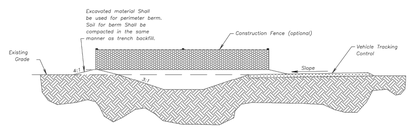
CONSTRUCTION ENTRANCE

*Notes for Concrete Washout:*

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

*Maintenance for Concrete Washout:*

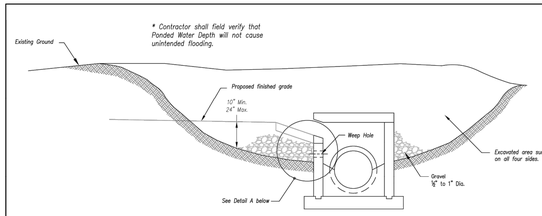
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

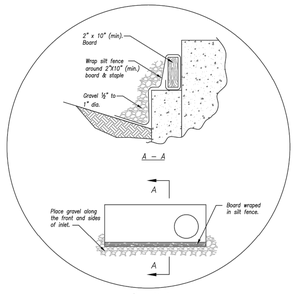



CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

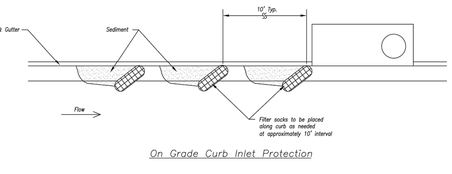
| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA | KANSAS CITY METRO CHAPTER |
| CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT | STANDARD DRAWING NUMBER ESC-01 ADOPTED: 10/24/2016 |




Detail A

EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)



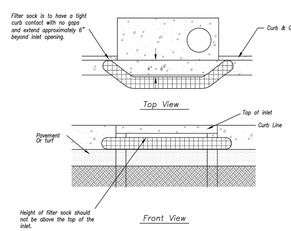

On Grade Curb Inlet Protection

*Notes:*

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

*Maintenance:*

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

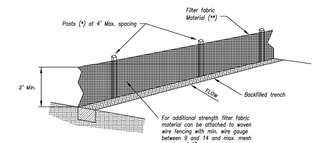



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

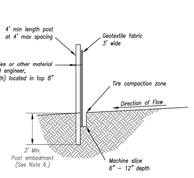
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA | KANSAS CITY METRO CHAPTER |
| CURB INLET PROTECTION | STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016 |




(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ⅜" x 1 ⅜"
- NO.2 SOUTHERN PINE 2 ⅜" x 2 ⅜"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288




*Notes:*

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

*Maintenance:*

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

SILT FENCE DETAILS
Not to Scale

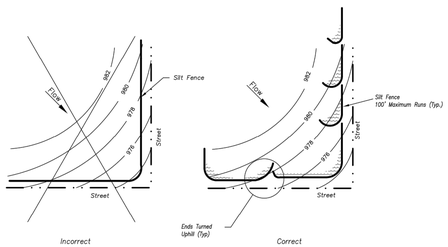
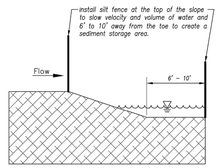
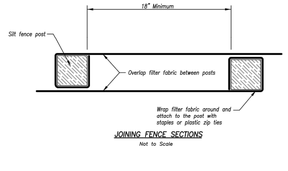



Figure A

SILT FENCE LAYOUT
Not to Scale

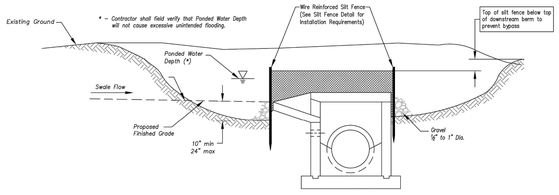


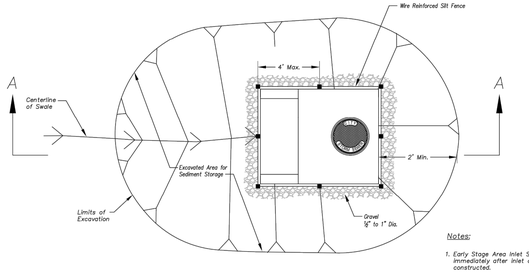

JOINING FENCE SECTIONS
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA | KANSAS CITY METRO CHAPTER |
| SILT FENCE | STANDARD DRAWING NUMBER ESC-03 ADOPTED: 10/24/2016 |

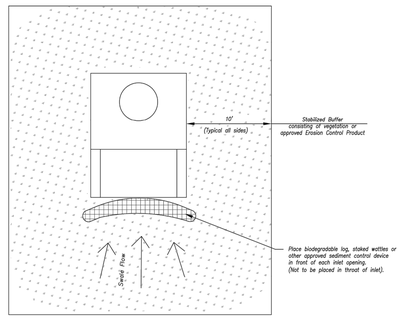



Section A–A
Not to Scale

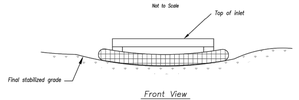



Plan
Not to Scale

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)




Plan
Not to Scale




Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

*Notes:*

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

*Maintenance:*

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA | KANSAS CITY METRO CHAPTER |
| AREA INLET AND JUNCTION BOX PROTECTION | STANDARD DRAWING NUMBER ESC-07 ADOPTED: 10/24/2016 |

GENERAL NOTE:
1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.

"AS-BUILT"

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.


ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P:(816) 623-9888 F:(816)623-9849

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821


The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

Project: THE RESERVE AT STONEY CREEK - 3RD PLAT
Issue Date: July 16, 2017

Construction Details
Construction Plans for:
The Reserve at Stoney Creek - 3rd Plat
Lee's Summit, Jackson County, Missouri

STATE OF MISSOURI — MATTHEW J. SCHLICHT — NUMBER LEGISLATIVE — PE-2006019708 — PROFESSIONAL ENGINEER


Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226


REVISIONS
9/24/19 – As-Built
11/7/19 – As-Built
11/14/19 – As-Built

C.602