Legend:

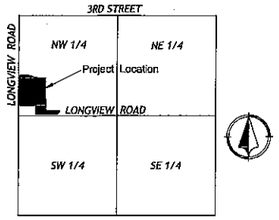
△ FOUND SECTION CORNER AS NOTED	✹ TREE, CONIFEROUS
● FOUND MONUMENT AS NOTED	⊙ TREE, DECIDUOUS
○ SET 1/2" X 24" REBAR WITH DMZ MO CAP	BUSH
○ SET 1/2" X 24" REBAR WITH RIC KSCLS 234 CAP	WATER METER
BENCHMARK	WATER VALVE
BOL BOLLARD	FIRE HYDRANT
CO CLEANOUT	SPIGOT
RD ROOF DRAIN	SPR SPRINKLER VALVE
MW MONITORING WELL	YARD SPRINKLER
FOM FIBER OPTIC MARKER	UGT UNDERGROUND TELEPHONE
GP GATE POST	OHT OVERHEAD TELEPHONE
GLM GAS LINE MARKER	F/O FIBER OPTIC LINE
MAILBOX	UGP UNDERGROUND POWER
AC AC UNIT	OHP OVERHEAD POWER
CABLE BOX	GAS GAS LINE
ELECTRICAL BOX	W/L WATER LINE
ELECTRIC METER	UGC UNDERGROUND CABLE
ELECTRICAL MANHOLE	OHC OVERHEAD CABLE
GAS METER	SAN SANITARY SEWER LINE
GAS VALVE	ST STORM SEWER LINE
TELEPHONE BOX	U/E UTILITY EASEMENT
TELEPHONE VAULT	SS/E SANITARY SEWER EASEMENT
TELEPHONE MANHOLE	D/E DRAINAGE EASEMENT
FLOOD LIGHT	A/E ACCESS EASEMENT
STREET LIGHT	WL/E WATERLINE EASEMENT
YARD LIGHT	GL/E GAS LINE EASEMENT
POWER POLE	B/L BUILDING SETBACK LINE
GUY POLE	RESTRICTED ACCESS
UTILITY POLE	(M) MEASURED
GUY ANCHOR	(P) PLATTED
SIGNAL POLE	(D) DEEDED
SIGNAL BOX	(D) DESCRIBED
SIGNS	L LENGTH OF CURVE
STORM MANHOLE	R RADIUS OF CURVE
SANITARY MANHOLE	CL CHORD LENGTH
	CB CHORD BEARING

Residences at New Longview
Construction Documents

Zoning: PMIX

City of Lee's Summit, Jackson County, Missouri

-2014-040-

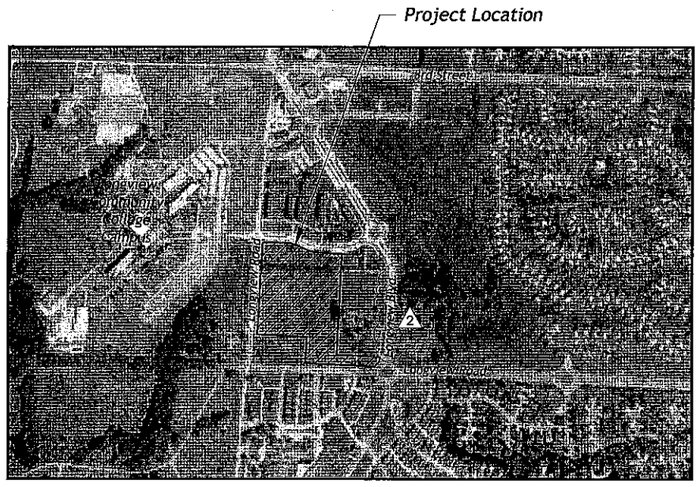


LOCATION MAP
SECTION 10-47N-32W
Scale 1" = 2000'

INDEX OF SHEETS

Planning & Development

RECEIVED
JUN 27 2014



VICINITY MAP
NOT TO SCALE

LEGEND

———	Existing Property Line	———	Proposed Property Line
———	Existing Right-of-Way Line	———	Proposed Lot Line
– – – – –	Existing Easement Line	———	Proposed Right-of-Way Line
———	Existing Section Line	– – – – –	Proposed Easement Line
———	Existing Curb & Gutter	———	Proposed Building
– – – – –	Existing Storm Sewer	———	Proposed Curb & Gutter
— — —	Existing Sanitary Sewer	———	Proposed Pavement Marking
— Water —	Existing Waterline	———	Proposed Storm Sewer
— OHP —	Existing Overhead Power	□	Proposed Storm Structure
— UGP —	Existing Underground Power	———	Proposed Waterline
— GAS —	Existing Gas Main	———	Proposed Sanitary Sewer Main
———	Existing Contours	— UGP —	Proposed Underground Power
		———	Proposed Detention Pond

UTILITIES

WATER & SANITARY SEWER
City of Lee's Summit Water Utilities
220 SE Green St
Lee's Summit, MO
(816) 969-1900

ELECTRICITY
Kansas City Power and Light
Phone: 816.471.5275

GAS
Missouri Gas Energy
PO Box 219255
Kansas City, Missouri 64141
Phone: 816.756.5252

TELEPHONE
AT&T
Phone: 800.288.2020

Time Warner Cable
Phone: 816.222.5952

CABLE TV
Comcast
Phone: 816.795.1100

Time Warner Cable
Phone: 816.358.8833

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
DEVELOPMENT ENGINEERING GROUP
STR& ITS: Approved By: Kenneth Date: 3 July 14
TRAFFIC: Approved By: Kenneth Date: 3 July 14
WSS/ST: Approved By: Kenneth Date: 3 July 14
Approval by the City Engineer, or designee does not release the applicant from responsibility to comply with all City of Lee's Summit Ordinances and sound engineering/construction practices.
PW Records _____ PW Insp _____ Reviewer
P&D/Codes _____ Dev. File _____ ITS

Oil / Gas Well Note:
There is no visible evidence, this date, of abandoned oil or gas wells located within the property boundary, as identified in "Environmental Impact Study of Abandoned Oil and Gas Wells in Lee's Summit, Missouri.

Flood Plain Note
We have reviewed the "Flood Insurance Rate Map", Community Panel Number 29095C0287F & 29095C0289F, both dated September 29, 2006, as published by the Federal Emergency Management Agency. The above rate maps place the property in Zone "X" is defined as areas determined to be outside the 500 Year Flood Elevation.

811 Know what's below. Call before you dig

LEGAL DESCRIPTION:

All of Tract 1, TOWER PARK DENTENTION POND, a subdivision of land, according to the recorded plat thereof, and all that part of the Northwest Quarter of Section 10, Township 47 North, Range 32 West, all in the City of Lee's Summit, Jackson County, Missouri, more particularly described as follows:

Commencing at the Southwest corner of the Northwest Quarter of said Section 10; thence North 03°15'08" East, coincident with the West line of said Northwest Quarter, 50.00 feet; thence departing said West line, South 87°10'51" East, 30.00 feet to a point of intersection of the North right-of-way line of SW Longview Road and the East right-of-way line of SW Longview Road, said point being the Point of Beginning; thence North 03°15'08" East, coincident with said East right-of-way line, 1002.29 feet to a point of intersection of the South right-of-way line of Kessler Drive and said East right-of-way line; thence departing said East right-of-way line, and coincident with said South right-of-way line, along the following courses: North 48°15'08" East, 21.21 feet; thence South 86°44'52" East, 204.38 feet; thence Southeasterly, along a tangent curve to the right, having a radius of 244.00 feet, for a distance of 113.82 feet; thence South 60°01'17" East, 0.20 feet; thence Southeasterly, along a tangent curve to the left, having a radius of 356.00 feet, for a distance of 168.83 feet; thence South 87°11'35" East, 180.45 feet; thence Easterly, along a tangent curve to the left, having a radius of 335.00 feet, for a distance of 9.48 feet; thence departing said South right-of-way line, South 02°46'30" West, 949.53 feet to a point on the North right-of-way line of said SW Longview Road; thence North 87°10'51" West, coincident with said North right-of-way line, 690.01 feet to the Point of Beginning, containing 674,305 square feet, or 15.480 acres, more or less.

BENCHMARK:

BM # 1: "+" cut on the Southwest corner of curb inlet located on the South side of Kessler Drive approximately 89 feet Southeast of the intersection of Kessler Drive and Southwest Longview Road.

Elevation: 1003.65

GENERAL NOTES

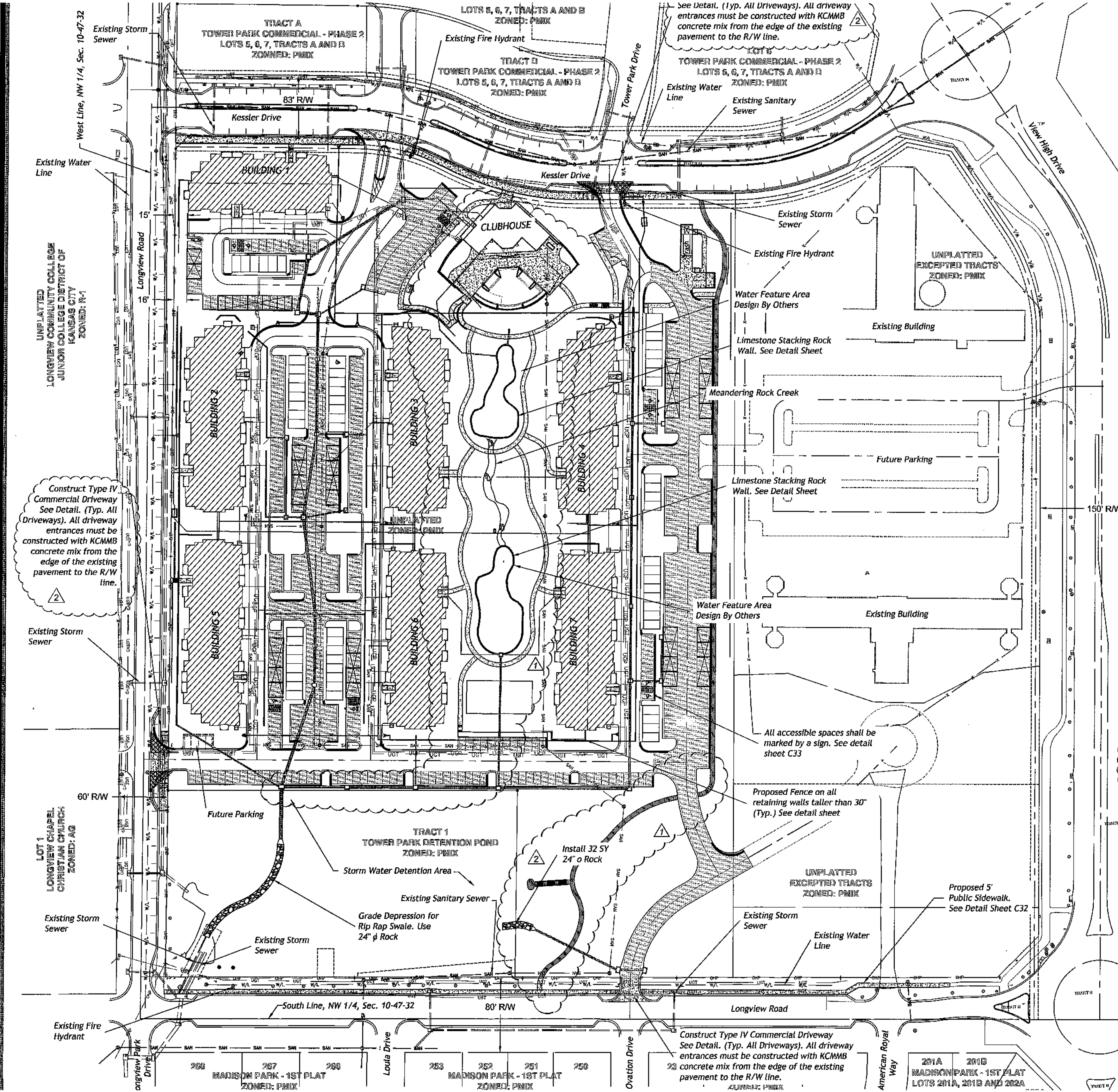
2
1. All construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between the Final Development Plan and the Design and Construction Manual, the Design and Construction Manual shall govern.
2. The contractor will be responsible for securing all bonds, and insurance required by the contract documents, City of Lee's Summit, Mo., and all other governing agencies (including local, county, state, and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all bonds, and insurance shall be the contractor's responsibility and shall be included in the bid for the work.
3. All existing utilities indicated on the drawings are according to the best information available to the engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All utilities, shown and un-shown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
4. The contractor will be responsible for all damages to existing utilities, pavement, fences, structures, and other features not designated for removal. The contractor shall repair all damages at his expense.
5. The demolition of existing pavement, curbs, structures, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state, and federal regulations.
6. By use of these construction documents the contractor hereby agrees that he shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses, or damages related to the project.
7. The contractor will be responsible for providing all signage, barricades, lighting, etc., as required for temporary traffic control during the construction of this project. Maintenance of the temporary traffic control devices will be the contractor's responsibility. All traffic control in conduction with construction in the right-of-way shall be in conformance with the City Traffic Control Requirements.
8. Contractor shall furnish evidence that his/her insurance meets the requirements of the City of Lee's Summit, Missouri Municipal Code.
9. Prior to installing, constructing, or performing any work on the public storm sewer line (including connecting private drainage systems to the storm sewer), contact Inspections.
10. Connections to the public storm sewers between structures will not be permitted.
11. Contractor shall verify and accept existing topography shown herein. Contractor shall notify Engineer if any discrepancies are found prior to any earthwork activities.
12. Planning and Codes Administration will require a retaining wall design by a registered engineer in the State of Missouri.
13. Geogrid, footings, or other elements of the retaining wall(s) cannot encroach into the right of way or public easements.
14. A Knox Box shall be provided for Each Building.
15. All building and life safety issues shall comply with the 2012 International Fire Code and local amendments as adopted by the City of Lee's Summit.

2

CONSTRUCTION DOCUMENTS

AMENDMENT 4

Renaissance Infrastructure



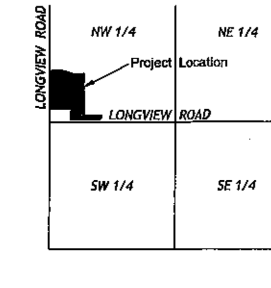
P.C. Concrete Pavement

8" Asphaltic Pavement

7" Asphaltic Pavement

APWA Type "CG-1" Curb

APWA Type "CG-1 Dry" Curb



LOCATION MAP

SECTION 10-47N-32W
Scale 1" = 2000'

LAYOUT & PAVING NOTES

1. All construction shall conform to the City of Lee's Summit's minimum design standards.
2. The contractor shall check existing grades, dimensions, and inverts in the field and report any discrepancies to the architect/engineer prior to beginning work.
3. The contractor shall verify the exact location of all existing utilities, take care to protect utilities that are to remain, and repair contractor caused damage according to current local standards and at the contractor's expense. coordinate all construction with the appropriate utility company.
4. The contractor shall comply with all local codes, obtain all permits, and pay all fees prior to beginning work.
5. Prior to installing, constructing, or performing any work in the public right of way or on the public storm sewer line (including concrete pavement or connecting private drainage systems to the storm sewer), contact City of Lee's Summit public works at 816.969.1800 for inspection of the work. Contact must be made at least 24 hours prior to start of the work.
6. Provide a smooth transition between existing pavement and new pavement. Field adjustment of final grades may be necessary. Adjust all utilities prior to installation of pavement.
7. The contractor shall protect all trees to remain, in accordance with the specifications. Do not operate or store heavy equipment, nor handle, nor store materials within the driplines of trees or outside the limit of grading.
8. Concrete walks and pads shall have a broom finish. All concrete shall be 4,000 p.s.i. unless otherwise noted. Curb ramps, sidewalk slopes, and driveway ramps shall be constructed in accordance with all current local requirements. If applicable, the contractor shall request inspection of sidewalk and ramp forms prior to placement of concrete.
9. All damage to existing asphalt pavement to remain which results from new construction shall be replaced with like materials at contractor's expense.
10. Dimensions are to the back of curb, or edge of concrete, unless otherwise noted.
11. Excess material shall be disposed of by the contractor off the owner's property at no additional cost in a legal manner.
12. Maintain one set of as-built drawings on the job site for distribution to the engineer upon completion.
13. Concrete curb at all all concrete paving and both side of drive-in ramps shall be integral.
14. Contractor shall be responsible for mud and debris on public ROW which shall be removed in a timely manner daily.

PAVEMENT MARKING AND SIGNAGE NOTES

1. Parking stall marking stripes shall be four inch (4") wide white stripes. Handicap stall marking shall be furnished at locations shown on plans.
2. Traffic control devices and pavement markings shall confom to the requirements of the "Manual of Uniform Traffic Control Devices." and to the City of Lee's Summit.
3. Traffic control and pavement markings shall be painted with a white Sherwin Williams S-W traffic marking series b-29y2 or approved equal. The pavement marking shall be applied in accordance with manufacturers recommendations. Apply on a clean, dry surface and at a surface temperature of not less than 70°f and the ambient air temperature shall not be less than 60°f and rising. Two coats shall be applied.
4. All pavement markings for handicap stalls and aisles shall be blue.

FOR NON-PUBLIC WORK

A. Screened items indicate a pre-construction topographic survey
B. Contraction joints shall conform to APWA Section 2200.
C. All concrete to be 4000 psi with 5% (+/- 1%) air entrainment. Cement mixtures with water/cement ratios at 0.5 or below are recommended
D. Construction of reinforced concrete pavements shall be in accordance with ACI 330 standard specifications.
E. Curing compound to be applied to all concrete surfaces immediately after broom finish.
F. Contractor shall reject concrete if it cannot be placed within 90 minutes of batch time expiration time shall be reduced to 60 minutes on high summer temperatures.

SITE DATA TABLE

PROPERTY INFO:	
Existing Zoning:	PMIX
Total Land Area:	15.480 Acres
Proposed Street Right-of-Way:	0.00 Acres
Net Land Area:	15.480 Acres
Proposed Use:	Planned Mixed Use
EXISTING DETENTION TRACT:	
Existing Area:	95,832 S.F. / 2.20 Acres
BUILDING INFO:	
Building 1:	Type A - N (4/5 - 36 Units)
Buildings 2 & 3:	Type C (4/4 - (2) 42 Units)
Building 4:	Type C (5/4 - 48 Units)
Building 5:	Type C (4/4 - 42 Units)
Building 6:	Type B (4/4 - 46 Units)
Building 7:	Type B (5/4 - 53 Units)
PARKING INFO:	
1 Bedroom Apartment	= 157 Units
2 Bedroom Apartment	= 152 Units
Total 1-2 Bedroom Apartments	= 309 Units
1.5 Stalls / 1-2 BR Unit	= 464 Spaces
0.5 Stalls / Unit (Visitor)	= 155 Spaces
Total Parking Required	= 619 Spaces
Onsite Parking:	

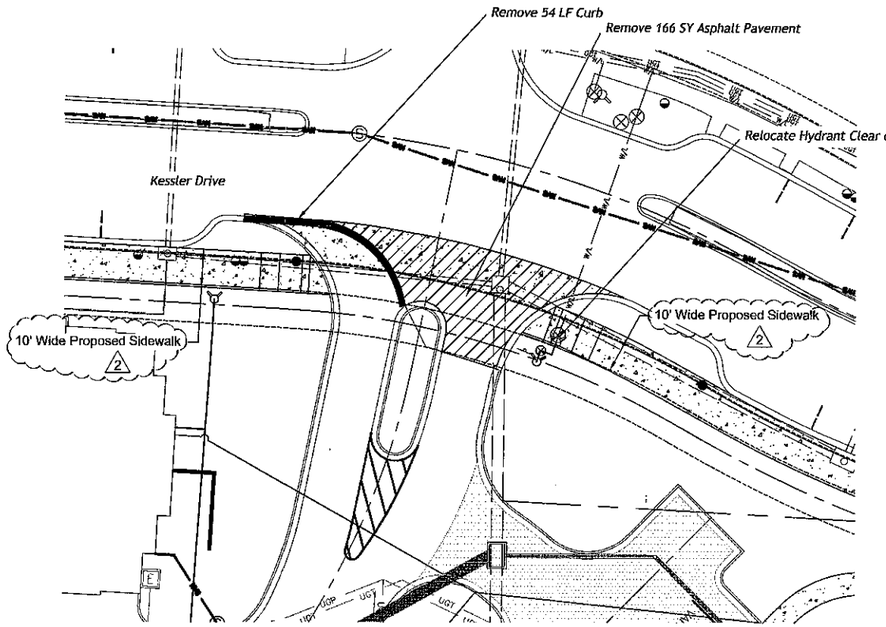
See NSPJ Letter dated 02-14-14 to Hector Solo

Total Floor Area	= 98,750 SF
Total Impervious Area	= 7.67 Acres
Floor Area Ratio (FAR)	= 0.146
Dwellings (Units) Per Acre	= 19.96

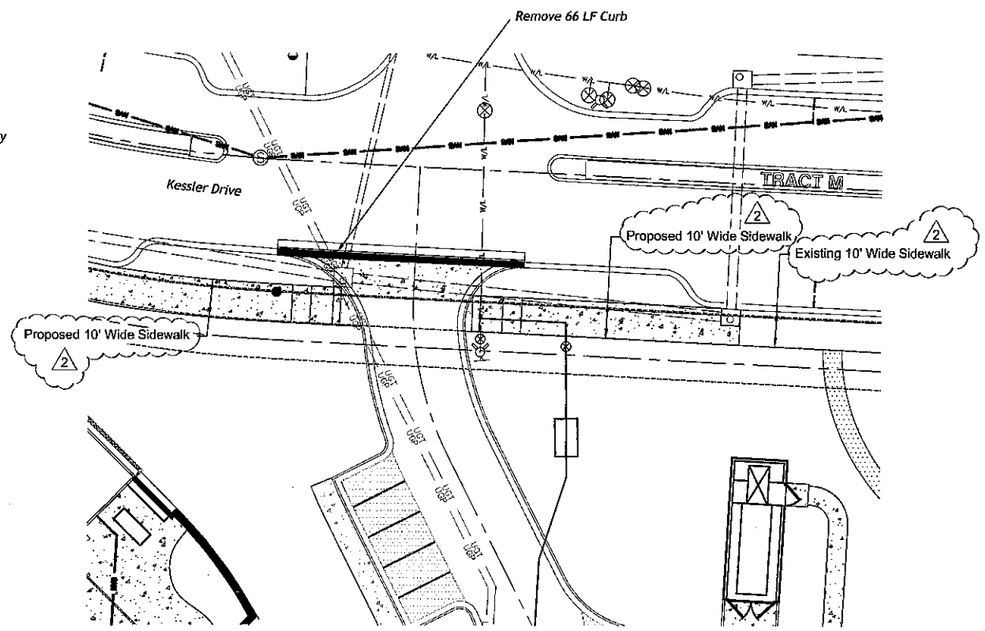
CONSTRUCTION DOCUMENTS

AMMENDMENT 4

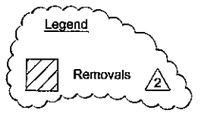
Renaissance Infrastructure

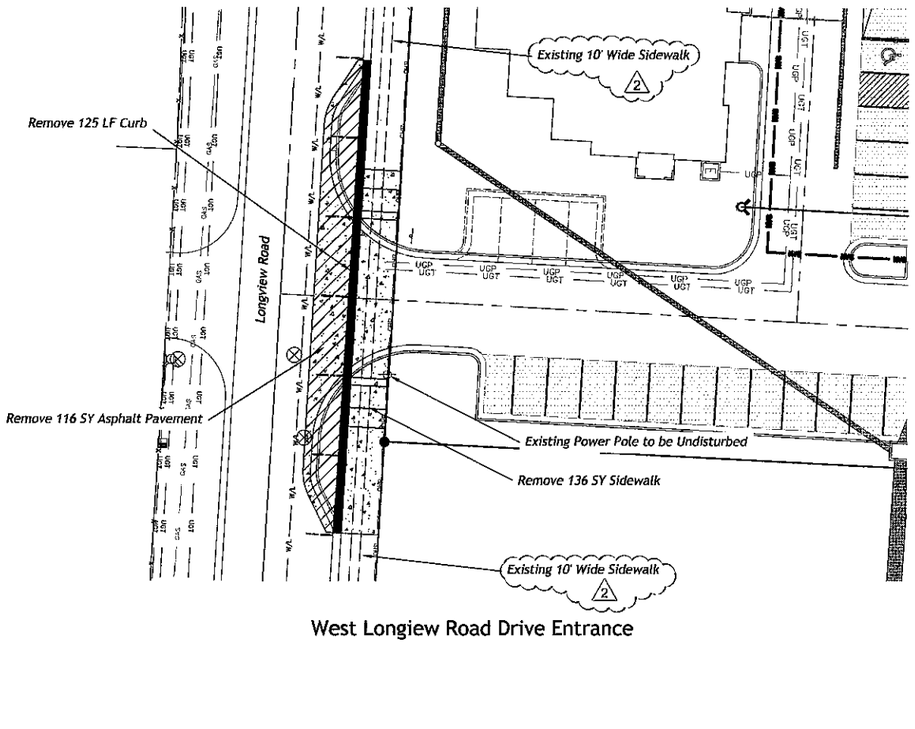


Northwest Kessler Drive Entrance

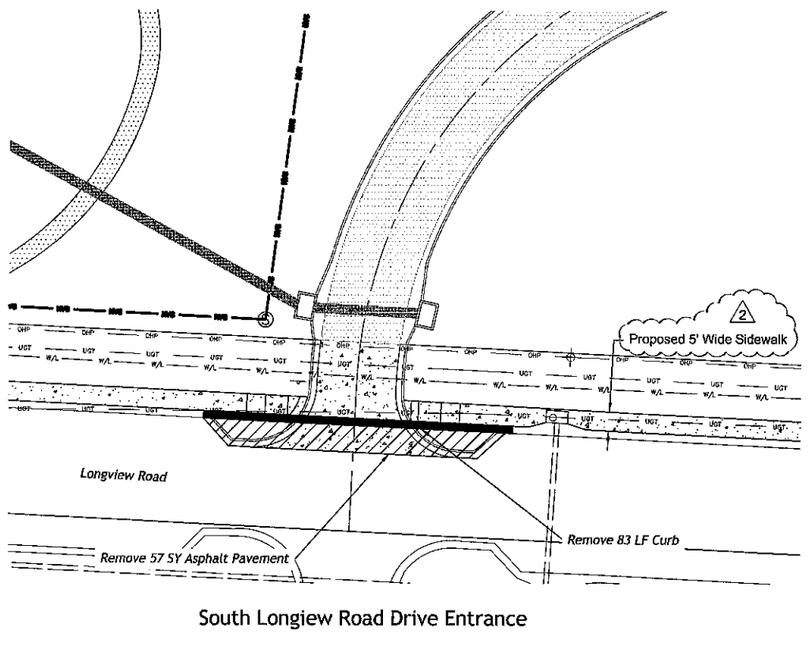


Northeast Kessler Drive Entrance





West Longiew Road Drive Entrance



South Longiew Road Drive Entrance

CONSTRUCTION DOCUMENTS

4	SPW	06/27/14
	MES	

AMENDMENT 4

Renaissance Infrastructure

Future Parking

Future Parking

Existing 8' Sidewalk

Proposed Retaining Wall 3

Proposed Retaining Wall 3

163.32'

225.72'

45.98'

216.37'

8' Sidewalk & Utility Easement

10' Gas & U/E

KESSLER DRIVE

TRACT M

TRASH

Proposed 8' Public Sidewalk

Install R1-1 30" x 30" Stop Sign. 2

Proposed 8' Public Sidewalk

Construct Stairs

5' Wide Sidewalk

CLUBHOUSE

Proposed Retaining Wall

Proposed Retaining Wall

Proposed 2' Valley Gutter Between all Grates (Typ.)

BUILDING 4
14,000 SF Footprint
65,000 SF Total

BUILDING 7
14,000 SF Footprint
63,000 SF Total

BUILDING 3
14,000 SF Footprint
58,000 SF Total

BUILDING 6
14,000 SF Footprint
56,000 SF Total

135.83'

137.83'

LEGEND

P.C. Concrete Pavement

Asphaltic Pavement

APWA Type "CG-1" Curb

APWA Type "CG-1 Dry" Curb

PARKING SPACE NOTATION LEGEND

1 = Number of Parking Spaces (Proposed Regular)

1G = Number of Parking Spaces (Proposed Garage)

1C = Number of Parking Spaces (Proposed Carport)

1E = Number of Parking Spaces (Existing)

1F = Number of Parking Spaces (Future)

1"=20'

CONSTRUCTION DOCUMENTS

SITE DIMENSION PLAN

AMENDMENT 4

SPW MES 06/27/14

Renaissance Infrastructure

Proposed Retaining Wall

216.37'

Proposed 5' Asphalt Trail

Construct Temporary Asphalt Curb

298.14'

R25'

Proposed 5' Pubtic Sidewalk. For Continuation See Sheet C32

LONGVIEW ROAD

OVATION DRIVE

R113'

R137'

262'

226'

145.86'

167.90'

168.13'

43'

25'

88'

81'

44'

91'

109'

11' Typ.

20' Typ.

9' Typ.

17.5' Typ.

R3'

R1'

R10'

27'

26'

R25'

UGT

UGP

SAN

W/L

OHP

35' UGT UGP

Install R1-1 30" x 30" Stop Sign.

298.01'

BUILDING 7
14,000 SF Footprint
63,000 SF Total

Proposed 2' Valley Gutter Between all Grades (Typ.)

4'

10'

Construct Stairs

Proposed Retaining Wall

Proposed 5' Public Sidewalk

96.67'

South Line, NW 1/4, Sec. 10-47-32

LONGVIEW ROAD

Storm Water Detention Area

BUILDING 6
14,000 SF Footprint
56,000 SF Total

LEGEND

- P.C. Concrete Pavement
- Asphaltic Pavement
- APWA Type "CG-1" Curb
- APWA Type "CG-1 Dry" Curb

PARKING SPACE NOTATION LEGEND

- (1) = Number of Parking Spaces (Proposed Regular)
- (1G) = Number of Parking Spaces (Proposed Garage)
- (1C) = Number of Parking Spaces (Proposed Carport)
- (1E) = Number of Parking Spaces (Existing)
- (1F) = Number of Parking Spaces (Future)

1"=20'

CONSTRUCTION DOCUMENTS

SITE DIMENSION PLAN

AMMENDMENT 4	SPW	MES 06/27/14
AMMENDMENT 3	PNC	MES 06/03/14

Renaissance Infrastructure

STATE OF
MITCH
E. SLU

NUM
PE-2002

PROJECT

PARKING SPACE NOTATION LEGEND

(1) = Number of Parking Spaces (Proposed Regular)

(1G) = Number of Parking Spaces (Proposed Garage)

(1C) = Number of Parking Spaces (Proposed Carport)

(1E) = Number of Parking Spaces (Existing)

(1F) = Number of Parking Spaces (Future)

P.C. Concrete Pavement

Asphaltic Pavement

APWA Type "CG-1" Curb

APWA Type "CG-1 Dry" Curb

CLUBHOUSE

Proposed Retaining Wall

KESSLER DRIVE

26' Setback

10'

ADA Accessible Handi-Cap Ramp

Proposed 8' Public Sidewalk

Install R1-1 30" x 30" Stop Sign.

5' Wide Sidewalk

Bike Rack

R15'

R71'

R12'

R20'

25'

9' Typ.

209.80'

R5'

18'

10'

R112'

R100'

R155'

42.48'

27'

R4'

R10'

17.5' Typ.

108'

32.5'

11' Typ.

66'

20' Typ.

29'

118'

44'

10'

1.5'

R1.5'

4'

34'

8'

24'

44.5'

64'

6.26'

68.39'

138.92'

48.60'

BUILDING 3
14,000 SF Footprint
58,000 SF Total

BUILDING 6
14,000 SF Footprint
56,000 SF Total

R34'

26'

50'

R7'

R3'

R5'

R1'

17.5' Typ.

190'

92'

11' Typ.

20' Typ.

88'

91.00'

Proposed 2' Valley Gutter Between all Grates (Typ.)

29'

25'

43'

BUILDING 1
10,750 SF Footprint
49,000 SF Total

BUILDING 2
14,000 SF Footprint
58,000 SF Total

BUILDING 5
14,000 SF Footprint
58,000 SF Total

Construct Stairs

KESSLER DRIVE

TRACT 46

474.90'

6.06'

42.57'

38.72'

38.82'

33.59'

225.86'

LONGVIEW ROAD

Install 2 - 4" Bollards

Contractor shall coordinate with KCP&L for relocation of guy anchors.

Proposed 8' Public Sidewalk

Proposed Retaining Wall

Existing 8' Sidewalk

Proposed Retaining Wall

1"=20'

CONSTRUCTION DOCUMENTS

SITE DIMENSION PLAN

AMENDMENT 4

Renaissance Infrastructure

5' Wide Sidewalk

Construct Stairs

BUILDING 6
14,000 SF Footprint
56,000 SF Total

BUILDING 5
14,000 SF Footprint
58,000 SF Total

Storm Water Detention Area

Proposed 5' Public Sidewalk

Proposed 2' Valley Gutter Between all Grates (Typ.)

Existing 8' Sidewalk

2 Install R1-1 30" x 30" Stop Sign.

LONGVIEW ROAD

LOULA DRIVE

LONGVIEW PARK DRIVE

West Line, NW 1/4, Sec. 10-47-32

South Line, NW 1/4, Sec. 10-47-32

1"=20'
0 10' 20'

LEGEND

- P.C. Concrete Pavement
- Asphaltic Pavement
- APWA Type "CG-1" Curb
- APWA Type "CG-1 Dry" Curb

PARKING SPACE NOTATION LEGEND

- (1) = Number of Parking Spaces (Proposed Regular)
- (1G) = Number of Parking Spaces (Proposed Garage)
- (1C) = Number of Parking Spaces (Proposed Carport)
- (1E) = Number of Parking Spaces (Existing)
- (1F) = Number of Parking Spaces (Future)

CONSTRUCTION DOCUMENTS

SITE DIMENSION PLAN

AMENDMENT 4

SPW MES 06/21/24

Renaissance Infrastructure

Kessler Drive

American Royal Way

South Line, NW 1/4, Sec. 10-47-32

Ovation Drive

BUILDING 4
FFE 1001.50 / 991.00

BUILDING 7
FFE 996.50 / 986.00

CLUBHOUSE
FFE 1003.00
/ 990.85

BUILDING 3
FFE 989.00

BUILDING 6
FFE 985.00

Longview Road

BUILDING 1
FFE 1006.50 / 997.00

Kessler Drive

BUILDING 2
FFE 990.00

BUILDING 5
FFE 985.00

Storm Water Detention Area

Riprap Swale

Loula Drive

Longview Road

Longview Park Drive

8'-0"

24" Ø Riprap

2'-0"

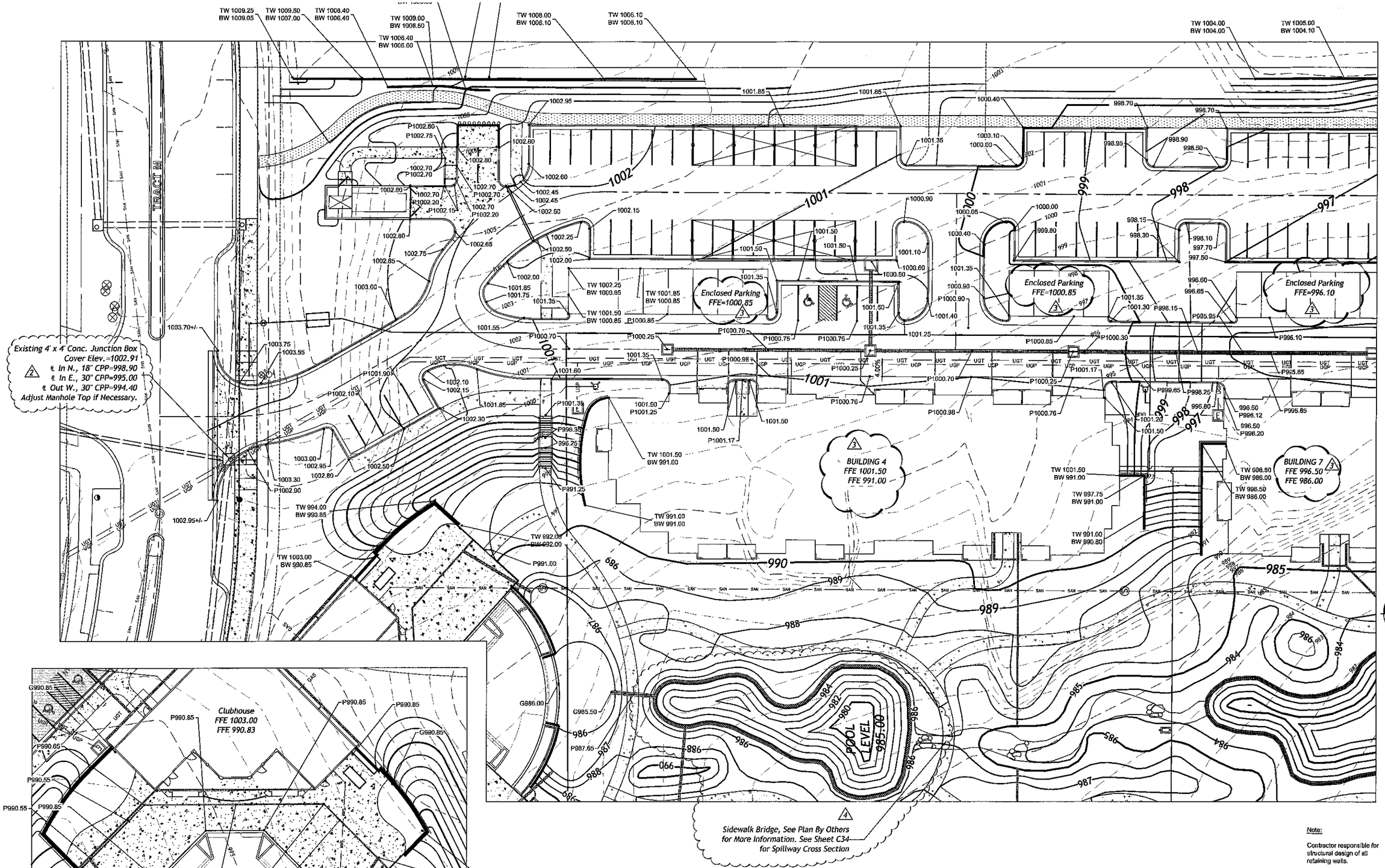
RIPRAP SWALE
NTS

1"=50'

CONSTRUCTION DOCUMENTS

3	SPW	06/27/14
		AMENDMENT 4

Renaissance Infrastructure



Pool Deck Grading Detail

Note:

Contractor responsible for structural design of all retaining walls.

CONSTRUCTION DOCUMENTS

AMENDMENT 4

SPW | MES | 06/17/14

Renaissance Infrastructure

NOTE:
Contractor responsible for structural design of all retaining walls.

1"=20'
0 10' 20'

Enclosed Parking
FFE=996.10

Enclosed Parking
FFE=996.00

BUILDING 7
FFE 996.50
FFE 986.00

POOL
LEVEL
982.75

40' X 80' SAND
VOLLEYBALL
TE 984.00

Install Circulatory Pump,
See Plan By Others for
more Information

See Sheet C33 for VolleyBall
Court Cross Section and Details

BUILDING 6
FFE 985.00

CONSTRUCTION DOCUMENTS

AMENDMENT 4

Renaissance Infrastructure

Existing 4.5' x 4.5' Conc. Junction Box
Cover Elev.=1002.33
℄ In W., 15" CPP=996.33
℄ In N., 15" CPP=995.93
℄ In SE., 30" CPP=991.58
℄ Out S., 36" CPP=991.23
Adjust Manhole Top if Necessary.

CLUBHOUSE
FFE 1003.0
/ 990.85

BUILDING 3
FFE 989.00

Enclosed Parking
FFE=988.75

Enclosed Parking
FFE=988.75

Enclosed Parking
FFE=994.60

BUILDING 1
FFE 1006.50 / 997.00

BUILDING 2
FFE 990.00

Match Exist.

1"=20'
0 10' 20'

Note:
Contractor responsible for
structural design of all
retaining walls

CONSTRUCTION DOCUMENTS

Renaissance Infrastructure

AMENDMENT 4
SPW NES 06/27/14

BUILDING 6
FFE 985.00

Enclosed Parking
FFE=982.70

Enclosed Parking
FFE=982.70

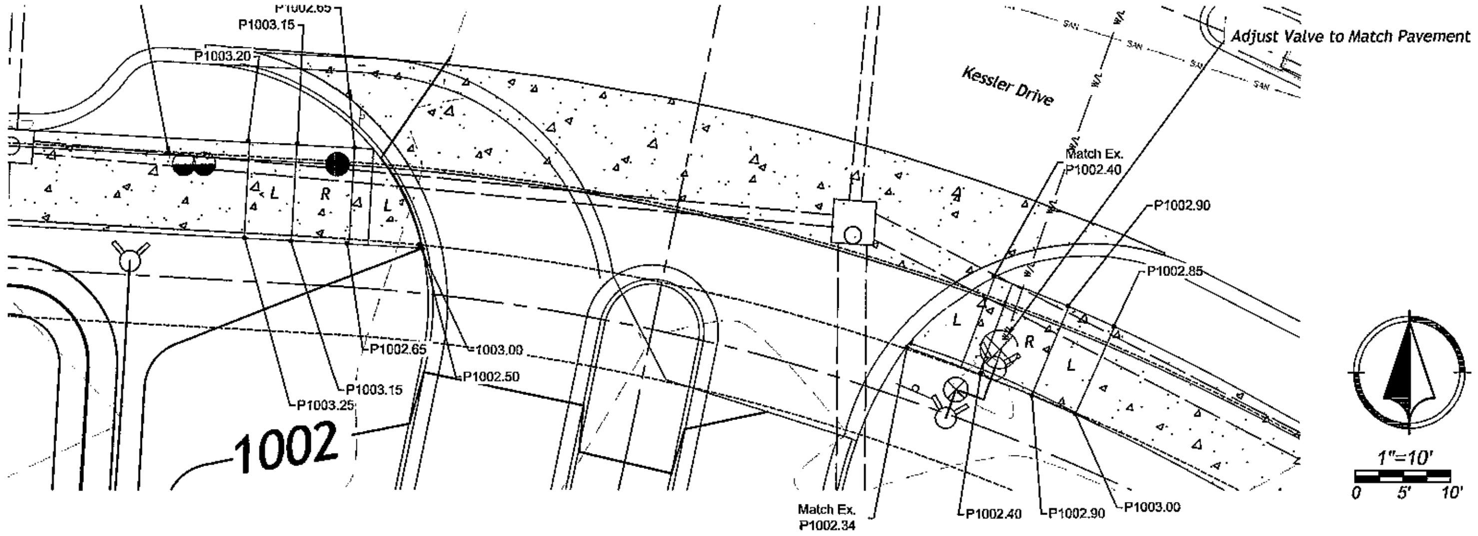
BUILDING 5
FFE 985.00

1"=20'

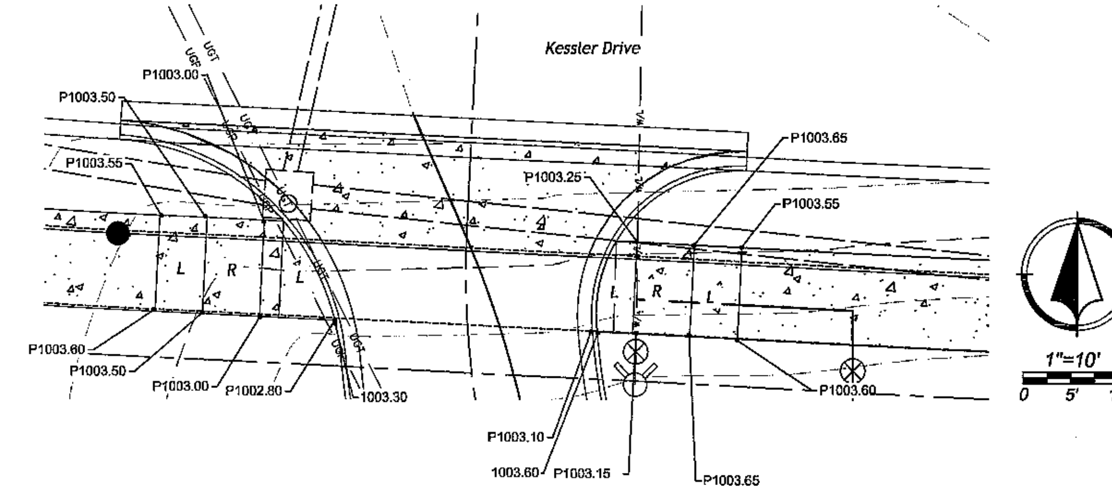
CONSTRUCTION DOCUMENTS

AMENDMENT 4

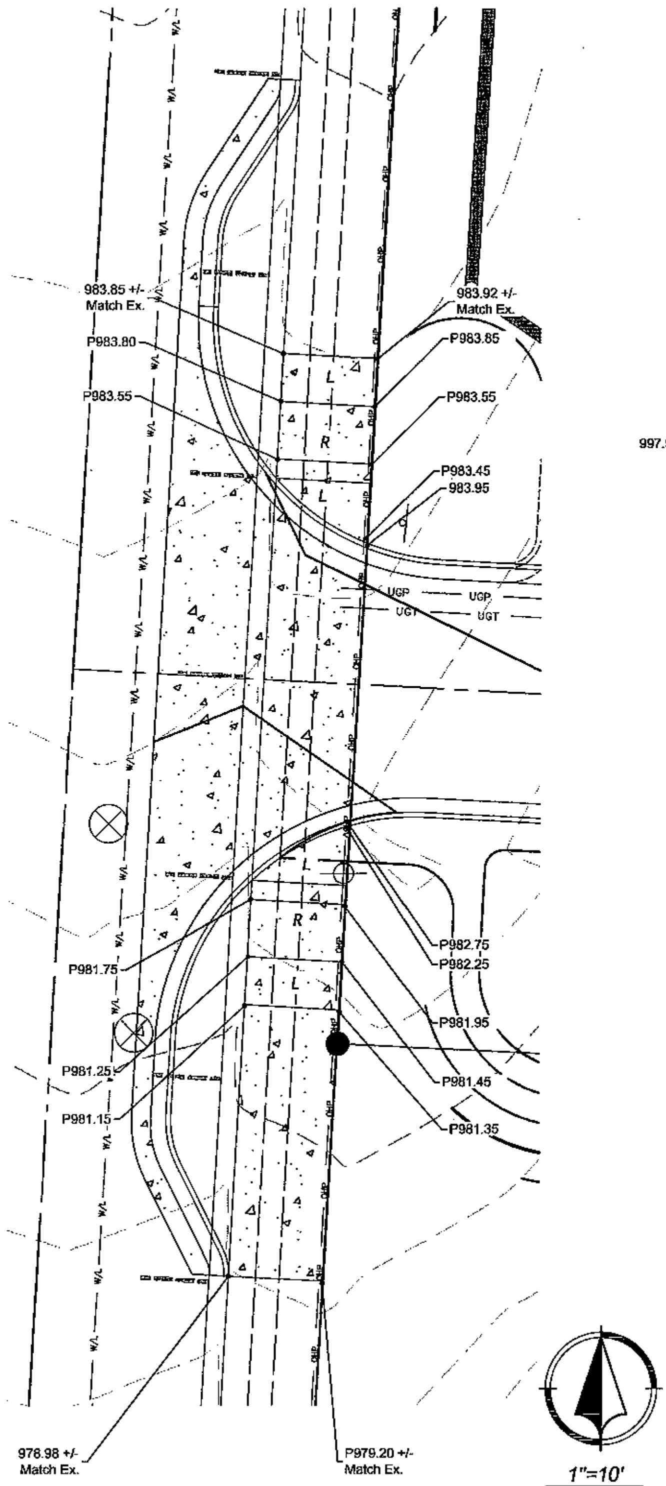
Renaissance Infrastructure



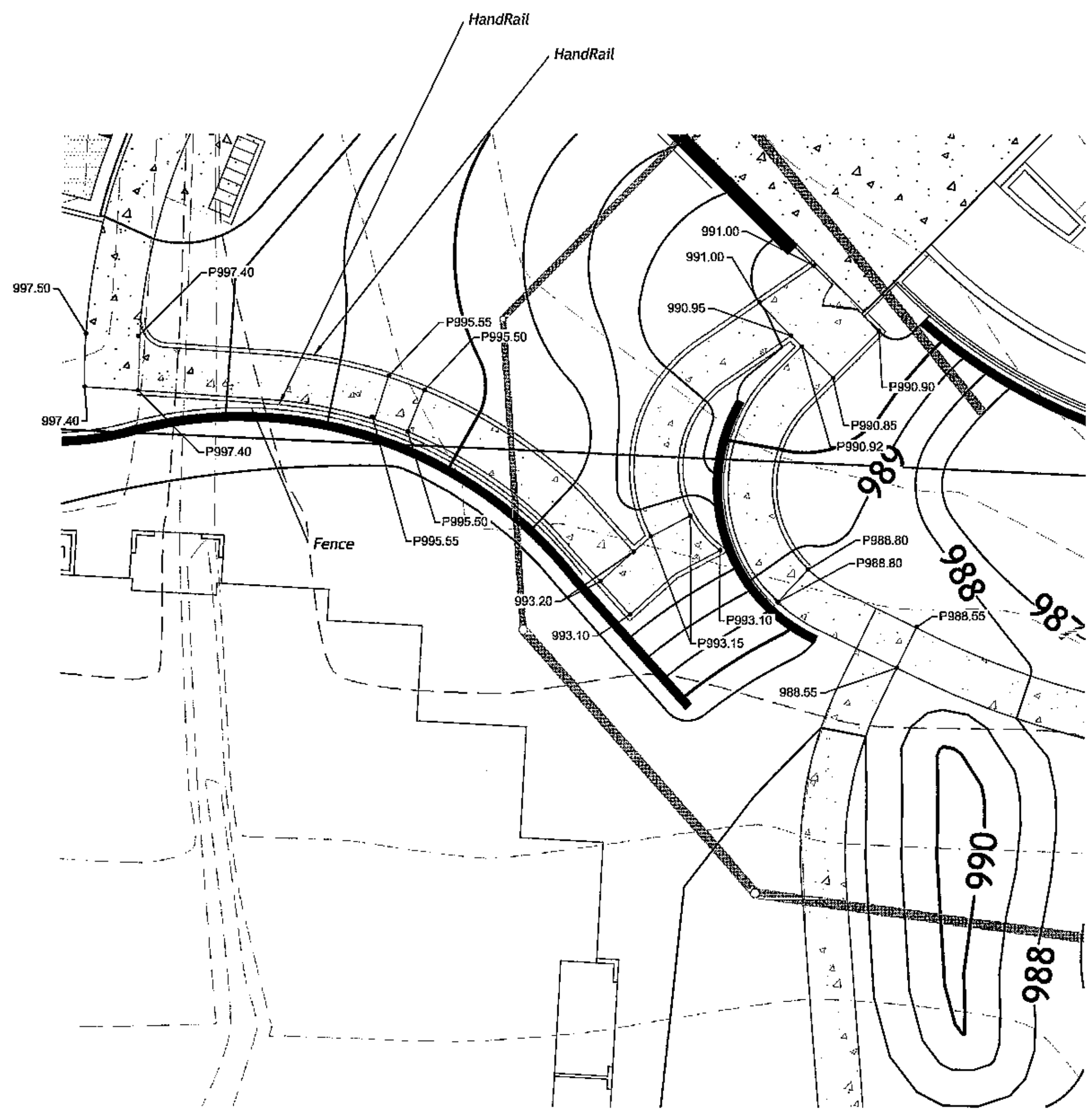
Northwest Kessler Drive ADA Detail



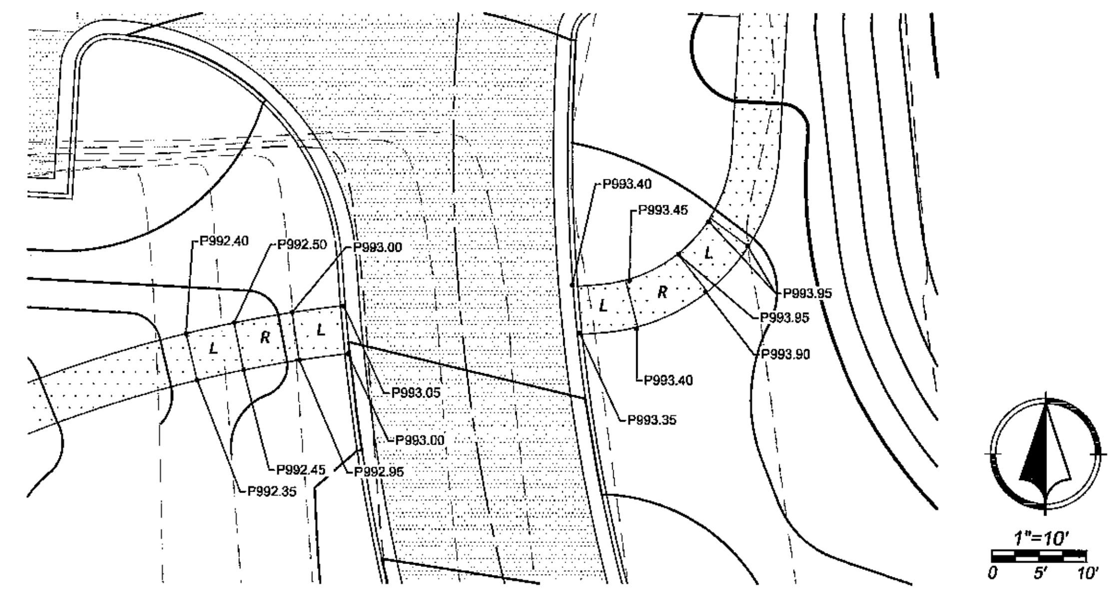
Northeast Kessler Drive ADA Detail



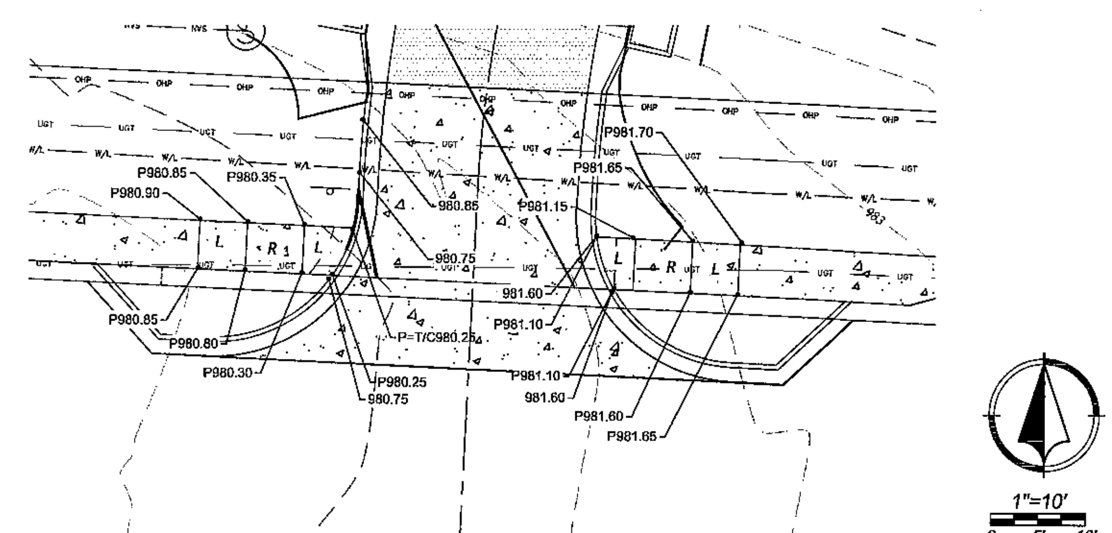
Longview Road ADA Detail



ADA Path Adjacent to Pool



Asphalt Path ADA Detail



Longview Road ADA Detail

CONSTRUCTION DOCUMENTS

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NOTE:
See Sheet C33 for Fire Lane Signage.

Assembly and Vault per City of Lee's Summit Standards. Install 50 LF 8" C900 PVC to tap (Private).

Construct Hydrant Assembly per City of Lee's Summit Specifications. Install 13 LF 6" C900 PVC. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private)

Construct Hydrant Assembly per City of Lee's Summit Specifications. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private)

Construct 1,780 lf 8" C900 PVC w/ Fittings per City of Lee's Summit Specifications. Maintain 42" min. Cover (Private).

See Sanitary Sewer Plan and Profile sheets for pipe sizes.

Construct Hydrant Assembly per City of Lee's Summit Specifications. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private)

1"=40'
0 20' 40'

Existing Sanitary Sewer

Install (2) 8" Gate Valves

Existing 8" Waterline

Kessler Drive

TRASH

Proposed Storm Sewer

Longview Road

Existing Storm Sewer

Proposed Sanitary Sewer

Ovation Drive

Proposed Gas Service Coordinate with MGE Install 20 LF Gasline to Clubhouse

Existing Fire Hydrant

8" Tap

BUILDING 4

Install 46 LF 2" Poly DR14 Pipe (Private)

BUILDING 7

Construct 528 lf of 4" Poly DR14 Pipe Domestic Water Service. Maintain 42" min. cover.

Install 46 LF 8" C900 PVC (Private)

Construct 2,598 LF 4"" Conduit to transformers Per KCP&L Standard & Specifications.

Existing Storm Sewer

Existing Underground Telephone

Existing 8" Waterline

CLUBHOUSE

5' Wide Sidewalk

POND

Contractor to install 1" deduct meter

Contractor to install 1" irrigation backflow

POND

Existing 8" Waterlin

Construct 195 lf of 2" Poly DR14 Pipe Domestic Water Service. Maintain 42" min. cover. (Private)

Construct 2,935 LF (3) 4" Telephone Conduit

Install 46 LF 8" C900 PVC (Private)

Install 42 LF 8" C900 PVC.

Construct Hydrant Assembly per City of Lee's Summit Specifications. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private)

Proposed Storm Sewer

Construct Hydrant Assembly per City of Lee's Summit Specifications. Install 12 LF 6" C900. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private)

Install 46 LF 2" Poly DR14 Pipe (Private)

BUILDING 3

BUILDING 6

Construct Hydrant Assembly per City of Lee's Summit Specifications. (Private)

Existing Fire Hydrant To Be Relocated. See Waterline Details For More Information.

Construct 402 lf of 3" Poly DR14 Pipe Domestic Water Service. Maintain 42" min. cover. (Private)

Proposed Transformer Pad (Typ.)

Proposed Sanitary Sewer

Construct Hydrant Assembly per Lee's Summit Specifications. Install 164 LF 6" C900 PVC. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private).

Loula Drive

Existing Sanitary Sewer

Storm Water Detention Area

Longview Road

Construct Hydrant Assembly per Lee's Summit Specifications. Install 34 LF 6" C900 PVC. (Private).

Install 231 LF 8" C900 PVC. (Private)

Kessler Drive

BUILDING 1

BUILDING 2

BUILDING 5

Proposed Storm Sewer

Proposed Transformer Pad (Typ.)

South Line, NW 1/4, Sec. 10-47-32

Install 195 LF 8" C900 PVC (Private).

Install 34 LF 8" C900 PVC (Private)

Install 34 LF 2" Poly DR14 Pipe (Private)

Existing Fire Hydrant

Longview Road

Longview Park Drive

Existing Storm Sewer

Existing Underground Telephone

Existing Gas Line

Existing Overhead Power

Construct Hydrant Assembly per Lee's Summit Specifications. Install 81 LF 6" C900 PVC. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private)

Remove Existing Gate Valve, Straddle Block and Cap. Install 8" Gate Valve and 8" x 3" Reducer. Install 91 LF of 3" Poly DR14 Pipe to Meter Vault.

Construct Hydrant Assembly per Lee's Summit Specifications. Install Red Paint on Curb (15' Each Side of Hydrant) and Sign indicating "FIRE LANE". (Private)

Install 3" Meter & Vault by City of Lee's Summit under tap fees

Existing 8" Waterline

Existing Storm Sewer

CONSTRUCTION DOCUMENTS

AMENDMENT 4

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Renaissance Infrastructure

SITE UTILITY NOTES: I

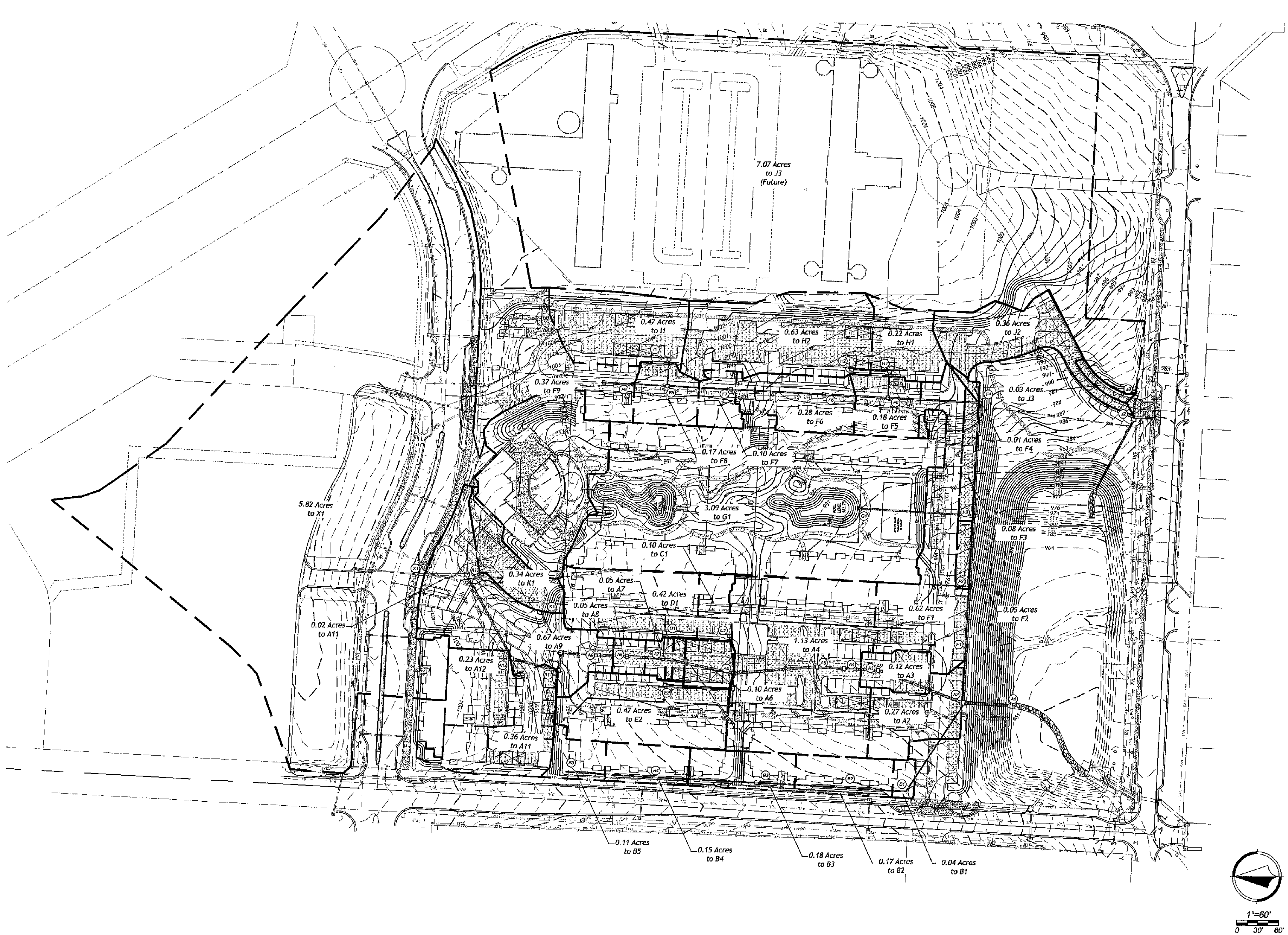
1. *The contractor is specifically cautioned that the location and/or elevation of existing utilities as Shown on these plans is based on records of the various utility Companies, und where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate and/or remove all existing utilities which conflict with the proposed improvements shown on the plans.*
2. *The construction of storm sewers on this project shall conform to the requirements of the City of Lee's Summit, Missouri Design and Construction Standards.*
3. *The contractor shall field verify the exact location and elevation of the existing storm sewer locations and the existing elevations at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans. The contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.*
4. *It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.*
5. *Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of the curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. spacing and at all bend points. Do not connect roof drains directly to storm sewer pipes.*
6. *The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, back flow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the building shall be the responsibility of the contractor. All work shall conform to the requirements of the City of Lee's Summit, Mo.*
7. *The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the building to the public line. The contractor shall refer to the architectural plans for specific locations and elevations of the service lines of the building connection. All work shall conform to the requirements of the City of Lee's Summit, Mo. The contractor is responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Mo., and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by the construction documents. The cost for all permit bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.*
8. *By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.*
9. *The contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structure. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.*
10. *All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.*
11. *Contractor shall notify the utility authorities inspectors 49 hours before connecting to any existing line.*
12. *Waterlines shall be as follows (unless otherwise shown on plans):*
    -for 8" and larger: ductile iron pipe per AWWA C150
    -between 2" and 6": copper tube Type "K" per ANSI 816.22 or ductile iron pipe per AWWA C150
    -For smaller than 2": copper tube Type "K" per ANSI 816.22
13. *Minimum trench width shall be 2 feet.*
14. *Contractor shall maintain a minimum of 42" of cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to the City of Lee's Summit, Mo. Water Department's specifications for commercial services.*
15. *All waterlines shall be kept ten feet (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 18" vertical clearance (outside edge of pipe to outside edge of pipe) of the waterline above the sewer line is required.*
16. *In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of the crossing (or encased in concrete the same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 18" clearance. Meeting requirements ANSI A21.10 or ANSI 21.11 (AWWA C151)(Class 50).*
17. *All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.*
18. *All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.*
19. *Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place and tested prior to paving.*
20. *When a building utility Connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such utility terminations.*

CONSTRUCTION DOCUMENTS

△	SPW	MES	06/27/14	AMMENDMENT 4

Renaissance Infrastructure

STATE ... MI... E. S... NU... PE-2... PROFESS...


7.07 Acres to J3 (Future)
0.42 Acres to I1
0.63 Acres to H2
0.22 Acres to H1
0.36 Acres to J2
0.03 Acres to J3
0.37 Acres to F9
0.28 Acres to F6
0.18 Acres to F5
0.01 Acres to F4
0.17 Acres to F8
0.10 Acres to F7
5.82 Acres to X1
3.09 Acres to G1
0.08 Acres to F3
0.10 Acres to C1
0.34 Acres to K1
0.05 Acres to A7
0.42 Acres to D1
0.05 Acres to A8
0.62 Acres to F1
0.05 Acres to F2
0.02 Acres to A11
0.67 Acres to A9
1.13 Acres to A4
0.23 Acres to A12
0.12 Acres to A3
0.10 Acres to A6
0.47 Acres to E2
0.27 Acres to A2
0.36 Acres to A11
0.11 Acres to B5
0.15 Acres to B4
0.18 Acres to B3
0.17 Acres to B2
0.04 Acres to B1
1"=60'
0 30' 60'

CONSTRUCTION DOCUMENTS

AMMENDMENT 4

SPW MES 06/27/14

Renaissance Infrastructure

26, 2014-2:28pm
C Design\2013\13-0182 Lees Summit MF Multi Family\dwg\13-0182 CDs.dwg

Overland Flow / System Flow

Cells with two values hold the 10-yr / 100-yr design storm values.

Line	Point	Trib. Area (Ac.)	"C" Value	Design Storm	"K" Value	Time of Conc. (min.)	Intensity I (in./hr.)	Trib Runoff (cfs)	Bypass flow (cfs)	Total Runoff (cfs)	Total Area (Ac.)	Total (K*A*C)	Time of Conc. (min.)	Intensity i (in./hr.)	System Discharge (cfs)
A	A13	0.00	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	5.82	5.06 / 5.82	5.00	7.35 / 10.32	37.23 / 60.08
A	A12	0.23	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	1.47 / 2.37	0.00 / 0.00	1.47 / 2.37	5.82	5.06 / 5.82	5.00	7.35 / 10.32	37.23 / 60.08
A	A11	0.36	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	2.30 / 3.72	0.00 / 0.00	2.30 / 3.72	6.18	5.38 / 6.18	5.07	7.33 / 10.29	39.42 / 63.62
A	A10	0.00	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	6.52	5.67 / 6.52	5.10	7.32 / 10.28	41.53 / 67.03
A	A9	0.67	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	4.29 / 6.92	0.00 / 0.00	4.29 / 6.92	7.19	6.26 / 7.19	5.15	7.31 / 10.26	45.70 / 73.76
A	A8	0.05	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.32 / 0.52	0.00 / 0.00	0.32 / 0.52	7.24	6.30 / 7.24	5.22	7.29 / 10.23	45.69 / 74.08
A	A7	0.05	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.32 / 0.52	0.00 / 0.00	0.32 / 0.52	7.71	6.71 / 7.71	5.30	7.26 / 10.20	48.70 / 78.63
A	A6	0.10	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.64 / 1.03	0.00 / 0.00	0.64 / 1.03	8.38	7.29 / 8.38	5.49	7.20 / 10.12	52.53 / 84.83
A	A5	0.00	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	8.38	7.29 / 8.38	5.64	7.16 / 10.06	52.20 / 84.33
A	A4	1.13	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	7.23 / 11.66	0.00 / 0.00	7.23 / 11.66	9.51	8.27 / 9.51	5.64	7.16 / 10.06	59.24 / 95.70
A	A3	0.12	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.77 / 1.24	0.00 / 0.00	0.77 / 1.24	9.63	8.38 / 9.63	5.70	7.14 / 10.04	59.85 / 96.69
A	A2	0.27	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	1.73 / 2.79	0.00 / 0.00	1.73 / 2.79	17.00	14.79 / 17.00	5.61	7.11 / 10.00	105.19 / 169.98
A	A1														
B	B5	0.11	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.70 / 1.14	0.00 / 0.00	0.70 / 1.14	0.11	0.10 / 0.11	5.00	7.35 / 10.32	0.70 / 1.14
B	B4	0.15	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.96 / 1.55	0.00 / 0.00	0.96 / 1.55	0.15	0.13 / 0.15	5.00	7.35 / 10.32	0.96 / 1.55
B	B3	0.18	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	1.15 / 1.86	0.00 / 0.00	1.15 / 1.86	0.18	0.16 / 0.18	5.00	7.35 / 10.32	1.15 / 1.86
B	B2	0.17	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	1.09 / 1.75	0.00 / 0.00	1.09 / 1.75	0.35	0.30 / 0.35	5.00	7.35 / 10.32	2.24 / 3.61
B	B1	0.04	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.26 / 0.41	0.00 / 0.00	0.26 / 0.41	0.39	0.34 / 0.39	5.00	7.35 / 10.32	2.49 / 4.03
A	A2														
C	C1	0.10	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.64 / 1.03	0.00 / 0.00	0.64 / 1.03	0.10	0.09 / 0.10	5.00	7.35 / 10.32	0.64 / 1.03
A	A5														
D	D1	0.42	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	2.69 / 4.34	0.00 / 0.00	2.69 / 4.34	0.42	0.37 / 0.42	5.00	7.35 / 10.32	2.69 / 4.34
A	A6														
E	E2	0.47	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	3.01 / 4.85	0.00 / 0.00	3.01 / 4.85	0.47	0.41 / 0.47	5.00	7.35 / 10.32	3.01 / 4.85
E	E1	0.00	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	0.47	0.41 / 0.47	5.00	7.35 / 10.32	3.01 / 4.85
A	A5														
F	F9	0.37	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	2.37 / 3.82	0.00 / 0.00	2.37 / 3.82	0.37	0.32 / 0.37	5.00	7.35 / 10.32	2.37 / 3.82
F	F8	0.80	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	3.84 / 6.19	0.00 / 0.00	3.84 / 6.19	1.39	1.21 / 1.39	5.00	7.35 / 10.32	8.89 / 14.35
F	F7	0.10	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.64 / 1.03	0.00 / 0.00	0.64 / 1.03	1.49	1.30 / 1.49	5.00	7.35 / 10.32	9.53 / 15.38
F	F6	0.28	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	1.79 / 2.89	0.00 / 0.00	1.79 / 2.89	1.77	1.54 / 1.77	5.00	7.35 / 10.32	11.32 / 18.27
F	F5	0.18	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	1.15 / 1.86	0.00 / 0.00	1.15 / 1.86	2.86	2.49 / 2.86	5.00	7.35 / 10.32	18.30 / 29.52
F	F4	0.01	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.06 / 0.10	0.00 / 0.00	0.06 / 0.10	2.87	2.50 / 2.87	5.00	7.35 / 10.32	18.36 / 29.63
F	F3	0.08	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.51 / 0.83	0.00 / 0.00	0.51 / 0.83	6.04	5.25 / 6.04	5.00	7.35 / 10.32	38.64 / 62.35
F	F2	0.05	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	0.32 / 0.52	0.00 / 0.00	0.32 / 0.52	6.09	5.30 / 6.09	5.00	7.35 / 10.32	38.96 / 62.86
F	F1	0.62	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	3.97 / 6.40	0.00 / 0.00	3.97 / 6.40	6.71	5.84 / 6.71	5.00	7.35 / 10.32	42.92 / 69.26
A	A2														
G	G1	3.09	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	19.77 / 31.90	0.00 / 0.00	19.77 / 31.90	3.09	2.69 / 3.09	5.00	7.35 / 10.32	19.77 / 31.90
F	F3														
H	H2	0.63	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	4.03 / 6.50	0.00 / 0.00	4.03 / 6.50	0.63	0.55 / 0.63	5.00	7.35 / 10.32	4.03 / 6.50
H	H1	0.22	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	1.41 / 2.27	0.00 / 0.00	1.41 / 2.27	0.85	0.74 / 0.85	5.00	7.35 / 10.32	5.44 / 8.77
F	F5														
I	I1	0.63	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	4.03 / 6.50	0.00 / 0.00	4.03 / 6.50	0.63	0.55 / 0.63	5.00	7.35 / 10.32	4.03 / 6.50
F	F8														
J	J3	7.10	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	45.42 / 73.29	0.00 / 0.00	45.42 / 73.29	7.10	6.18 / 7.10	5.00	7.35 / 10.32	45.42 / 73.29
J	J2	0.36	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	2.30 / 3.72	0.00 / 0.00	2.30 / 3.72	7.46	6.49 / 7.46	5.00	7.35 / 10.32	47.72 / 77.01
J	J1														
K	K1	0.34	0.87	10 / 100	1 / 1.25	5.00	7.35 / 10.32	2.18 / 3.51	0.00 / 0.00	2.18 / 3.51	0.34	0.30 / 0.34	5.00	7.35 / 10.32	2.18 / 3.51
A	A10														

Pipe Design / Structure Design

Line	Point	U/S Node	D/S Node	Pipe Type	Pipe Shape	Pipe Diameter (in.)	Pipe Length (ft.)	Mannings "n" value	Pipe Slope (%)	Depth of Flow (ft.)	Design Flow (cfs)	Pipe Capacity (cfs)	Design Flow Velocity (fps)	Full Flow Velocity (fps)	Flow Time (min.)	U/S Invert El.	U/S Crown El.	D/S Invert El.	D/S Crown El.	U/S Depth of Cover (ft.)	D/S Depth of Cover (ft.)	Headwater Inlet Elev. (EGL)	Headwater Outlet Elev. (EGL)	Inlet/Outlet Control	Top Elevation	Structure Type
A	A13	A13	A12	HDPE	Round	36	134.15	0.013	1.00	1.60	37.23	86.60	9.66	9.42	0.23	990.48	993.48	989.14	992.14	6.82	2.96	992.11	992.20	O	1000.30	6'x4' Junction Box
A	A12	A12	A11	HDPE	Round	36	66.76	0.013	4.49	1.05	37.23	141.26	16.78	19.98	0.07	988.84	991.84	985.75	988.75	3.20	3.26	989.92	991.16	O	995.10	5'x6' Curb Inlet
A	A11	A11	A10	HDPE	Round	36	25.98	0.013	2.50	1.27	39.42	105.40	13.76	14.91	0.03	985.45	988.45	984.60	987.60	3.55	2.50	986.75	989.02	O	992.00	5'x5' Curb Inlet
A	A10	A10	A9	HDPE	Round	36	54.25	0.013	4.33	1.13	41.53	138.69	16.95	19.02	0.05	984.50	987.50	982.15	985.15	2.80	3.00	985.66	987.74	O	990.30	5'x5' Junction Box
A	A9	A9	A8	HDPE	Round	36	39.65	0.013	1.01	1.82	45.70	67.01	10.14	9.48	0.07	981.85	984.85	981.45	984.45	3.30	3.70	983.71	984.67	O	988.15	5'x4' Grate Inlet
A	A8	A8	A7	HDPE	Round	36	51.67	0.013	1.01	1.83	45.69	66.85	10.14	9.46	0.08	981.15	984.15	980.63	983.63	4.00	4.52	983.02	984.06	O	988.15	5'x4' Grate Inlet
A	A7	A7	A6	HDPE	Round	36	101.64	0.013	0.75	2.12	48.70	57.62	9.10	8.15	0.19	980.33	983.33	979.57	982.57	4.82	4.98	982.49	982.98	O	988.15	5'x4' Grate Inlet
A	A6	A6	A4	HDPE	Round	36	118.56	0.013	1.80	1.65	52.53	89.31	13.13	12.64	0.15	979.27	982.27	977.14	980.14	5.28	7.41	980.98	981.47	O	987.55	5'x5' Curb Inlet
A	A5	A5	A4	HDPE	Round	36	38.38	0.013	1.80	1.65	52.20	89.35	13.13	12.64	0.05	976.84	979.84	976.15	979.15	2.91	3.60	978.53	980.48	O	982.75	5'X4' Junction Box
A	A4	A4	A3	HDPE	Round	36	48.60	0.013	1.93	1.73	59.24	93.74	13.99	13.26	0.06	975.85	978.85	974.90	977.90	3.30	4.25	977.63	979.67	O	982.15	5'x4' Grate Inlet
A	A3	A3	A2	HDPE	Round	36	129.44	0.013	5.00	1.32	59.85	146.98	19.77	21.03	0.11	972.90	975.90	966.43	969.43	6.25	13.07	974.27	973.82	I	982.15	5'x4' Grate Inlet
A	A2	A2	A1	HDPE	Round	36	69.33	0.013	3.50	2.07	105.19	124.75	19.58	17.65	0.06	963.43	966.43	961.00	964.00	16.07	2.00	965.58	969.02	O	982.50	6'x4' Curb Inlet
A	A1																								966.00	36" CMP End Section
B	B5	B5	B4	HDPE	Round	15	117.42	0.013	1.46	0.26	0.70	7.79	3.76	6.35	0.52	983.75	985.00	982.03	983.28	3.00	4.72	984.03	982.51	I	988.00	15" Nyloplast Inline Drain
B	B4	B4	B3	HDPE	Round	15	166.73	0.013	2.51	0.26	0.96	10.19	5.15	8.30	0.54	981.73	982.98	977.55	978.80	5.02	4.70	982.01	978.22	I	988.00	15" Nyloplast Drain Basin
B	B3	B3	B2	HDPE	Round	15	114.46	0.013	0.75	0.45	1.15	5.58	3.88	4.55	0.49	977.25	978.50	976.39	977.64	5.00	5.36	977.73	977.07	I	983.50	15" Nyloplast Drain Basin
B	B2	B2	B1	HDPE	Round	15	83.62	0.013	0.75	0.55	2.24	5.59	4.28	4.55	0.33	976.09	977.34	975.46	976.71	5.66	6.29	976.70	976.29	I	983.00	15" Nyloplast Drain Basin
B	B1	B1	A2	HDPE	Round	15	148.38	0.013	5.88	0.34	2.49	15.61	9.16	12.72	0.27	975.16	976.41	966.43	967.68	6.59	14.82	975.56	968.07	I	983.00	18" Nyloplast Drain Basin
A	A2																								982.50	6'x4' Curb Inlet
C	C1	C1	A5	HDPE	Round	15	52.53	0.013	3.86	0.19	0.64	12.65	5.37	10.31	0.16	983.05	984.30	981.02	982.27	3.00	5.28	983.26	981.66	I	987.30	5'x4' Curb Inlet
A	A5																								987.55	5'x5' Curb Inlet
D	D1	D1	A6	HDPE	Round	15	37.60	0.013	2.62	0.44	2.69	10.42	6.81	8.49	0.09	983.05	984.30	982.08	983.33	3.00	4.82	983.56	983.26	I	987.30	5'X4' Curb Inlet
A	A6																								988.15	5'X4' Grate Inlet
E	E2	E2	E1	HDPE	Round	15	96.27	0.013	1.01	0.60	3.01	6.46	5.14	5.26	0.31	984.45	985.70	983.48	984.73	2.50	3.57	985.13	984.49	I	988.20	5'x4' Curb Inlet
E	E1	E1	A5	HDPE	Round	15	21.43	0.013	2.15	0.49	3.01	9.43	8.72	7.68	0.05	981.48	982.73	981.02	982.27	5.57	5.28	982.05	982.21	O	988.30	4'x4' Junction Box
A	A5																								987.55	5'X5' Curb Inlet
F	F9	F9	F8	HDPE	Round	15	89.69	0.013	0.80	0.57	2.37	5.77	4.33	4.70	0.35	996.00	997.25	995.28	996.53	3.00	3.72	996.63	996.14	I	1000.25	4'x4' Grate Inlet
F	F8	F8	F7	HDPE	Round	18	89.65	0.013	1.00	1.01	8.89	10.49	6.57	5.94	0.23	995.03	996.53	994.13	995.63	3.72	4.62	996.15	995.61	I	1000.25	4'x4' Grate Inlet
F	F7	F7	F6	HDPE	Round	18	132.28	0.013	2.08	0.84	9.53	15.04	8.76	6.51	0.25	993.83	995.33	991.10	992.60	4.92	2.60	994.79	993.13	I	1000.25	4'x4' Grate Inlet
F	F6	F6	F5	HDPE	Round	24	80.72	0.013	1.00	0.97	11.32	22.60	7.08	7.20	0.21	990.60	992.60	989.69	991.69	2.80	3.71	991.61	991.44	I	995.40	4'x4' Grate Inlet
F	F5	F5	F4	HDPE	Round	24	130.78	0.013	2.15	1.06	18.30	33.08	10.77	10.53	0.20	989.39	991.39	986.58	988.58	4.01	5.62	990.52	989.44	I	995.40	5'x4' Grate Inlet
F	F4	F4	F3	HDPE	Round	24	159.35	0.013	5.66	0.80	18.36	54.61	15.72	17.35	0.17	986.28	988.28	976.95	978.95	5.92	9.90	987.15	981.59	I	994.20	5'x4' Curb Inlet
F	F3	F3	F2	HDPE	Round	30	101.08	0.013	1.00	1.93	38.64	40.94	9.48	8.34	0.18	976.45	978.95	975.44	977.94	8.90	7.61	978.44	978.77	O	988.85	5'x4' Curb Inlet
F	F2	F2	F1	HDPE	Round	30	83.65	0.013	3.85	1.22	38.96	80.64	16.31	16.43	0.08	975.14	977.64	971.92	974.42	7.91	8.08	976.42	977.27	O	985.55	5'x4' Curb Inlet
F	F1	F1	A2	HDPE	Round	30	79.60	0.013	6.50	1.12	42.92	104.44	20.65	21.28	0.07	971.62	974.12	966.43	968.93	8.38	13.57	972.61	973.79	O	982.50	5'x4' Curb Inlet
A	A2																								982.50	6'x4' Curb Inlet
G	G1	G1	F3	HDPE	Round	24	161.61	0.013	0.80	1.60	19.77	20.19	7.34	6.43	0.37	978.24	980.24	976.95	978.95	4.76	9.60	979.92	979.39	I	985.00	24" CMP End Section
F	F3																								988.55	5'x4' Curb Inlet
H	H2	H2	H1	HDPE	Round	15	53.21	0.013	1.00	0.72	4.03	6.42	5.50	5.23	0.16	992.00	993.25	991.47	992.72	2.50	2.53	992.82	992.66	I	995.75	5'x4' Curb Inlet
H	H1	H1	F5	HDPE	Round	15	37.00	0.013	2.78	0.63	5.44	10.74	8.82	8.75	0.07	991.17	992.42	990.14	991.39	2.83	4.01	991.94	991.98	O	996.25	5'x4' Curb Inlet
F	F5																								995.40	
I	I1	I1	F8	HDPE	Round	15	37.50	0.013	2.59	0.55	4.03	10.35	7.70	8.43	0.08	996.25	997.50	995.28	996.53	3.00	3.72	996.90	996.75	I	1000.50	5'x4' Curb Inlet
F	F8																								1000.25	
J	J3	J3	J2	HDPE	Round	30	32.57	0.013	5.37	1.25	45.42	94.93	19.34	19.34	0.03	976.00	978.50	974.25	976.75	3.75	4.45	977.32	981.31	O	982.25	6'x4' Curb Inlet
J	J2	J2	J1	HDPE	Round	30	112.55	0.013	6.00	1.22	47.72	100.29	19.97	20.43	0.09	973.75	976.25	967.00	969.50	4.95	24.40	975.05	974.41	I	981.20	6'x4' Curb Inlet
J	J1																								993.90	15" CMP End Section
K	K1	K1	A10	HDPE	Round	15	53.36	0.013	7.85	0.30	2.18	18.03	9.60	14.69	0.09	990.44	991.69	986.25	987.50	5.26	2.80	990.60	987.98	I	996.95	5'X4' Curb Inlet
A	A10																								990.30	5'x5' Junction Box

CONSTRUCTION DOCUMENTS

AMMENDMENT 4

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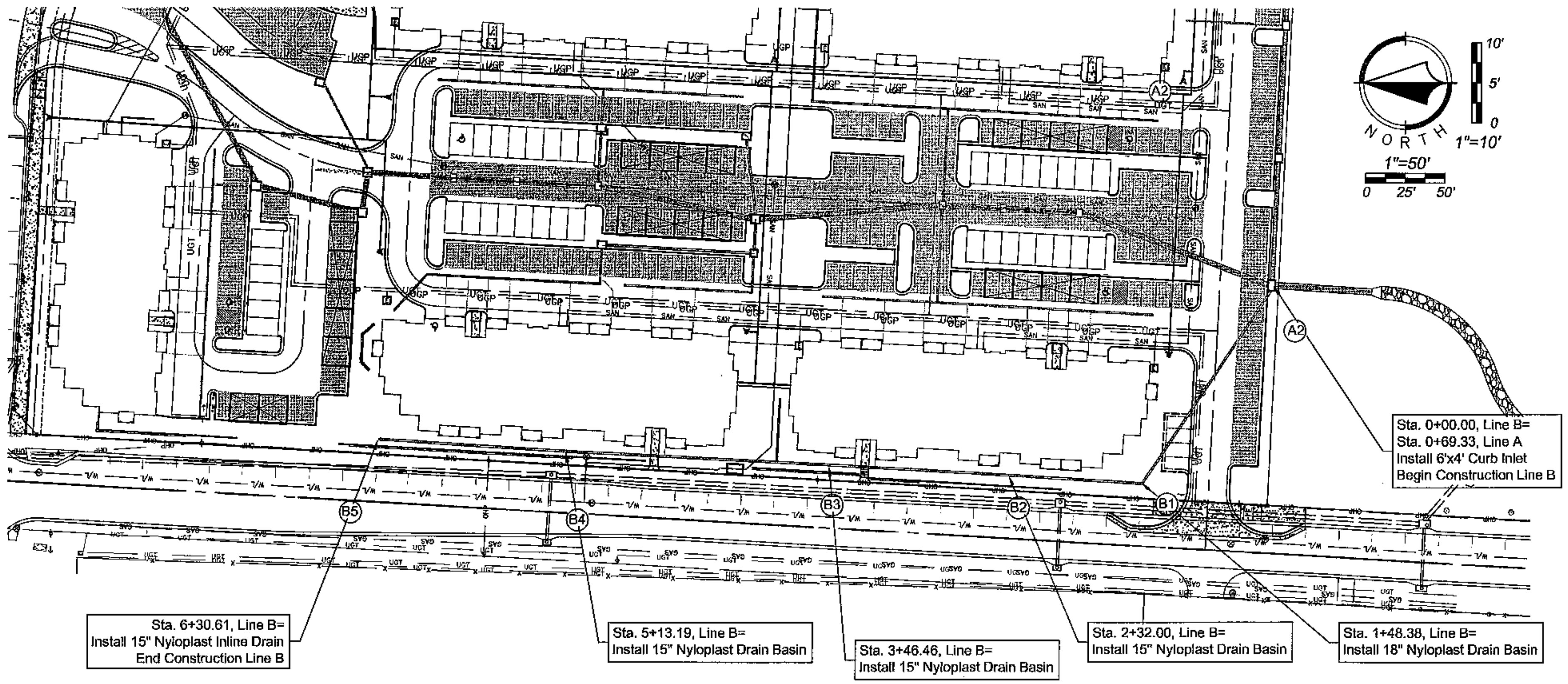

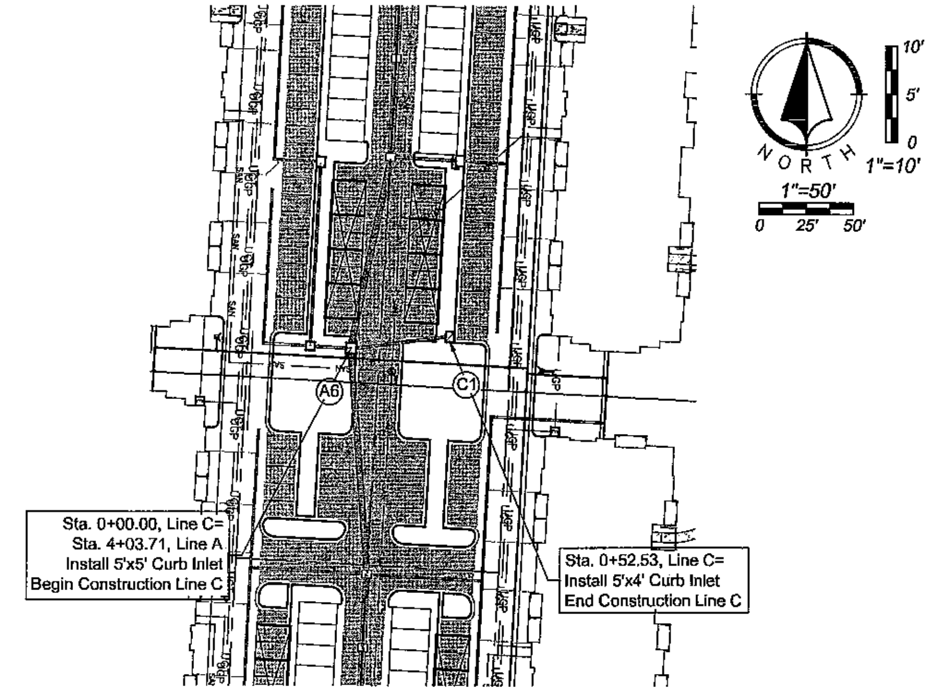

NOTE:
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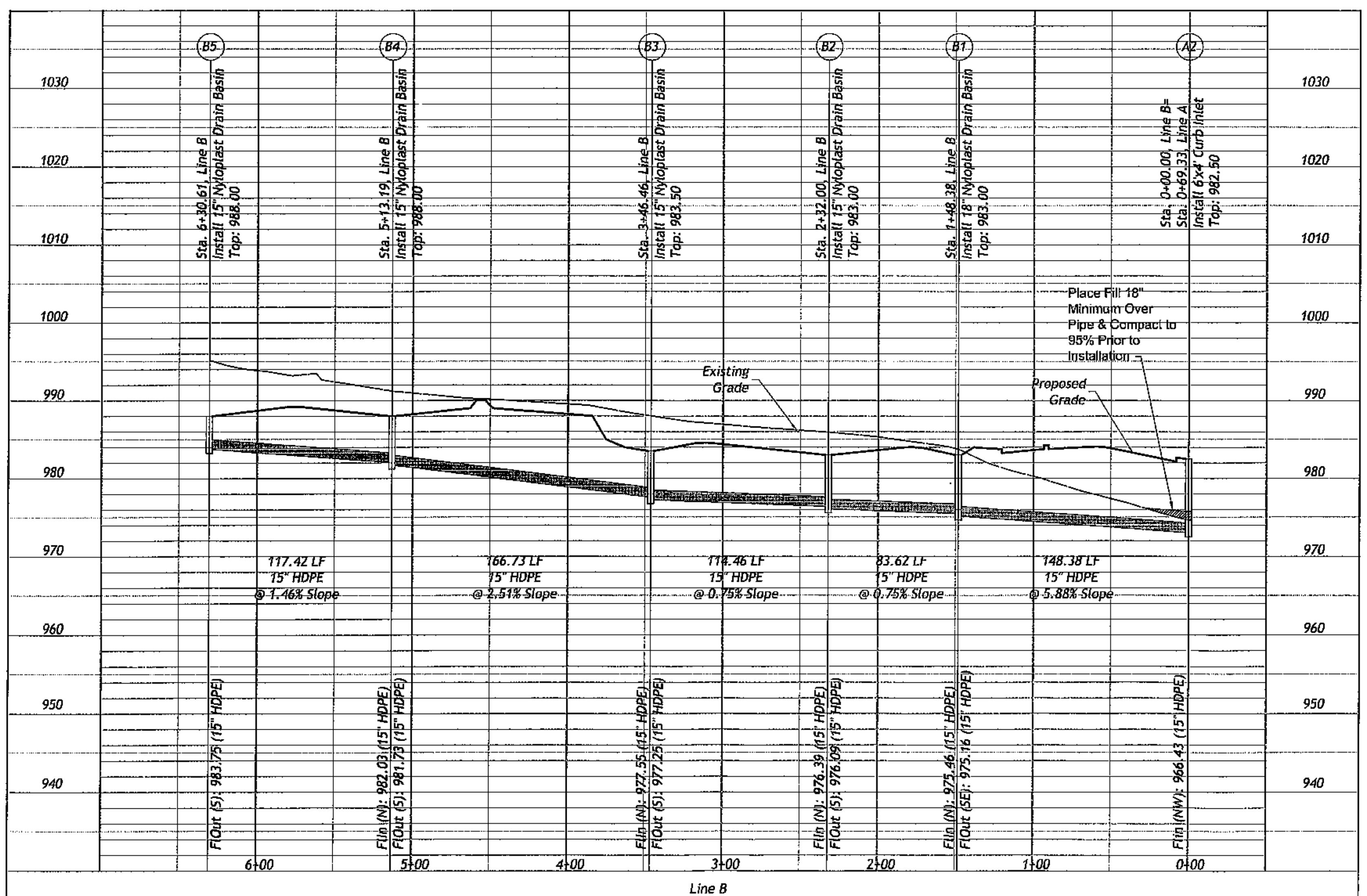

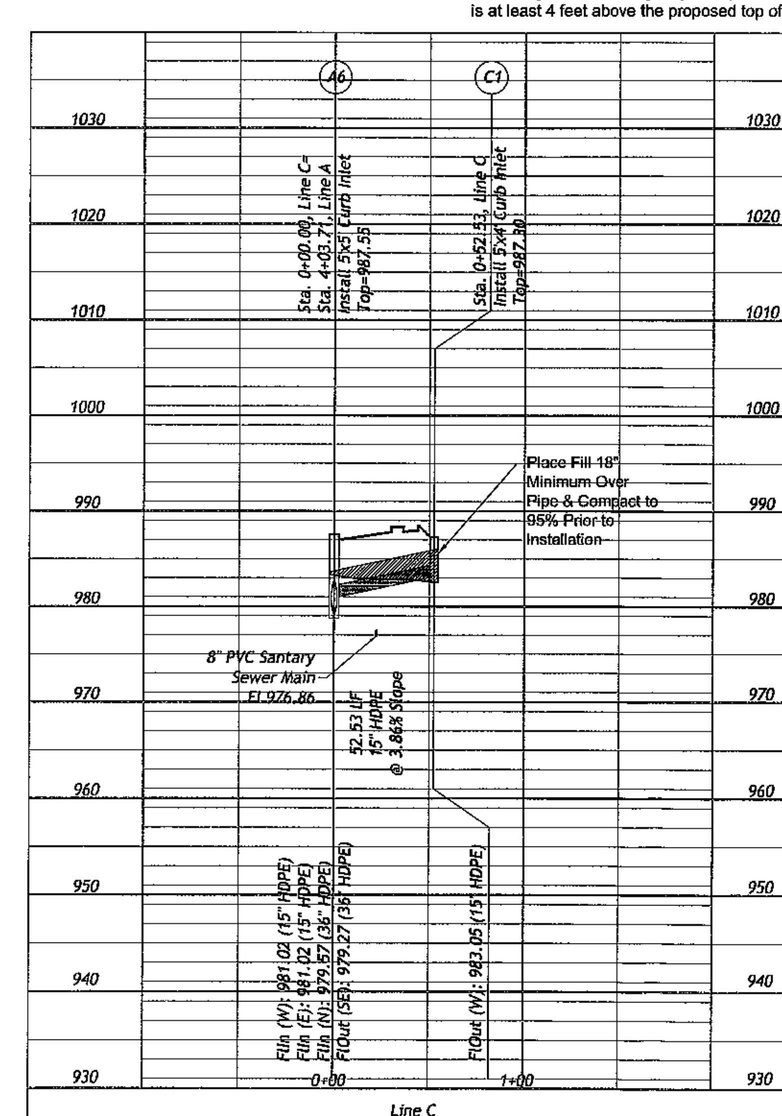

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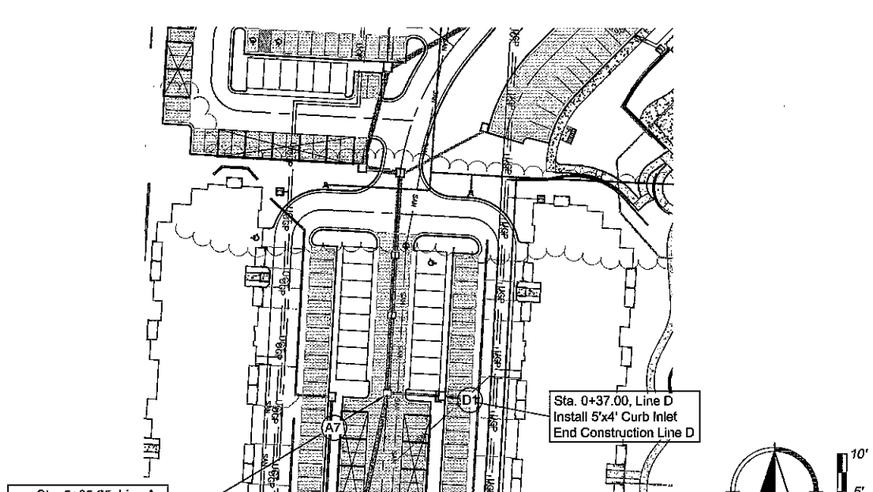

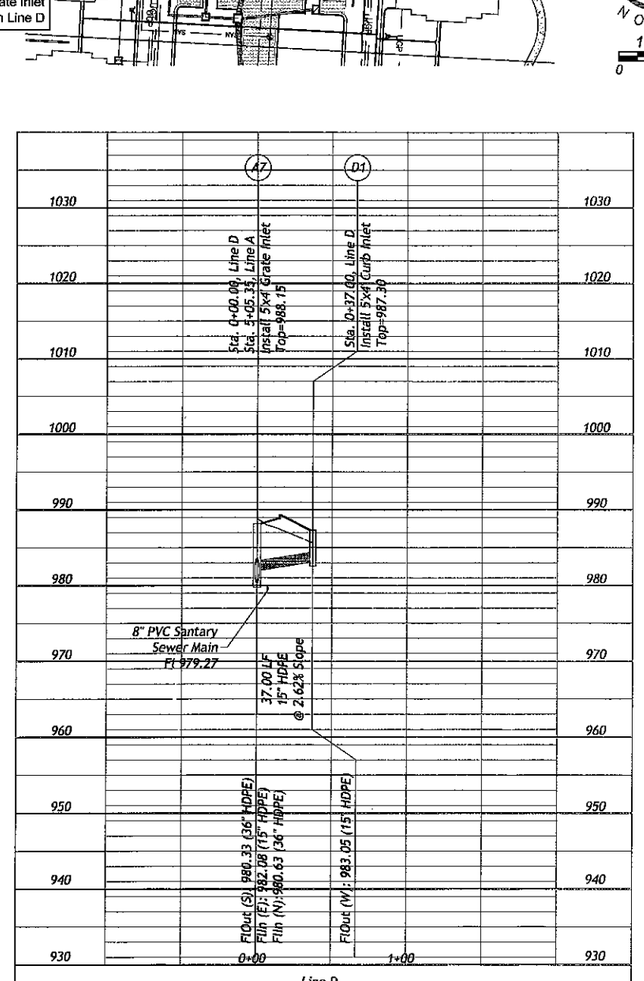

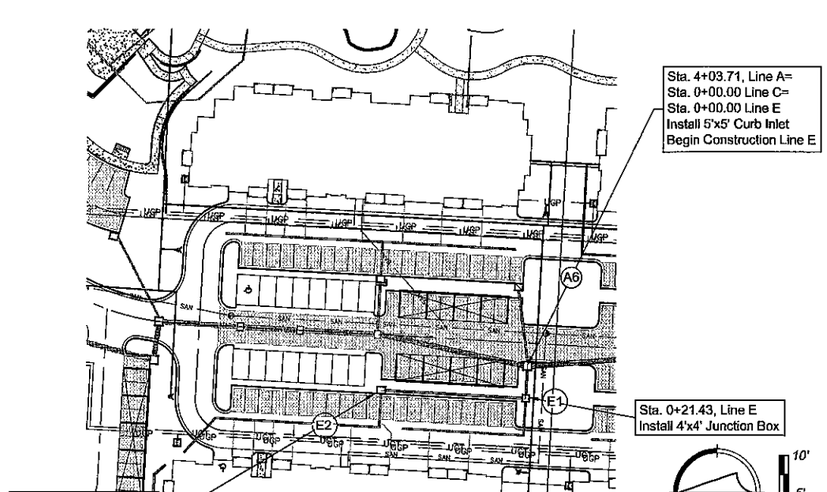

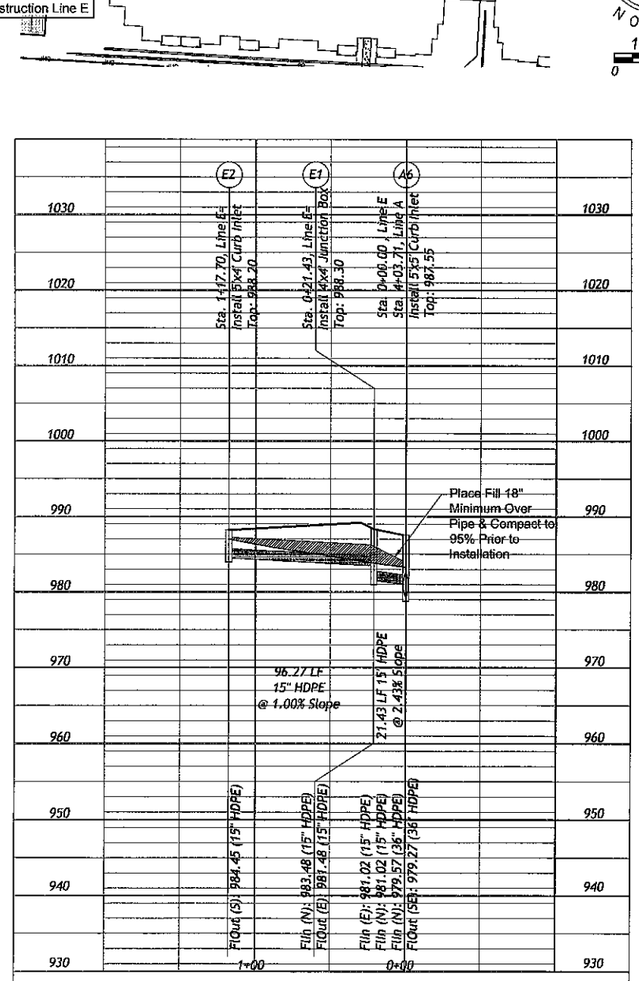

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AMENDMENT 4

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PJC LJPS 06/27/14

Sta. 9+56.38, Line F=
Install 4'x4' Grate Inlet
End Construction Line F

Sta. 8+66.69, Line F=
Sta. 0+00.00 Line I
Install 4'x4' Grate Inlet

Sta. 7+77.04, Line F
Install 4'x4' Grate Inlet

Sta. 6+44.78, Line F
Install 4'x4' Grate Inlet

Sta. 5+54.06, Line F=
Sta. 0+00.00 Line H
Install 5'x4' Grate Inlet

Sta. 4+23.28, Line F
Install 5'x4' Curb Inlet

Sta. 2+63.93, Line F=
Sta. 0+00.00, Line G
Install 5'x4' Curb Inlet

Sta. 1+62.85, Line F
Install 5'x4' Curb Inlet

Sta. 0+79.80, Line F
Install 5'x4' Curb Inlet

Sta. 0+00.00, Line F=
Sta. 0+69.33, Line A
Install 6'x4' Curb Inlet
Begin Construction Line F

F9 F8 F7 F6 F5 F4 F3 F2 F1 A2

NORTH
10' 5' 0
1"=10'
1"=50'
0 25' 50'

NOTE:
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Sta. 9+56.38, Line F
Install 4'x4' Grate Inlet
Top=1000.25

Sta. 8+66.69, Line F=
Sta. 0+00.00, Line I
Install 4'x4' Grate Inlet
Top=1000.25

Sta. 7+77.04, Line F
Install 4'x4' Grate Inlet
Top=1000.25

Sta. 6+44.78, Line F
Install 4'x4' Grate Inlet
Top=995.40

Sta. 5+54.06, Line F=
Sta. 0+00.00 Line H
Install 5'x4' Grate Inlet
Top=995.40

Sta. 4+23.28, Line F
Install 5'x4' Curb Inlet
Top=994.20

Sta. 2+63.93, Line F=
Sta. 0+00.00, Line G
Install 5'x4' Curb Inlet
Top=988.85

Sta. 1+62.85, Line F
Install 5'x4' Curb Inlet
Top=985.55

Sta. 0+79.80, Line F
Install 5'x4' Curb Inlet
Top=985.55

Sta. 0+00.00, Line F=
Sta. 0+45.33, Line A
Install 5'x4' Curb Inlet
Top=982.50

Place Fill 18" Minimum Over Pipe & Compact to 95% Prior to Installation

Existing Grade

Proposed Grade

Place Fill 18" Minimum Over Pipe & Compact to 95% Prior to Installation

89.69 LF 15" HDPE @ 0.80% Slope

89.65 LF 18" HDPE @ 1.00% Slope

132.26 LF 18" HDPE @ 2.06% Slope

90.72 LF 24" HDPE @ 1.00% Slope

130.78 LF 24" HDPE @ 2.15% Slope

159.35 LF 24" HDPE @ 5.86% Slope

101.08 LF 30" HDPE @ 1.00% Slope

83.05 LF 30" HDPE @ 3.87% Slope

79.80 LF 30" HDPE @ 6.50% Slope

69.33 LF 36" HDPE @ 3.50% Slope

8" PVC Santary Sewer Main
Fl=968.96

FIOut (S): 996.00 (15" HDPE)
FIin (N): 995.28 (15" HDPE)
FIin (E): 995.28 (15" HDPE)
FIOut (S): 995.03 (18" HDPE)
FIin (N): 994.13 (18" HDPE)
FIOut (S): 993.83 (18" HDPE)
FIin (N): 991.10 (18" HDPE)
FIOut (S): 990.60 (24" HDPE)
FIin (N): 989.69 (24" HDPE)
FIin (E): 990.14 (15" HDPE)
FIOut (S): 989.39 (24" HDPE)
FIin (N): 986.58 (24" HDPE)
FIOut (W): 986.28 (24" HDPE)
FIin (E): 976.95 (24" HDPE)
FIin (N): 976.95 (24" HDPE)
FIOut (W): 976.45 (30" HDPE)
FIin (E): 975.44 (30" HDPE)
FIOut (W): 975.14 (30" HDPE)
FIin (E): 971.92 (30" HDPE)
FIOut (W): 971.62 (30" HDPE)
FIin (W): 966.43 (15" HDPE)
FIin (N): 966.43 (36" HDPE)
FIin (E): 966.43 (30" HDPE)
FIOut (S): 963.43 (36" HDPE)

1030 1020 1010 1000 990 980 970 960 950 940 930

10+00 9+00 8+00 7+00 6+00 5+00 4+00 3+00 2+00 1+00 0+00

Line F

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STORM SEWER PLAN & PROFILE

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AMENDMENT 4
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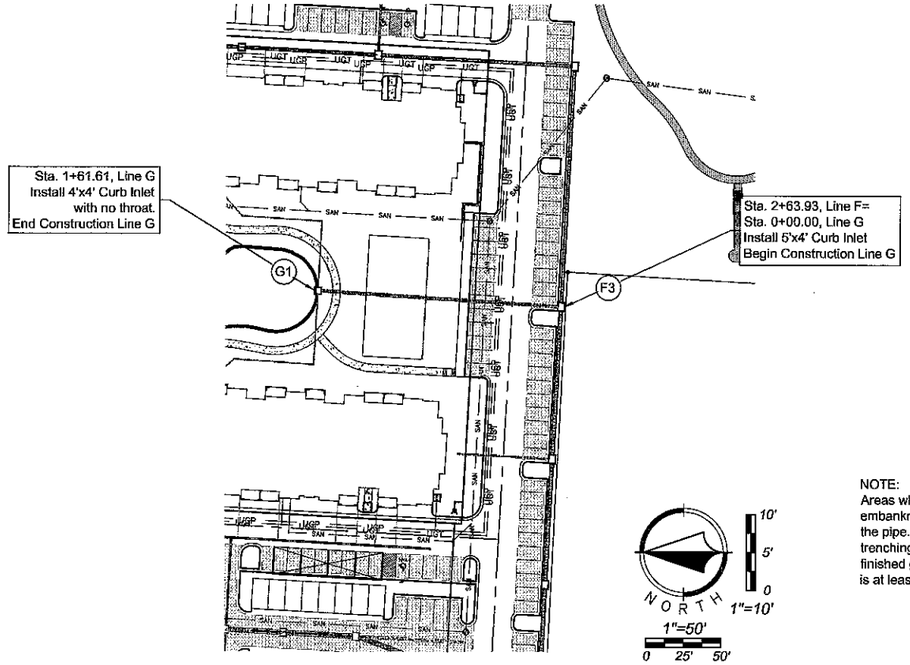

NOTE:
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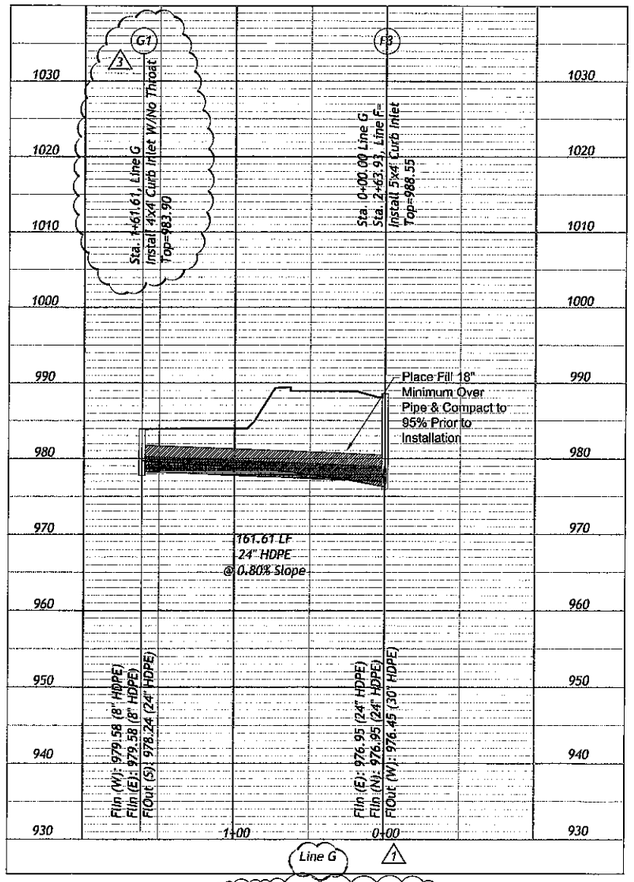

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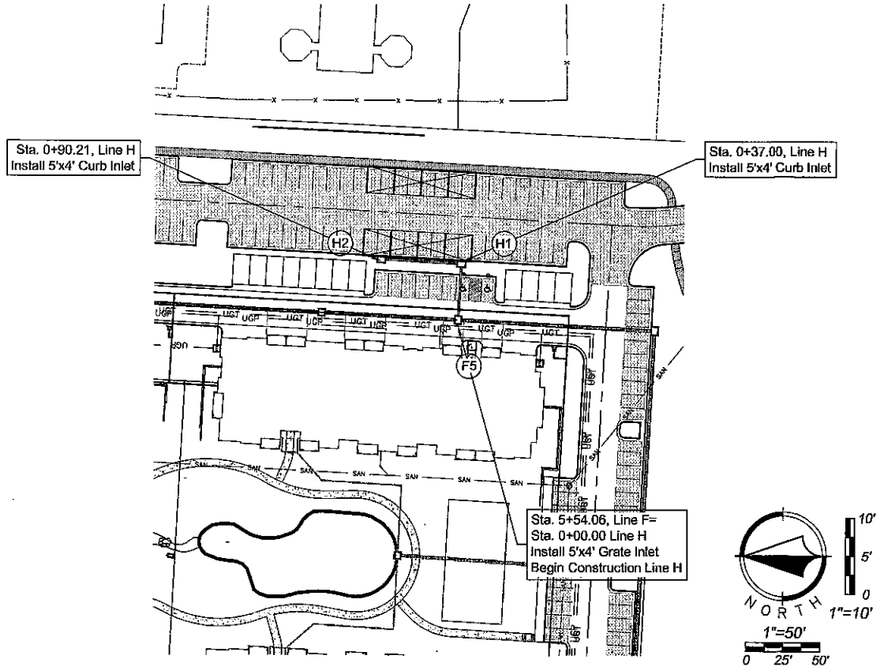

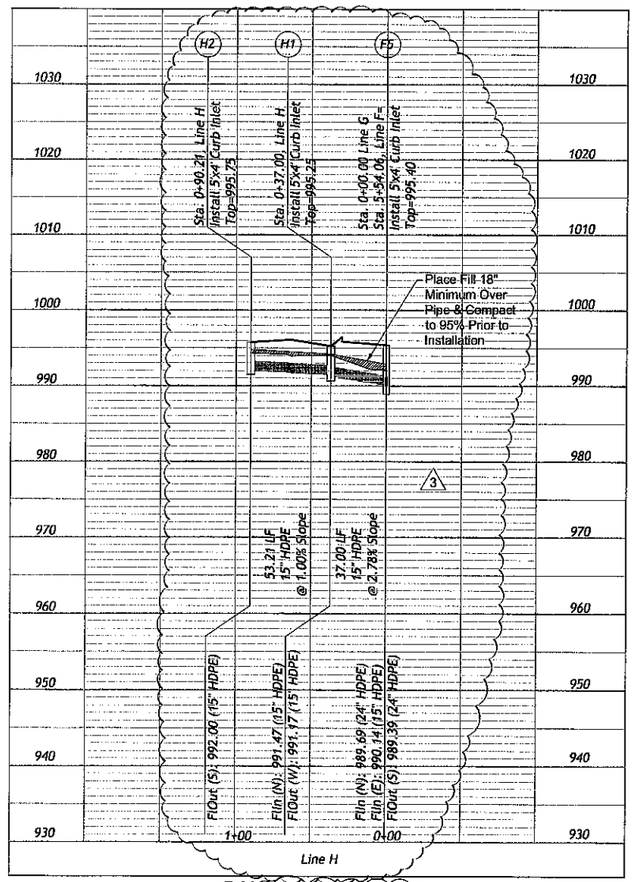

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STORM SEWER PLAN & PROFILE

AMENDMENT 4

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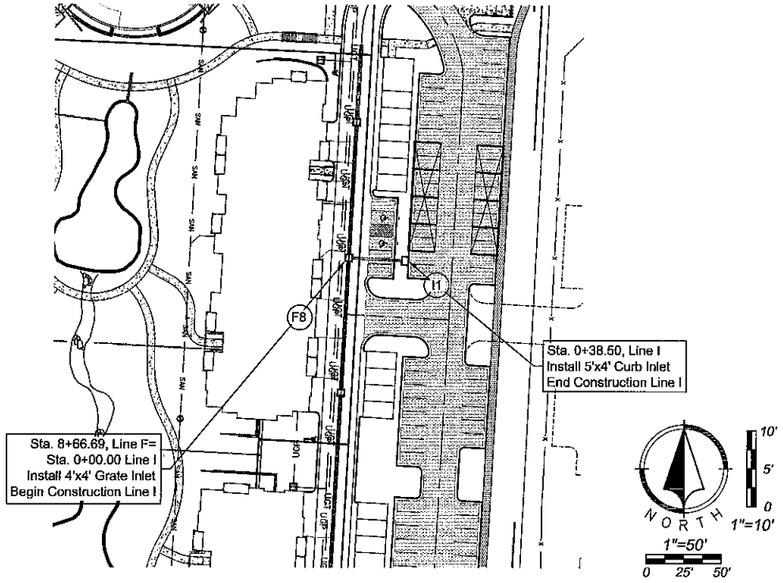

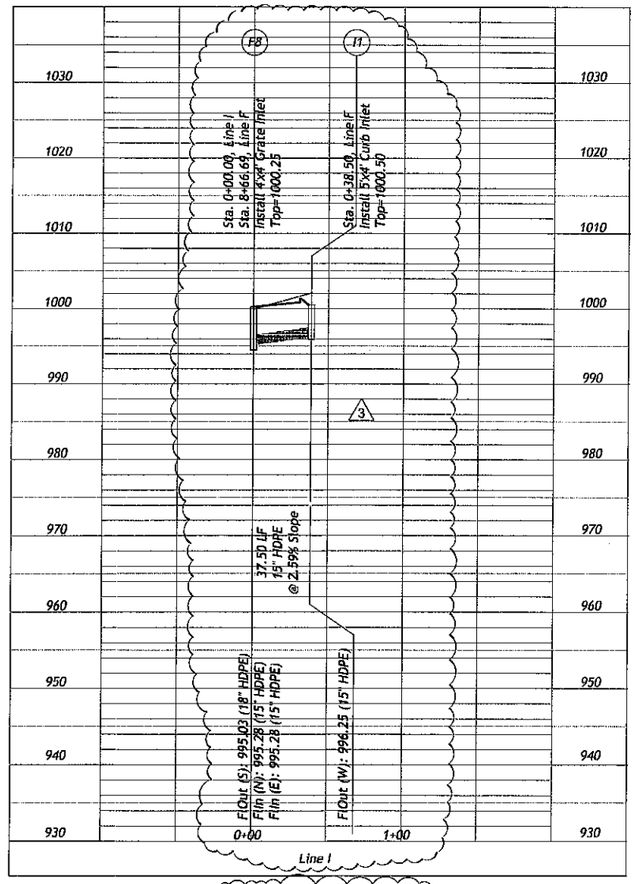

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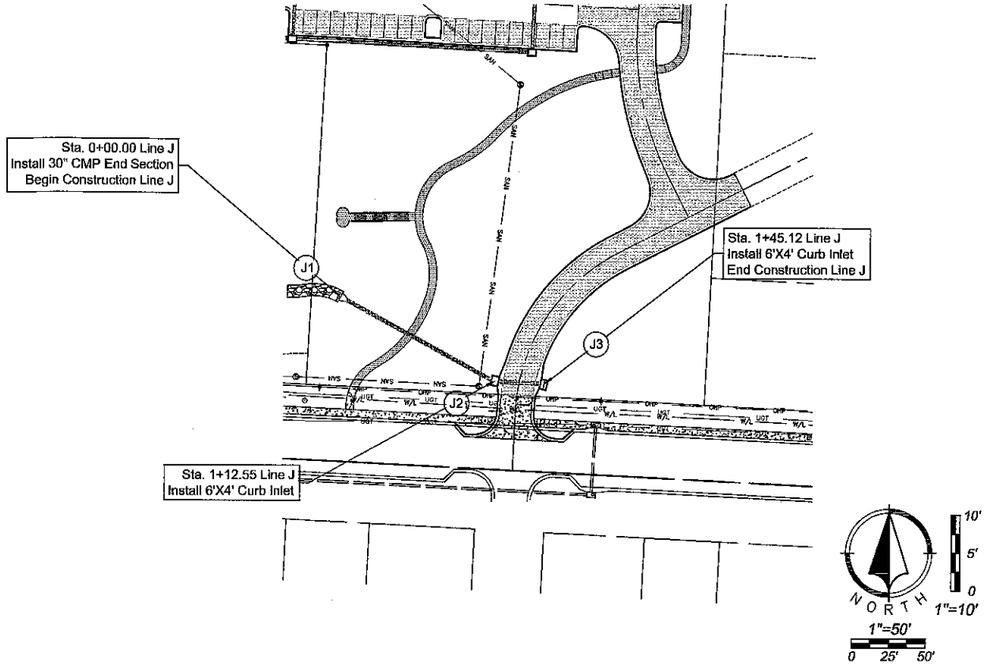
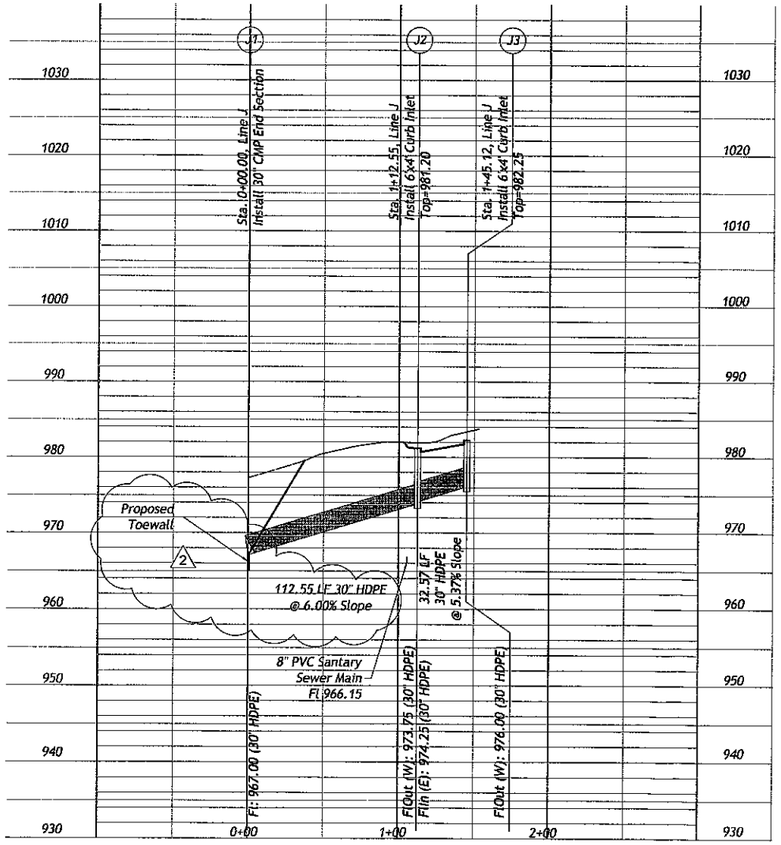




PRIVATE

2

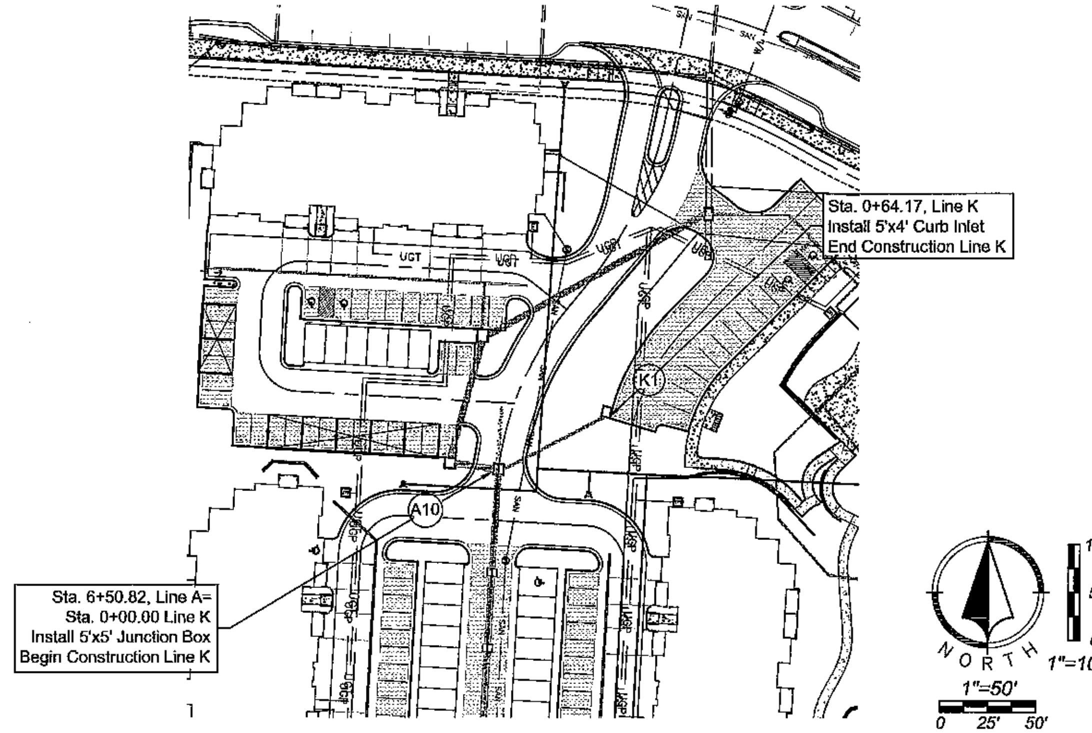
CONSTRUCTION DOCUMENTS

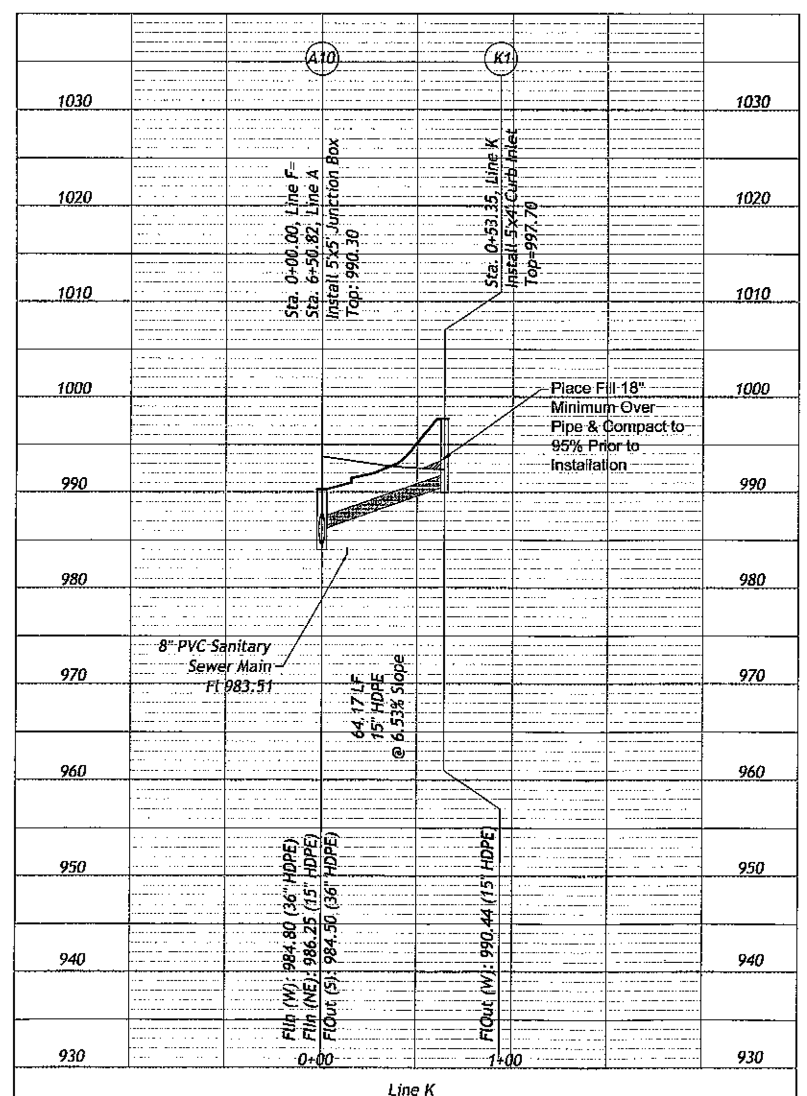
STORM SEWER PLAN &

Renaissance Infrastructure

AMENDMENT 4

SPW MES 06/27/14





PRIVATE

CONSTRUCTION DOCUMENTS

STORM SEWER PLAN &

4	SPW	MES	06/27/14

AMMENDMENT 4

Renaissance
Infrastructure

STATE
PROFESS
PE-2

Install 12" Cleanout

Ex. 36" CMP F/L In N=990.78
12" HDPE F/L In E=992.48
36" HDPE F/L Out SW=990.48
Install 236 LF 12" HDPE to East Corner Clubhouse. Maintain 2% Slope
Extend Building Downspouts to 12" Pipe

12" HDPE F/L=991.08
Install 12" Cleanout
Install 146 LF 12" HDPE (W) @ 1.00%
Install 22 LF 12" HDPE (E) @ 1.00%

Storm Structure A12
F/L In W=990.84 (12" HDPE)
Install 24.29 LF 12" HDPE @ 1.00%

12" HDPE F/L=992.54
Install 12" Cleanout

12" HDPE
F/L=985.00
Install 12" Cleanout

Contractor to extend all building downspouts to 12" storm header pipe. Install necessary fittings and assemblies as required. Maintain 1% minimum slope.

F/L=986.05
Install 12" Cleanout

Contractor to extend all building downspouts to 12" storm header pipe. Install necessary fittings and assemblies as required. Maintain 1% minimum slope.

Storm Structure E2
F/L In W=984.70 (12" HDPE)
Install 24.5 LF 12" HDPE @ 3.02%

F/L=985.44
Install 109.00 LF 12" HDPE @ 0.56%
Install 12" Cleanout

12" HDPE
F/L=982.54
Install 12" Cleanout

F/L=981.98
Install 81.00 LF 12" HDPE @ 1.00%
Install 12" Cleanout

Storm Structure E1
F/L In W=981.73 (12" HDPE)
Install 24.5 LF 12" HDPE @ 1.00%

12" HDPE
F/L=979.30
Install 12" Cleanout

F/L=978.58
Install 72.00 LF 12" HDPE (N) @ 1.00%
Install 136.00 LF 12" HDPE (S) @ 1.00%
Install 12" Cleanout

Contractor to extend all building downspouts to 12" storm header pipe. Install necessary fittings and assemblies as required. Maintain 1% minimum slope.

Storm Structure A5
F/L In W=977.09 (12" HDPE)
Install 60.5 LF 12" HDPE (W) @ 1.00%

San. Service Line Crossing
F/L 12" HDPE=979.44
F/L 6" SDR-26 PVC=975.18

12" HDPE
F/L=979.94
Install 12" Cleanout

Contractor to extend all building downspouts to closest adjacent storm pipe. Install necessary fittings and assemblies as required.
Maintain 1% minimum slope.

Contractor to extend all building downspouts to 12" storm header pipe. Install necessary fittings and assemblies as required. Maintain 1% minimum slope.

San. Service Line Crossing
F/L 12" HDPE=983.66
F/L 6" SDR-26 PVC=980.02

F/L=983.55
Install 104.00 LF 12" HDPE (N) @ 1.39%
Install 88.00 LF 12" HDPE (S) @ 1.39%
Install 12" Cleanout

San. Service Line Crossing
F/L 12" HDPE=983.47
F/L 6" SDR-26 PVC=979.91

Storm Structure D1
F/L In E=983.30 (12" HDPE)
Install 24.5 LF 12" HDPE @ 1.00%

Contractor to extend all building downspouts to nearest adjacent storm pipe. Install necessary fittings and assemblies as required.
Maintain 1% minimum slope.

12" HDPE
F/L=984.00
Install 12" Cleanout

12" HDPE
F/L=979.44
Install 12" Cleanout
See Yard Drainage Sheet for Continuation

F/L=978.58
Install 86.00 LF 12" HDPE (N) @ 1.00%
Install 132.00 LF 12" HDPE (S) @ 1.00%
Install 12" Cleanout

San. Service Line Crossing
F/L 12" HDPE=977.16
F/L 6" SDR-26 PVC=971.92

Storm Structure A5
F/L In E=977.09 (12" HDPE)
Install 60.5 LF 12" HDPE (E) @ 1.00%

12" HDPE
F/L=979.90
Install 12" Cleanout

POOL LEVEL 982.75

NORTH
1"=50'
0 25' 50'

CONSTRUCTION DOCUMENTS

STREET FRONTAGE ROOF

AMENDMENT 4

Renaissance Infrastructure

2 12" HDPE F/L=987
Install 45 LF 12" HDPE to Deck-O-Drain
Bottom Outlet Adapter

Install 160 LF Deck-O-Drain or approved equal. Coordinate with Architect for Color. Install Cleanouts as necessary. 2

Install 12" Nyloplast Inline Drain
Top=989.35
12" HDPE F/L Out=986.35

Install 12" Cleanout

Install 8" Cleanout

Install 12" Nyloplast Drain Basin
Top=988.00
8" HDPE F/L In=985.75
12" HDPE F/L Out=985.50
Install 182 LF 8" HDPE to Building Corner. Extend Roof Drains to 8" HDPE Pipe. Maintain 2% Slope.

2 12" HDPE F/L=987
Install 36 LF 12" HDPE to Deck-O-Drain
Bottom Outlet Adapter

12" HDPE F/L=986.05
Install 30.34 LF 12" HDPE (NW) @ 1.00%

Install 8" Cleanout
Connect to Second Downspout

Install 8" Cleanout
Connect to Second Downspout

(2) 8" HDPE Pipes
F/L=985.50

(2) 8" HDPE Pipes
F/L=985.20
Install 19.34 LF (2) 8" HDPE @ 1.55%

Install 12" Nyloplast Inline Drain
Top=984.00
12" HDPE F/L Out=979.96

12" HDPE F/L=985.00
Install 82.85 LF 12" HDPE to Nyloplast Inline Drain @ 0.60%

2 12" HDPE F/L=978.38
Install 39.68 LF 12" HDPE (E) @ 4.00%

Install 8" Cleanout
Connect to Second Downspout

8" HDPE F/L=985.00
Install 85.00 LF 8" HDPE to Downspout
Maintain 1% Slope

Install 8" Cleanout

8" HDPE F/L=985.00
Install 51.50 LF 8" HDPE to Downspout
Maintain 1% Slope

Install 8" Cleanout

Install 8" Cleanout

Install 8" Cleanout

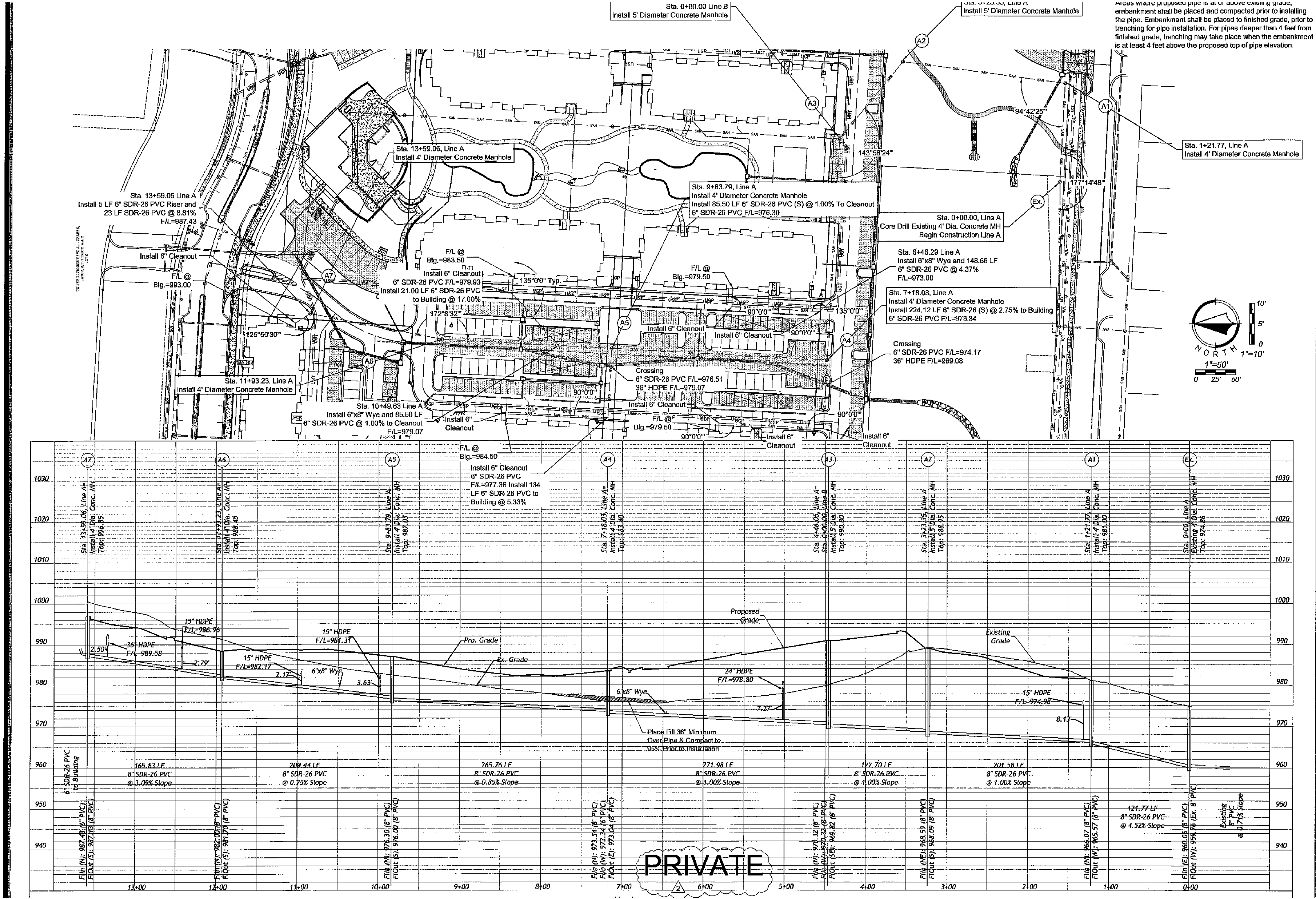
4'x4' Curb Inlet G1
Top=983.90
8" HDPE F/L In W=979.58
8" HDPE F/L In E=979.58
24" HDPE F/L Out S=978.24
Install 138.50 LF 8" HDPE F/L W to Downspout
Install 138.50 LF 8" HDPE F/L E to Downspout
Maintain 1% Slope
2

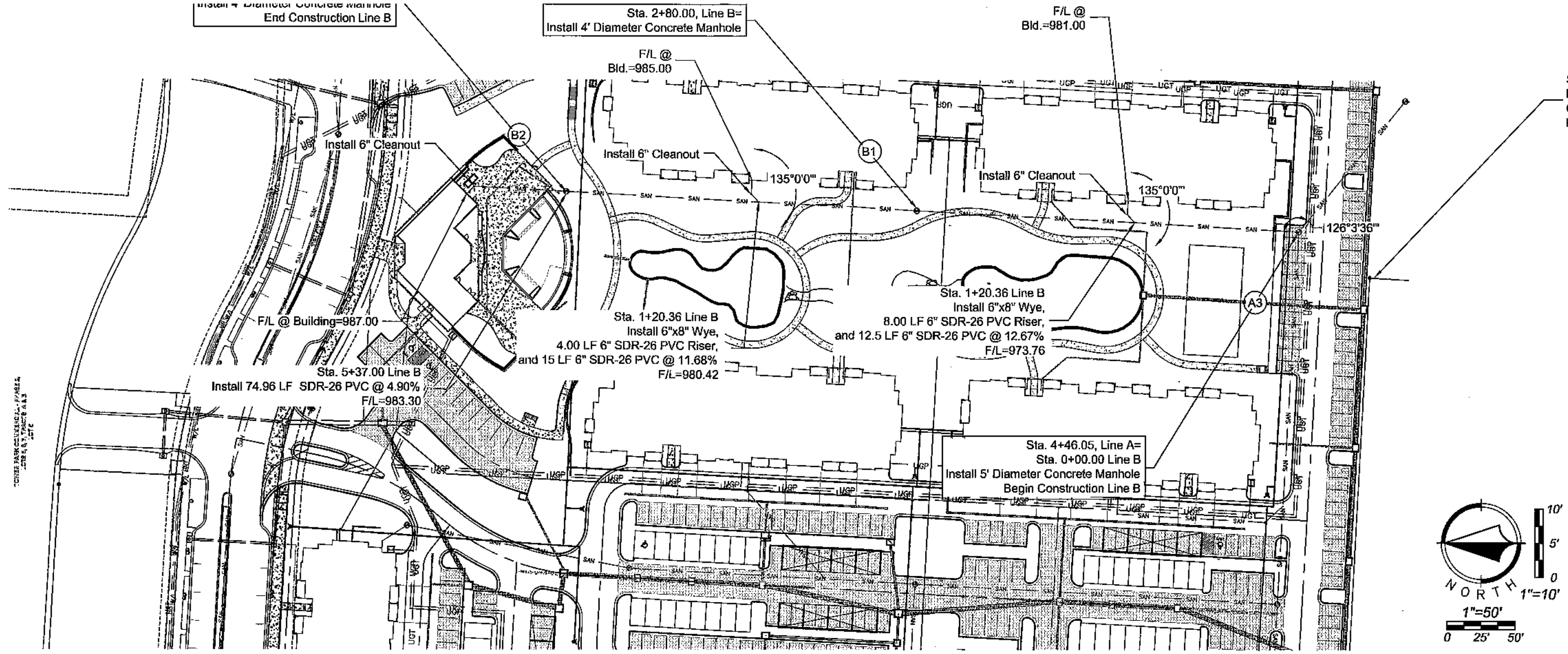
Install 12" Nyloplast Inline Drain
Top=984.25
12" HDPE F/L Out=980.75

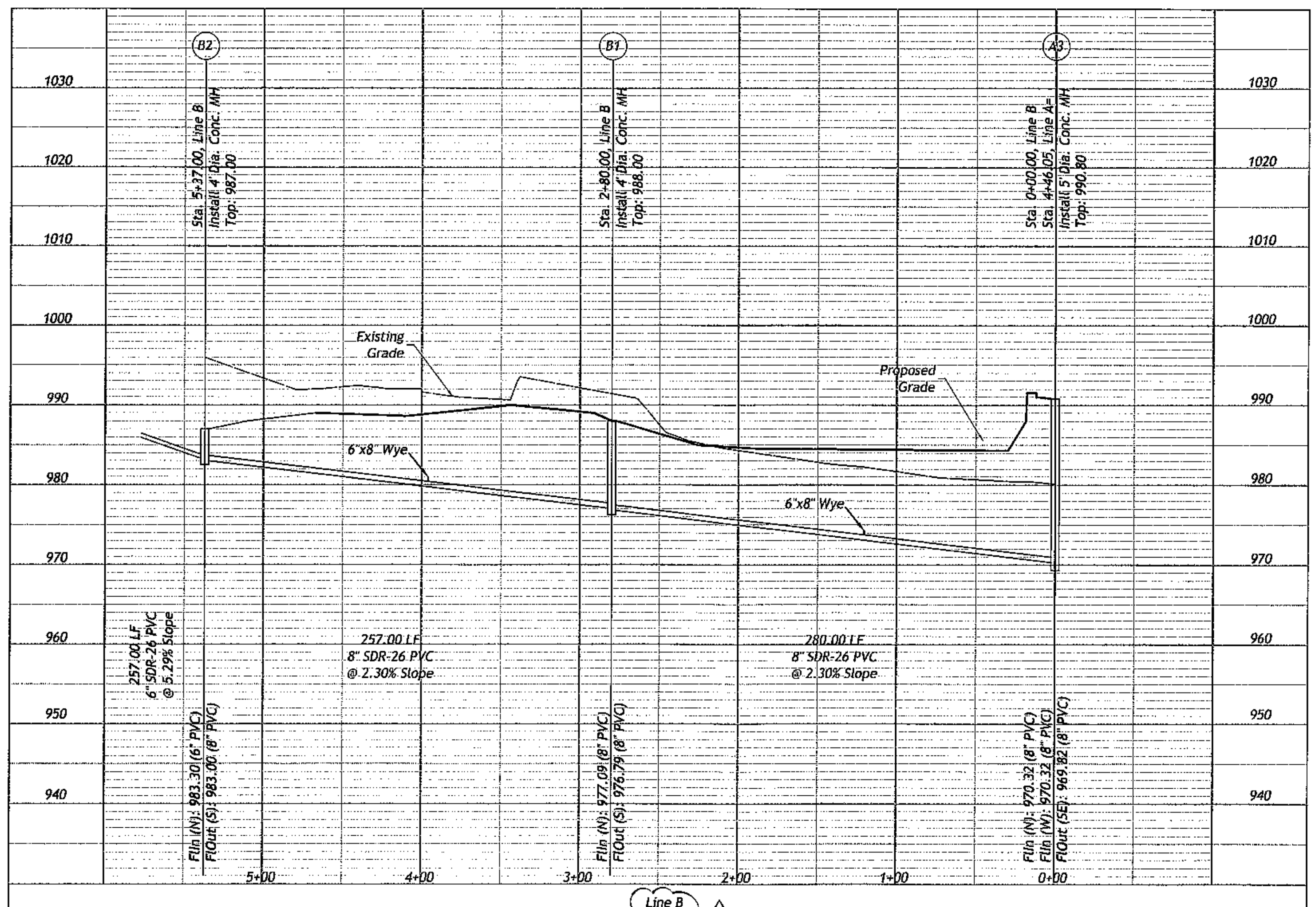
2 12" HDPE F/L=978.36
Install 62.60 LF 12" HDPE (N) @ 3.82%

NORTH
1"=50'
0 25' 50'

CONSTRUCTION DOCUMENTS
YARD FRONTAGE ROOF
AMENDMENT 4
SPW MES 06/27/14
Renaissance Infrastructure


Areas where proposed pipe is at or above existing grade, embankment shall be placed and compacted prior to installing the pipe. Embankment shall be placed to finished grade, prior to trenching for pipe installation. For pipes deeper than 4 feet from finished grade, trenching may take place when the embankment is at least 4 feet above the proposed top of pipe elevation.
Sta. 0+00.00 Line B
Install 5' Diameter Concrete Manhole
Install 5' Diameter Concrete Manhole
Sta. 1+21.77, Line A
Install 4' Diameter Concrete Manhole
Sta. 13+59.06, Line A
Install 4' Diameter Concrete Manhole
Sta. 9+83.79, Line A
Install 4' Diameter Concrete Manhole
Install 85.50 LF 6" SDR-26 PVC (S) @ 1.00% To Cleanout
6" SDR-26 PVC F/L=976.30
Sta. 13+59.06 Line A
Install 5 LF 6" SDR-26 PVC Riser and
23 LF SDR-26 PVC @ 8.81%
F/L=987.43
Sta. 0+00.00, Line A
Core Drill Existing 4' Dia. Concrete MH
Begin Construction Line A
Install 6" Cleanout
F/L @
Blg.=993.00
F/L @
Blg.=983.50
Install 6" Cleanout
6" SDR-26 PVC F/L=979.93
Install 21.00 LF 6" SDR-26 PVC
to Building @ 17.00%
135°0'0" Typ.
F/L @
Blg.=979.50
Sta. 6+46.29 Line A
Install 6"x8" Wye and 148.66 LF
6" SDR-26 PVC @ 4.37%
F/L=973.00
Sta. 7+18.03, Line A
Install 4' Diameter Concrete Manhole
Install 224.12 LF 6" SDR-26 (S) @ 2.75% to Building
6" SDR-26 PVC F/L=973.34
Crossing
6" SDR-26 PVC F/L=974.17
36" HDPE F/L=969.08
Crossing
6" SDR-26 PVC F/L=976.51
36" HDPE F/L=979.07
Sta. 11+93.23, Line A
Install 4' Diameter Concrete Manhole
Sta. 10+49.63 Line A
Install 6"x8" Wye and 85.50 LF
6" SDR-26 PVC @ 1.00% to Cleanout
F/L=979.07
Install 6" Cleanout
F/L @
Blg.=979.50
F/L @
Blg.=984.50
Install 6" Cleanout
6" SDR-26 PVC
F/L=977.36 Install 134
LF 6" SDR-26 PVC to
Building @ 5.33%
NORTH
1"=50'
1"=10'
Sta. 13+59.06, Line A
Install 4' Dia. Conc. MH
Top: 996.85
Sta. 11+93.23, Line A
Install 4' Dia. Conc. MH
Top: 988.45
Sta. 9+83.79, Line A
Install 4' Dia. Conc. MH
Top: 987.05
Sta. 7+18.03, Line A
Install 4' Dia. Conc. MH
Top: 983.40
Sta. 4+46.05, Line A
Sta. 0+00.00, Line B
Install 5' Dia. Conc. MH
Top: 990.80
Sta. 3+23.35, Line A
Install 5' Dia. Conc. MH
Top: 988.95
Sta. 1+21.77, Line A
Install 4' Dia. Conc. MH
Top: 981.00
Sta. 0+00, Line A
Existing 4' Dia. Conc. MH
Top: 974.86
15" HDPE
F/L=986.96
36" HDPE
F/L=989.58
15" HDPE
F/L=981.31
15" HDPE
F/L=982.17
6"x8" Wye
Pro. Grade
Ex. Grade
Proposed Grade
Existing Grade
24" HDPE
F/L=978.80
15" HDPE
F/L=974.98
Place Fill 36" Minimum Over Pipe & Compact to 95% Prior to Installation
6" SDR-26 PVC to Building
165.83 LF
8" SDR-26 PVC
@ 3.09% Slope
209.44 LF
8" SDR-26 PVC
@ 0.75% Slope
265.76 LF
8" SDR-26 PVC
@ 0.85% Slope
271.98 LF
8" SDR-26 PVC
@ 1.00% Slope
122.70 LF
8" SDR-26 PVC
@ 1.00% Slope
201.58 LF
8" SDR-26 PVC
@ 1.00% Slope
121.77 LF
8" SDR-26 PVC
@ 4.52% Slope
Existing 8" PVC @ 0.7% Slope
FlIn (N): 987.43 (6" PVC)
FlOut (S): 987.13 (8" PVC)
FlIn (N): 982.00 (8" PVC)
FlOut (S): 981.70 (8" PVC)
FlIn (N): 976.30 (8" PVC)
FlOut (S): 976.00 (8" PVC)
FlIn (N): 973.54 (8" PVC)
FlIn (W): 973.34 (6" PVC)
FlOut (E): 973.04 (8" PVC)
FlIn (N): 970.32 (8" PVC)
FlIn (W): 970.32 (8" PVC)
FlOut (SE): 969.82 (8" PVC)
FlIn (NE): 968.59 (8" PVC)
FlOut (S): 968.09 (8" PVC)
FlIn (N): 966.07 (8" PVC)
FlOut (W): 965.57 (8" PVC)
FlIn (E): 960.06 (8" PVC)
FlOut (W): 959.76 (Ex. 8" PVC)
PRIVATE
CONSTRUCTION DOCUMENTS
SANITARY SEWER PLAN &
AMMENDMENT 4
Renaissance Infrastructure





PRIVATE

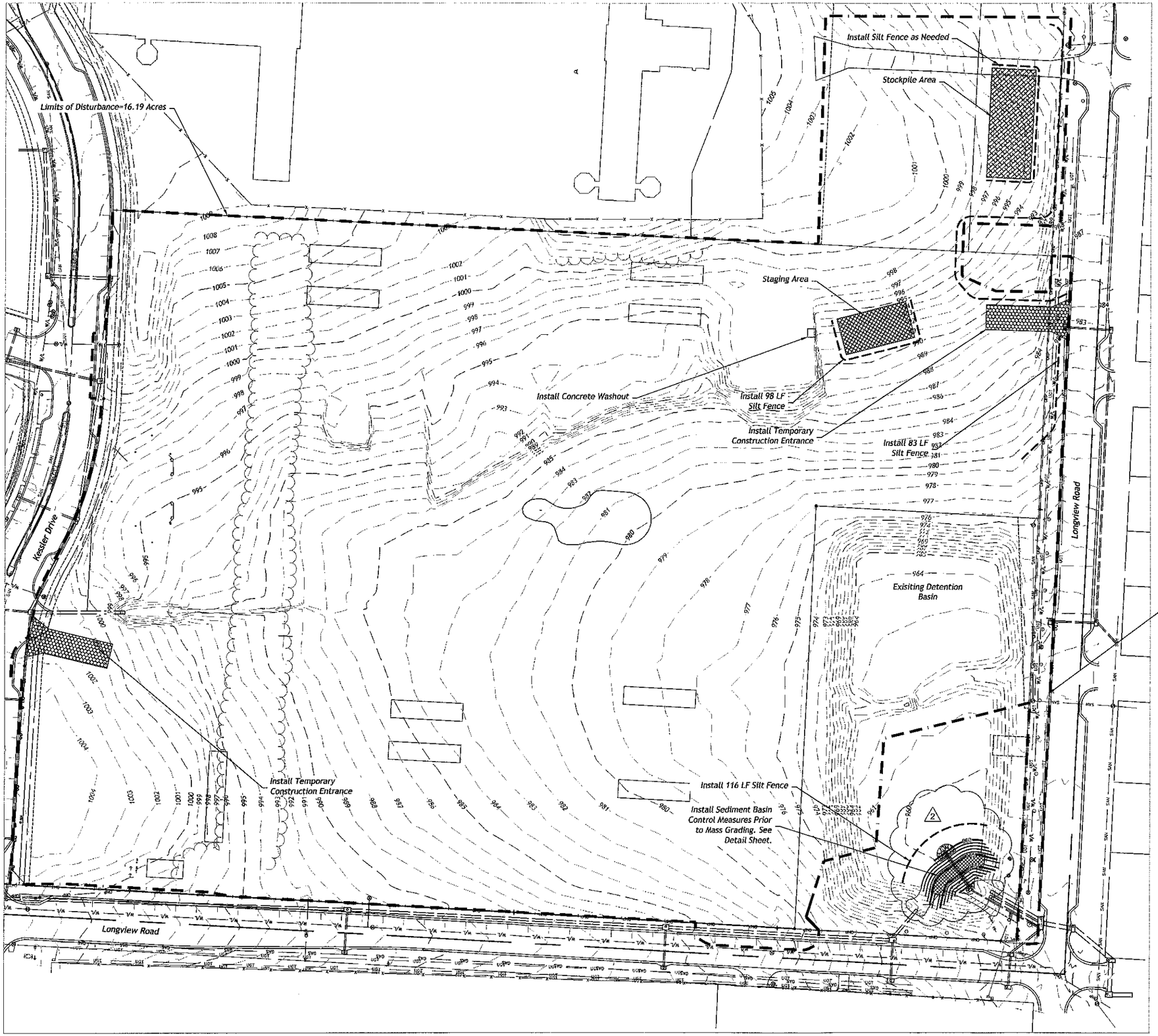
CONSTRUCTION DOCUMENTS

SANITARY SEWER PLAN 8

AMMENDMENT 4

SPW MES 06/27/14

Renaissance Infrastructure



NOTES

1. Contractor shall follow APWA Kansas City Chapter Specification Section 2150 Erosion and Sediment Controls.
2. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
3. The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.
4. The contractor shall temporarily seed and mulch all disturbed areas if there has been no construction activity on them for a period of fourteen (14) calendar days.
5. Install "J' Hooks on silt fence every 100 LF

WRITTEN SEQUENCING

1. Implement Pre-Clearing Plan: All structural BMPs Shown on the pre-clearing plan must be in place before general clearing operations. Clearing necessary to place structural BMPs is the minimum required for the installation. Coordinate clearing necessary to place structural BMPs with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all diversion dikes, sediment basins, and sediment traps within 5 days after installation.

2. Clear and Stabilize Work Areas: Grade building pad and contractor area and place all-weather surface on contractor areas.

Structural BMP refers to any BMP that requires installation of physical placement on the site as opposed to management BMPs such as management of the construction sequence, inspection, maintenance and good housekeeping activities.

LEGEND

- Construction Entrance
- Staging Area
- Stockpile Area
- Silt Fence
- Limits of Disturbance

Total Area Disturbed: 16.19 Ac.

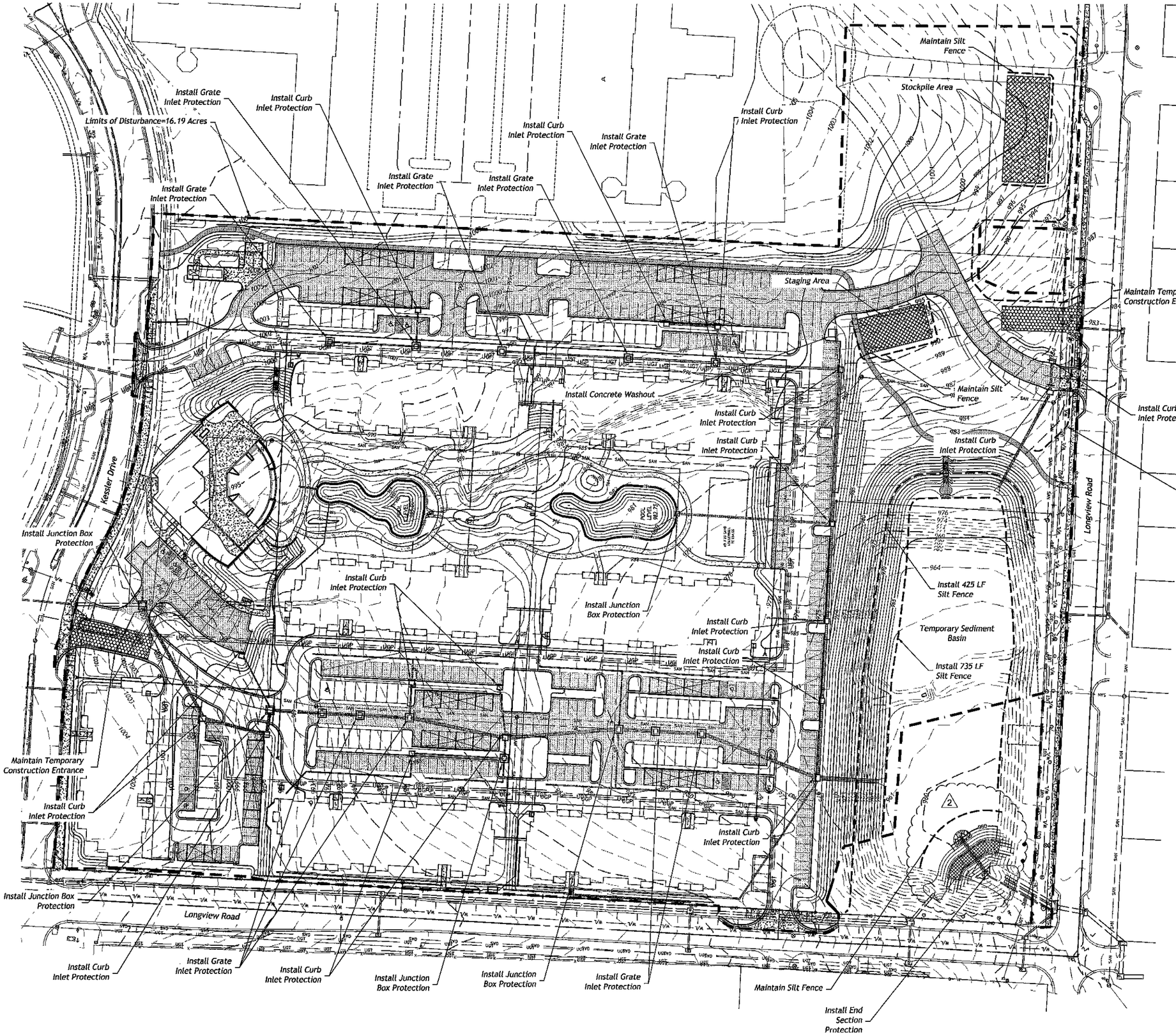
1"=50'
0 25' 50'

CONSTRUCTION DOCUMENTS

4	GPM	MES 06/17/14

AMENDMENT 4

Renaissance Infrastructure



NOTES

1. *Contractor shall follow APWA Kansas City Chapter Specification Section 2150 Erosion and Sediment Controls.*
2. *Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.*
3. *The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.*
4. *The contractor shall temporarily seed and mulch all disturbed areas if there has been no construction activity on them for a period of fourteen (14) calendar days.*
5. *Install "J' Hooks on silt fence every 100 LF*

WRITTEN SEQUENCING

1. *Building Top-out: Complete building foundation, framing, siding and roof installation including utility services.*
2. *Stabilize Inactive Areas: The ground cover and other structural BMPs shown on the inactive area stabilization must be placed within 14 days of cessation of ground disturbing activity at the location of the BMP, but in no case later than 14 days from building top out. In determining the inactive status of the ground, evaluate each portion of the site separately. The need for subsequent placement of trenched utilities, pavement or other construction in an otherwise inactive area is not justification for delay of stabilization.*
3. *Finish Interior: Construct the interior of the structure and minor structures depicted on the construction plans.*

Structural BMP refers to any BMP that requires installation of physical placement on the site as opposed to management BMPs such as management of the construction sequence, inspection, maintenance and good housekeeping activities.

LEGEND

- *Construction Entrance*
- *Staging Area*
- *Stockpile Area*
- *Silt Fence*
- *Limits of Disturbance*

Total Area Disturbed: 16.19 Ac.

NORTH
1"=50'
0 25' 50'

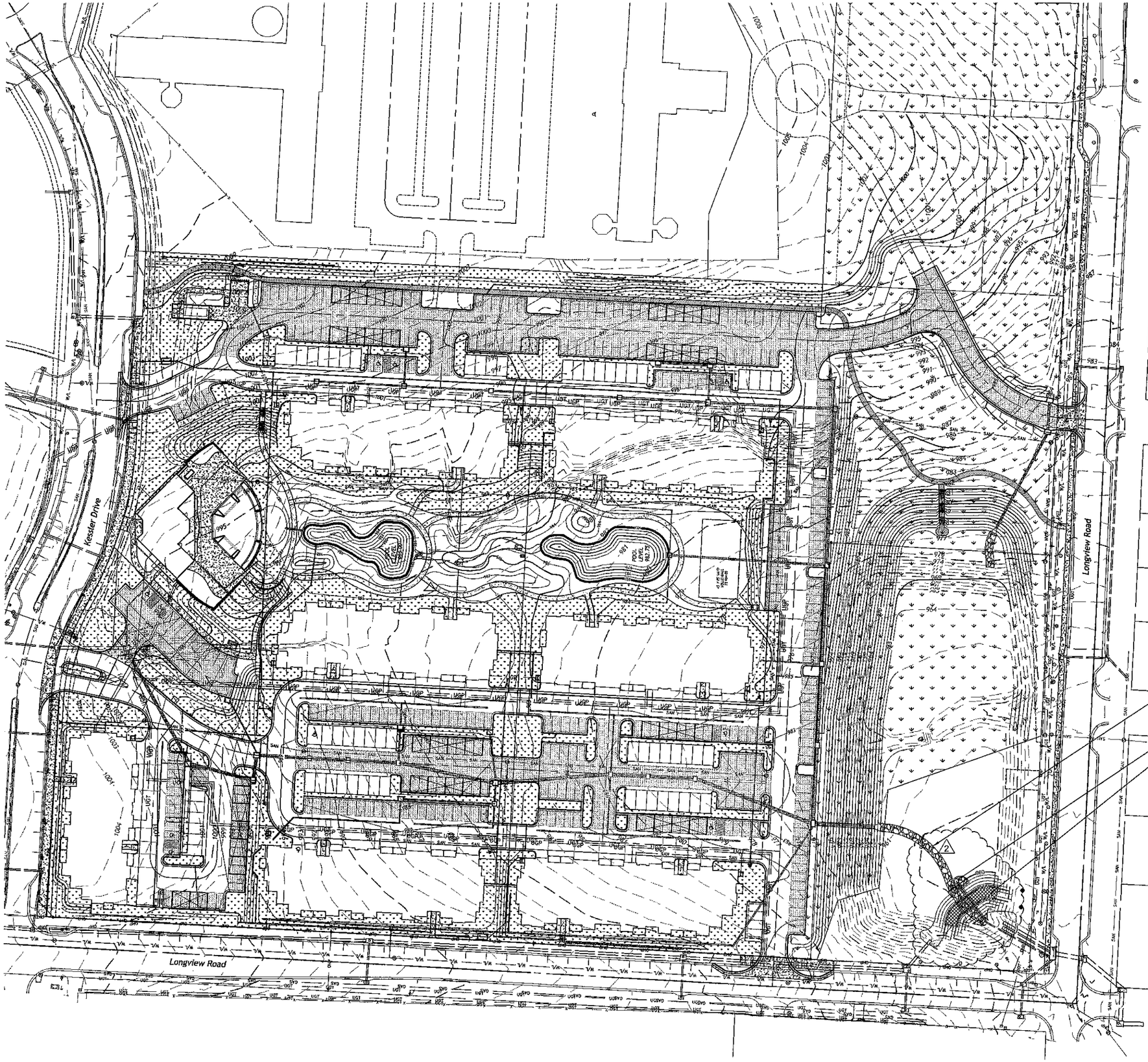
CONSTRUCTION DOCUMENTS

EROSION CONTROL PLAN

4	SPW	MES	06/27/14

AMENDMENT 4

Renaissance Infrastructure



NOTES

1. *Contractor shall follow APWA Kansas City Chapter Specification Section 2150 Erosion and Sediment Controls.*
2. *Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.*
3. *The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.*
4. *The contractor shall temporarily seed and mulch all disturbed areas if there has been no construction activity on them for a period of fourteen (14) calendar days.*
5. *Install "J' Hooks on silt fence every 100 LF*

WRITTEN SEQUENCING

1. *Building Top-out: Complete building foundation, framing, siding and roof installation including utility services.*
2. *Stabilize Inactive Areas: The ground cover and other structural BMPs shown on the inactive area stabilization must be placed within 14 days of cessation of ground disturbing activity at the location of the BMP, but in no case later than 14 days from building top out. In determining the inactive status of the ground, evaluate each portion of the site separately. The need for subsequent placement of trenched utilities, pavement or other construction in an otherwise inactive area is not justification for delay of stabilization.*
3. *After Stabilization is complete remove remaining silt fence, inlet protection, all silt within temporary sediment basin and temporary outlet structure.* 2
4. *Finish Interior: Construct the interior of the structure and minor structures depicted on the construction plans.*

Structural BMP refers to any BMP that requires installation of physical placement on the site as opposed to management BMPs such as management of the construction sequence, inspection, maintenance and good housekeeping activities.

LEGEND

Sodded Areas

Seeded Areas

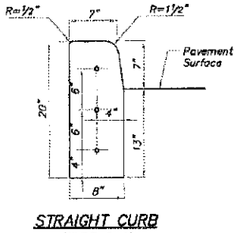
CONSTRUCTION DOCUMENTS

EROSION CONTROL PLAN

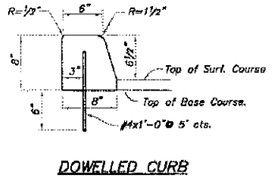
AMENDMENT 4

SPW | MES | 06/27/14

Renaissance Infrastructure



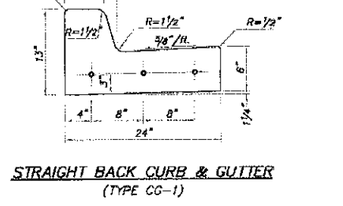
STRAIGHT CURB
(TYPE C-1)



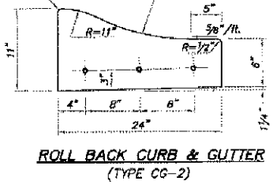
DOWELLED CURB
(TYPE DC)

GENERAL NOTES:

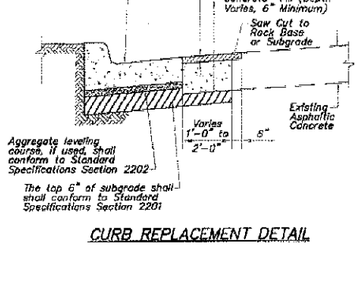
1. 3/4" Isolation Joints with 3/8" dia. x 2' smooth dowels shall be placed at radius points and at 150' intervals. These dowel bars shall be greased and wrapped on one end with expansion tubes.
2. 1" deep Contraction Joints shall be installed at approximately 10' intervals. These joints shall pass across the entire curb section.
3. Fix dowel bars with bar supports.
4. Depth of curb shall be a minimum of 8" through the handicap access ramp.
5. Concrete shall conform to Standard Specifications Section 2208.2.5.
6. Asphaltic concrete surface course shall conform to Standard Specifications Section 2205.2.



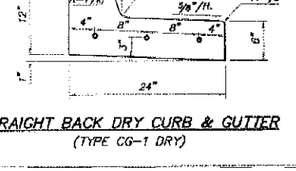
STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



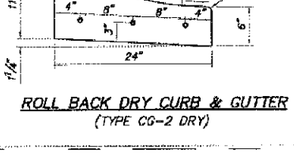
ROLL BACK CURB & GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL



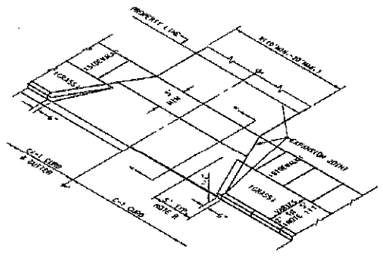
STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



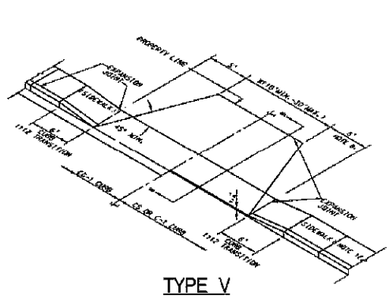
ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
CURB DETAILS	STANDARD DRAWING NUMBER C - 1 ADOPTED: MAY 23, 2001

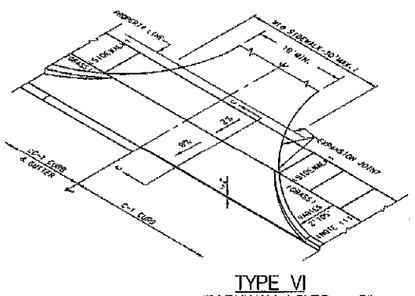
RECONSTRUCTED DRIVEWAYS



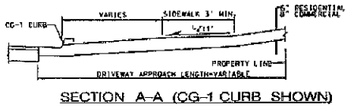
TYPE IV
(PARKWAY 1.5' TO <5')



TYPE V



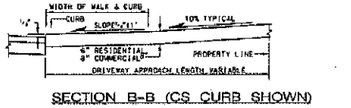
TYPE VI
(PARKWAY 1.5' TO <5')



SECTION A-A (CG-1 CURB SHOWN)

A. TYPE IV LAYOUT MAY BE ADAPTED TO CG-2 CURB.

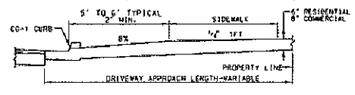
B. WHERE DRIVE WIDTH IS 14 FEET OR LESS FLARES SHALL BE 7.5 FEET WIDE AT CURB AND SHALL EXTEND AT A 45° ANGLE THROUGH THE SIDEWALK.



SECTION B-B (CS CURB SHOWN)

NOTE:

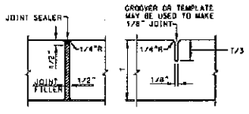
1. SIDEWALK CROSS SLOPES THROUGH DRIVEWAY MUST BE 1/4" PER FT. TO COMPLY WITH THE AMERICAN DISABILITY ACT.
2. THE TOP 6" OF DRIVEWAY SUBGRADE SHALL BE COMPACTED TO 95% OF STANDARD MAXIMUM DENSITY.
3. ALL DRIVES TO BE CONSTRUCTED WITH 8" OF KCMMB MIX CONCRETE. (2)
4. EXPANSION JOINT FILLER AND JOINT SEALING COMPOUND SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2209.2.
5. CURING MEMBRANES SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2301.5
6. CURB TRANSITIONS ON DRIVEWAY FLARES ARE CONSIDERED PART OF DRIVEWAY.
7. IN CSD- 6 x 6-W2.9 x W2.9 REINFORCING SHALL BE PLACED IN CENTER OF SLAB THICKNESS.
8. ON PARK DEPT. PROPERTY USE TYPE VI ENTRANCE AND PLACE 6 x 6-W1.4 x W1.4 REINFORCING IN CENTER OF SLAB THICKNESS.
9. CONTRACTION JOINTS SHALL BE SPACED AT 12' MAX. BOTH DIRECTIONS.
10. FORM 1/4" LIP AT PAVEMENT LINE ON DRIVES IN C-1 & CS CURBS.



SECTION C-C (CG-1 CURB SHOWN)

SEE SITE DIMENSION PLAN FOR RADII. (2)

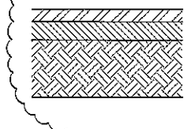
NOTE:
ALL DRIVEWAY CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. (2)



EXPANSION JOINT CONTRACTION JOINT

JOINT DETAILS

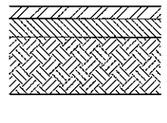
8" ASPHALTIC PAVEMENT
ASPHALT DRIVE AREAS



2" Asphaltic Concrete Surface
6" Asphaltic Concrete Base
Soil Compact to 95% Standard Proctor

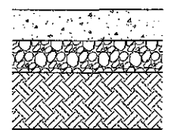
(4)

7" ASPHALTIC PAVEMENT
ASPHALT PARKING AREAS



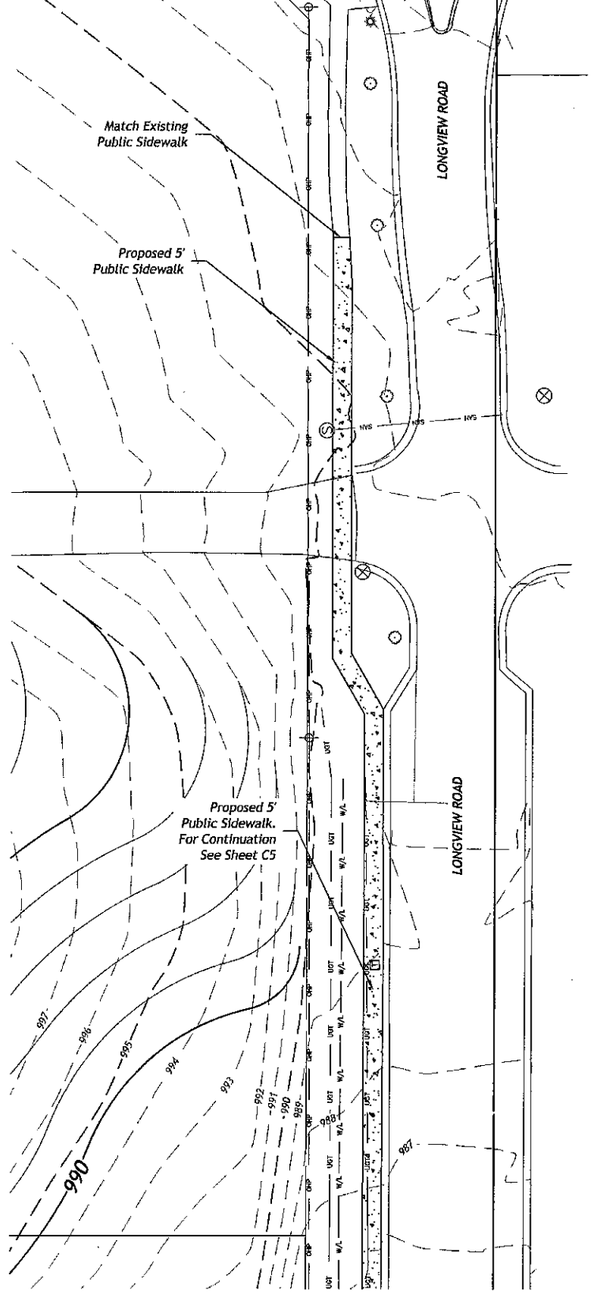
2" Asphaltic Concrete Surface
5" Asphaltic Concrete Base
Soil Compact to 95% Standard Proctor

PORTLAND CONCRETE PAVEMENT
CONCRETE VEHICLE AREAS



7" Portland Concrete Pavement
4" Crushed Rock (3/4" Minus)
12" Soil Compact to 95% Standard Proctor

TYPICAL PAVEMENT SECTIONS
NOT TO SCALE



LONGVIEW ROAD PUBLIC SIDEWALK PLAN VIEW

CONSTRUCTION DOCUMENTS

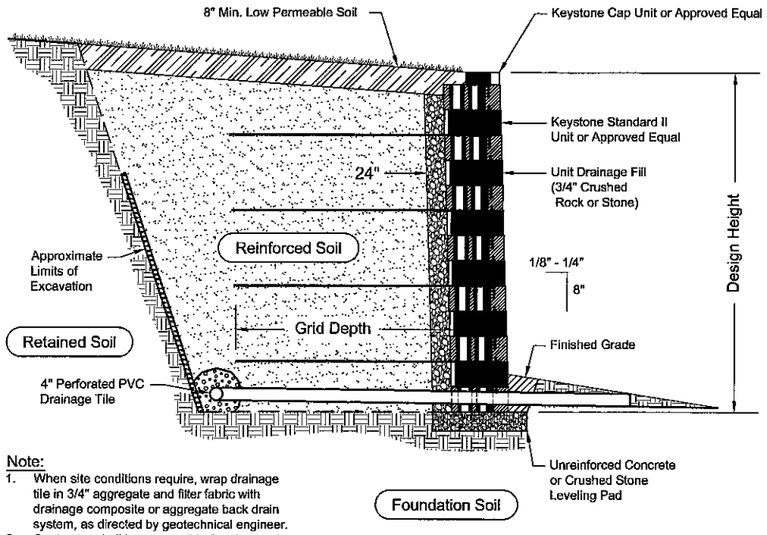
CURB & GUTTER, PAVEMENT AND SIDEWALK

AMMENDMENT 4

SPW MES 09/27/14

Renaissance Infrastructure

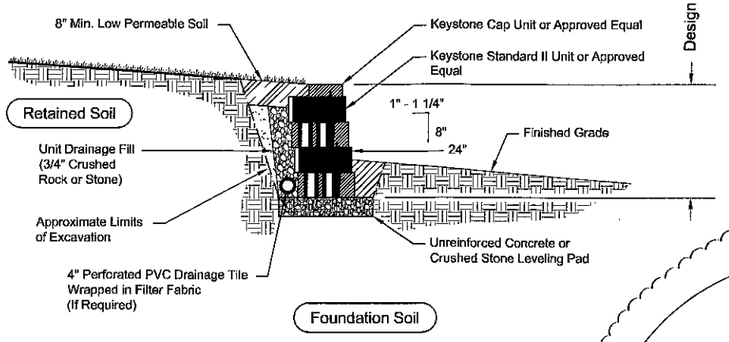
STATE OF MISSOURI
ENGINEER
PE-2



Note:
1. When site conditions require, wrap drainage tile in 3/4" aggregate and filter fabric with drainage composite or aggregate back drain system, as directed by geotechnical engineer.
2. Contractor shall be responsible for structural design of retaining wall
3. Black Aluminum Fencing shall be placed on all walls with a height over 30"

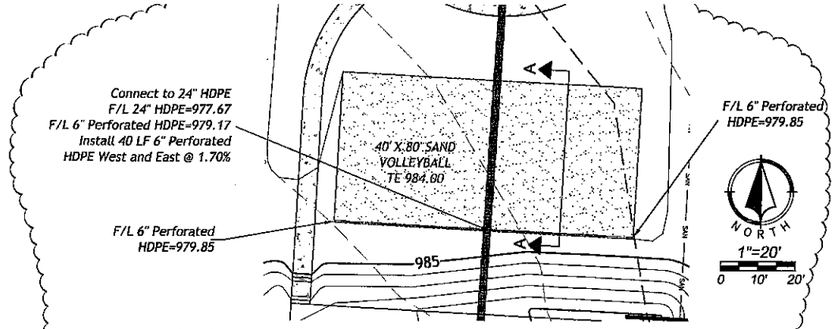
Typical Reinforced Wall Section

Standard II Unit - Near Vertical Setback

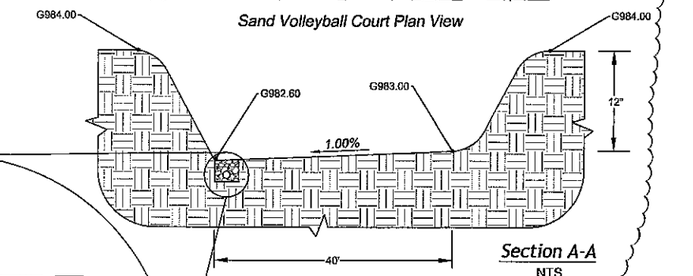


Typical Gravity Wall Section

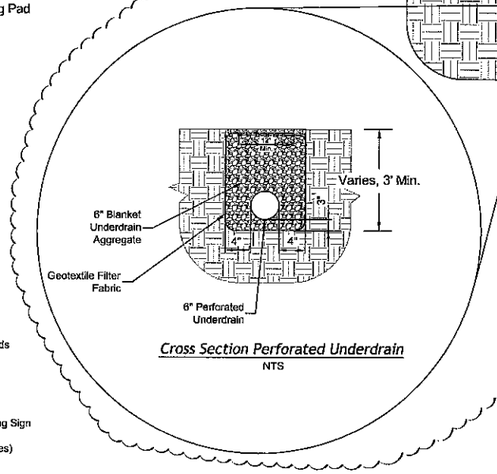
Standard II Unit - 1" Setback



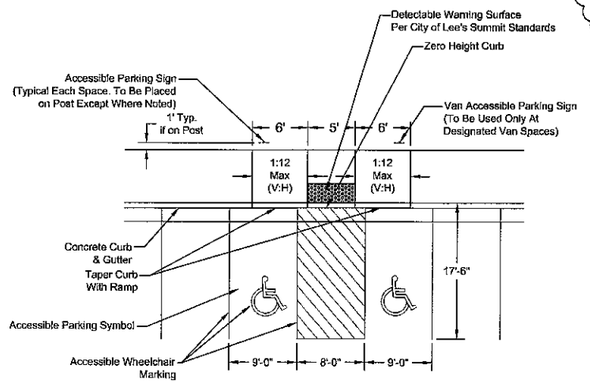
Sand Volleyball Court Plan View



Section A-A
NTS



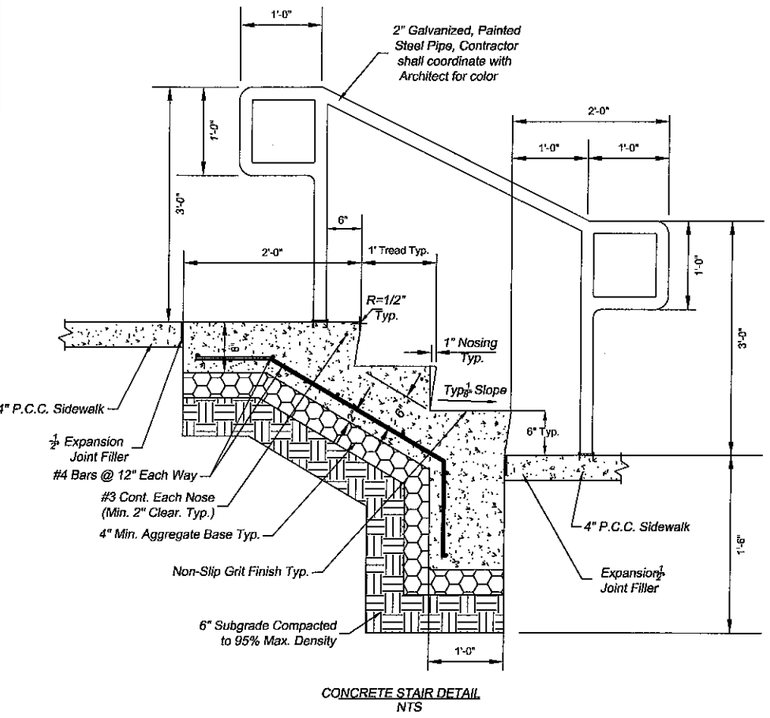
Cross Section Perforated Underdrain
NTS



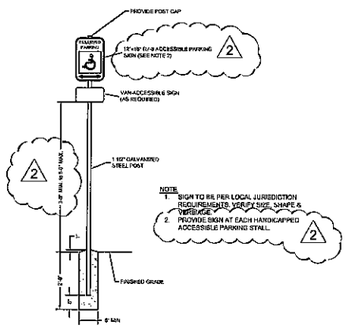
Note:
Accessible Parking Symbol and Signage Shall Comply with the Applicable Recommendations of the Manual of Uniform Traffic Control Devices (MUTCD)

Accessible Parking Detail

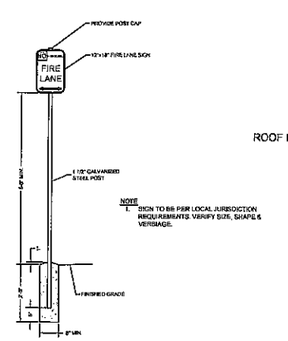
NTS



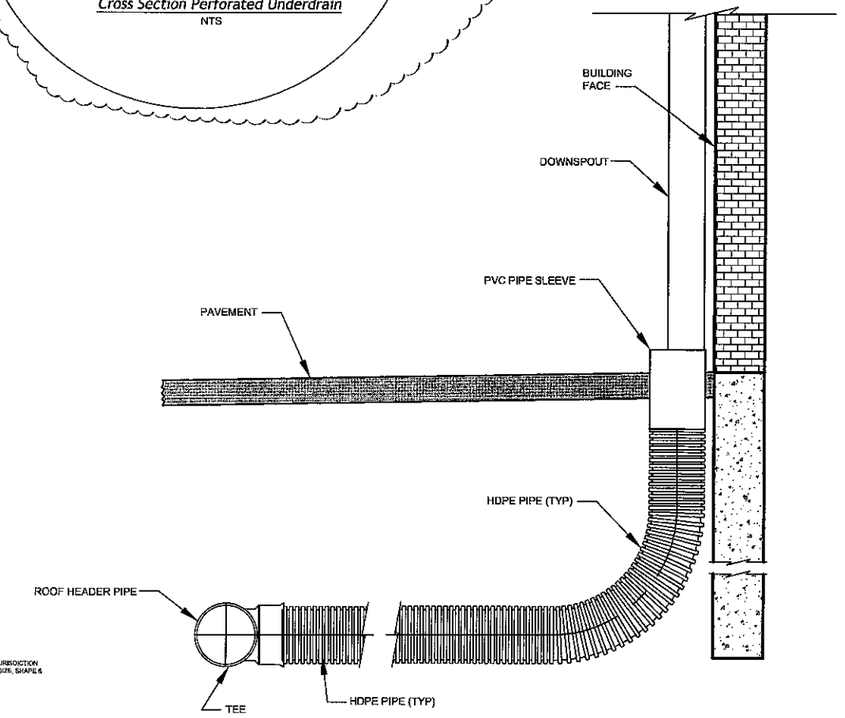
CONCRETE STAIR DETAIL
NTS



ACCESSIBLE PARKING SPACE SIGNAGE
NOT TO SCALE



FIRE LANE SIGNAGE
NOT TO SCALE



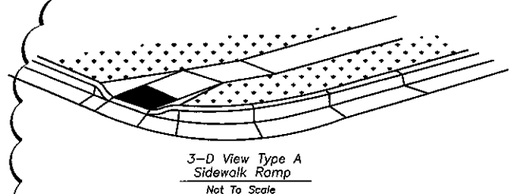
Downspout Detail

NTS

CONSTRUCTION DOCUMENTS

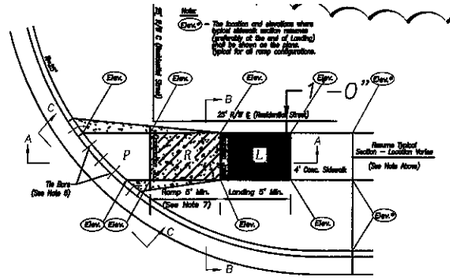
AMMENDMENT 4

Renaissance Infrastructure



3-D View Type A Sidewalk Ramp

Not To Scale



Type A Sidewalk Ramp

Not To Scale

Legend:

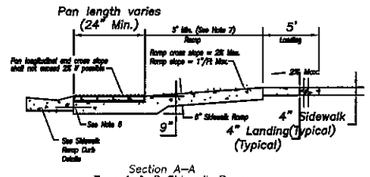
Ramp

Landing

Pan

Sidewalk & Sidewalk Ramp Notes:

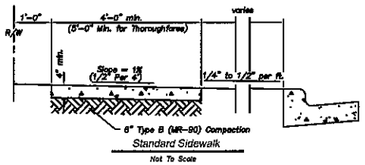
1. Sidewalk ramp location determined from the intersection of the extension of back of sidewalk and back of curb & gutter.
2. ADA compliance will be measured at points labeled (Elev.) Slope between these points shall be calculated and shown on the plans.
3. All concrete used in this work shall meet the requirements of the City of Lee's Summit Municipal Code. KCMMB4K Concrete shall be used throughout.
4. Longitudinal joint spacing to match width of sidewalk.
5. Isolation joints shall be placed where walk abuts driveways and similar structures, and 250' centers max.
6. Install 18" tie bars #4 epoxy coated @ 18" o.c. and through wings as shown.
7. Sidewalk Ramp shall be lengthened to provide ADA compliance slope but need not exceed 15'.
8. ADA maximum ramp slope = 1"/Ft. ADA maximum cross slope = 2%.
9. Curb depression at ramp opening shall be staked prior to curb construction.



Section A–A

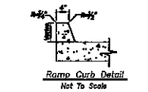
Type A & B Sidewalk Ramp

Not To Scale



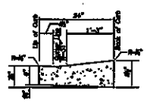
Standard Sidewalk

Not To Scale



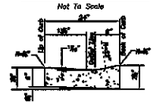
Ramp Curb Detail

Not To Scale



Use With Type A Curb

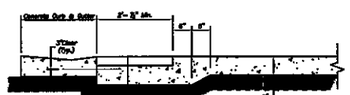
Not To Scale



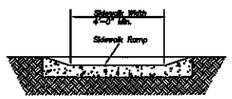
Use With Type B Curb

Not To Scale

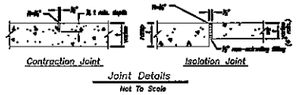
Street Curb Detail at Ramp



Ramp Profile



Section B–B

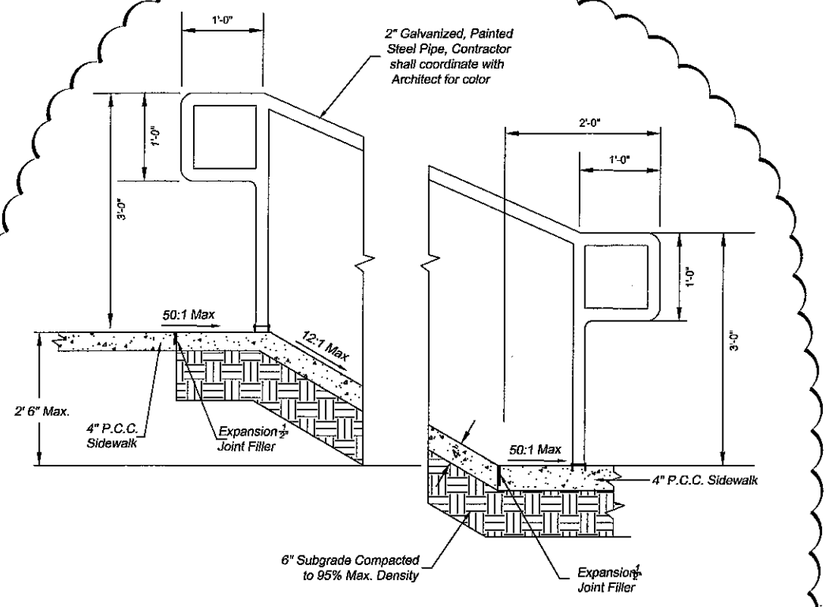


Joint Details

Not To Scale

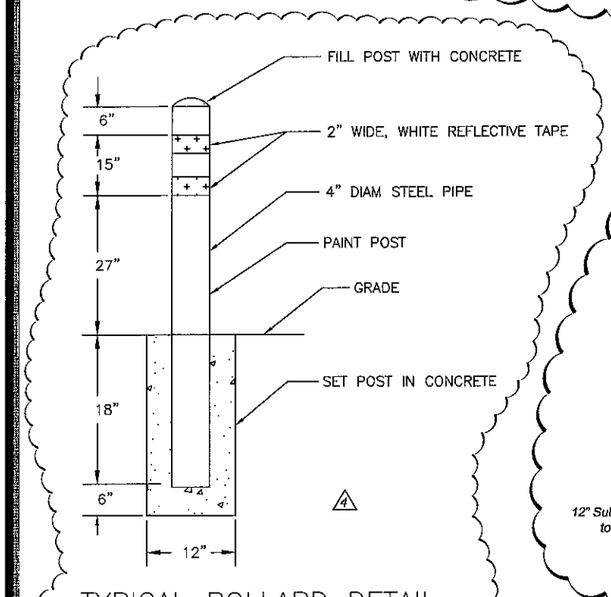
SIDEWALK RAMP DETAILS

△2



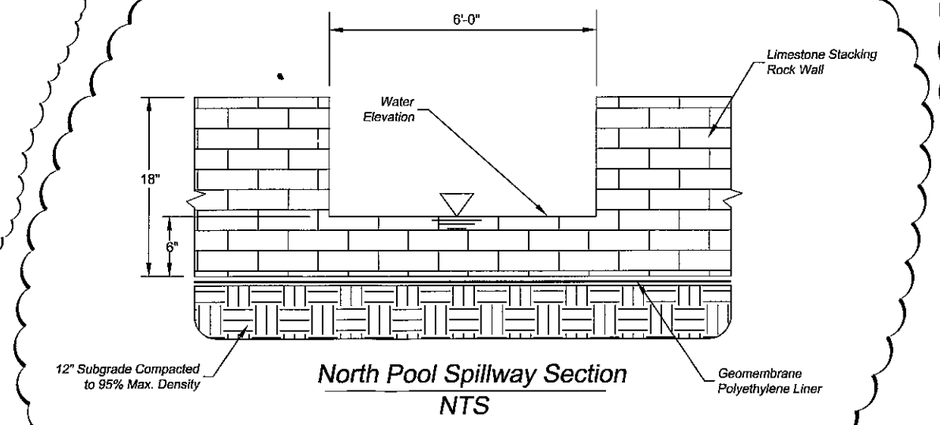
ADA Railing Detail

NTS



TYPICAL BOLLARD DETAIL

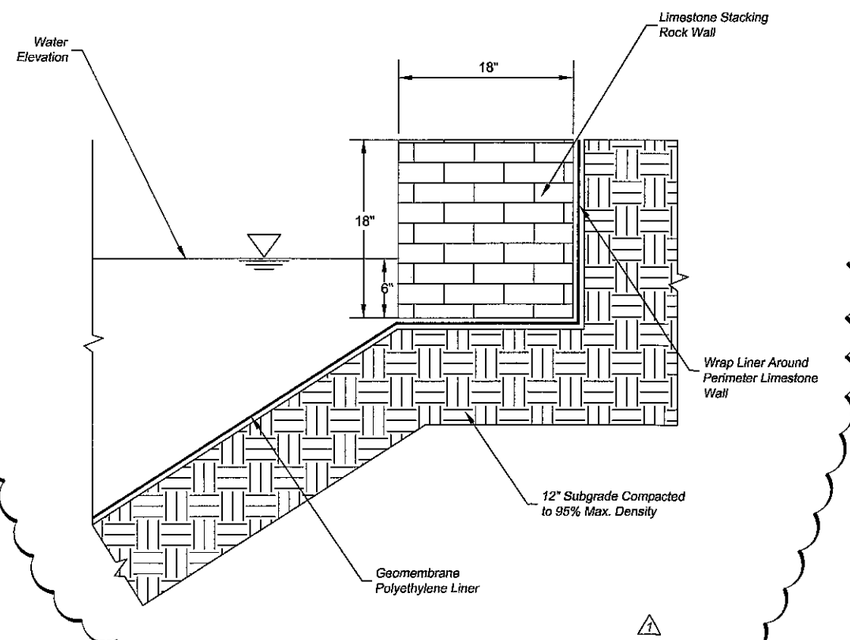
△4



North Pool Spillway Section

NTS

△4



△1

Limestone Wall Pond Detail

NTS

CONSTRUCTION DOCUMENTS

A	SPW	MES	06/27/14

AMMENDMENT 4

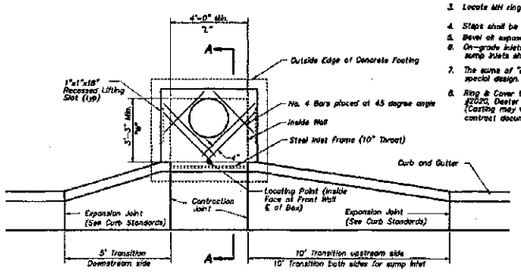
Renaissance Infrastructure

STATE OF MI E. SU

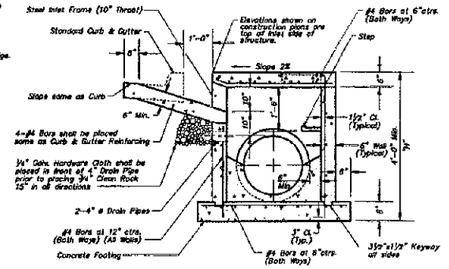
NU PE-20

GENERAL NOTES:

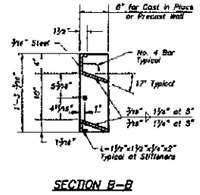
1. The first dimension listed in the Construction Notes is the "L" dimension. The second dimension is the "W" dimension. E's listed on the project plans are listed at the inside face of the wall.
2. Floor of inlet shall be shaped with invert to provide smooth flow.
3. Locate MH ring and cover over outlet.
4. Steps shall be spaced at 1'-4" O.C. vertically.
5. Bevel all exposed edges with ¾" chamfer or ½" tooled edge.
6. On-grade inlets shall conform to the street grade and sump inlets shall be level.
7. The sums of "L" & "W" shall not exceed 14' without special design. (See project plans for details.)
8. Ring & Cover to be Neenah R-1537, Clay & Bailey #2020, Dexter #2018, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)



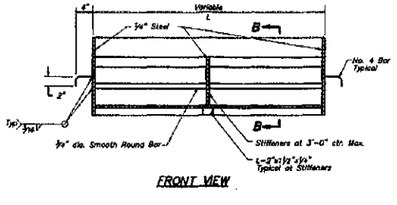
PLAN



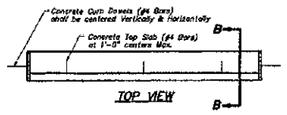
SECTION A–A



SECTION B–B



FRONT VIEW



TOP VIEW

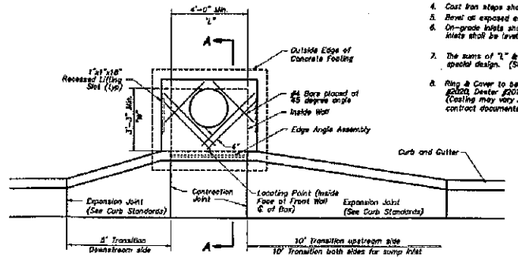
Notes:

1. All welds shall be preformed in accordance with appropriate AWS Specifications & 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 #37-77 primer (Red) or equal.

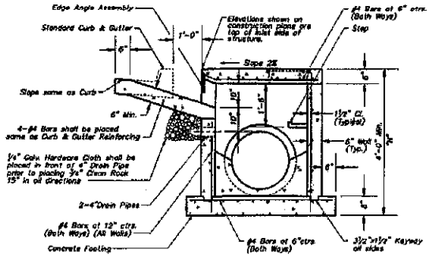
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
CURB INLET – TYPE 2 DETAILS	STANDARD DRAWING NUMBER CI – 2 ADOPTED: APRIL 17, 1996

GENERAL NOTES:

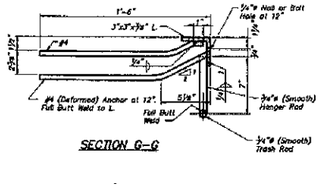
1. The first dimension listed in the Construction Notes is the "L" dimension. The second dimension is the "W" dimension. E's listed on the project plans are listed at the inside face of the wall.
2. Floor of inlet shall be shaped with invert to provide smooth flow.
3. Locate MH ring and cover over outlet.
4. Cast iron steps shall be spaced at 1'-4" O.C. vertically.
5. Bevel all exposed edges with ¾" chamfer or ½" tooled edge.
6. On-grade inlets shall conform to the street grade and sump inlets shall be level.
7. The sums of "L" & "W" shall not exceed 14' without special design. (See project plans for details.)
8. Ring & Cover to be Neenah R-1537, Clay & Bailey #2020, Dexter #2018, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)



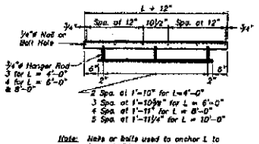
PLAN



SECTION A–A

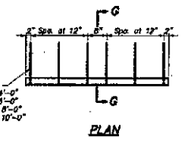


SECTION G–G



Note: Nuts or bolts used to anchor L to form shall be removed or cut-off flush w/surface of L.

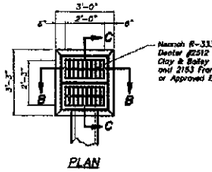
FRONT ELEV.



PLAN

DETAIL OF EDGE ANGLE ASSEMBLY

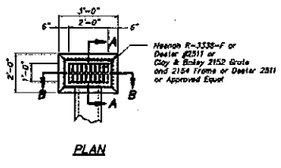
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
CURB INLET – TYPE 3 DETAILS	STANDARD DRAWING NUMBER CI – 3 ADOPTED: APRIL 17, 1996



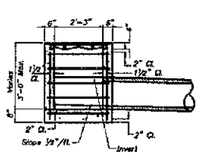
PLAN

NOTE:

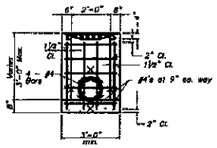
1. Location point at center of inlet.
2. A separate top slab may be utilized.
3. Not recommended for use in areas with bicycle traffic.



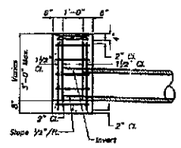
PLAN



SECTION C–C



SECTION B–B

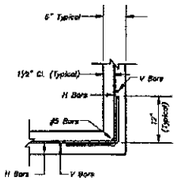


SECTION A–A

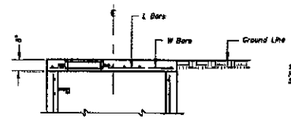
DOUBLE GRATE INLET DETAILS

SINGLE GRATE INLET DETAILS

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
GRATE INLET DETAILS	STANDARD DRAWING NUMBER GI–1 ADOPTED: APRIL 17, 1996

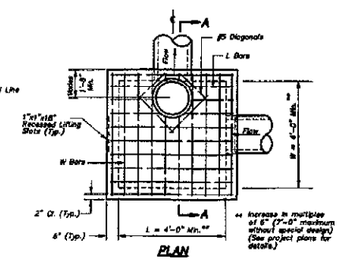


CORNER DETAIL



SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

NOTE: Ring & Cover to be Neenah R-1537, Clay & Bailey #2020, Dexter #2018, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)



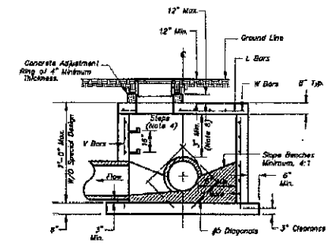
PLAN

GENERAL NOTES:

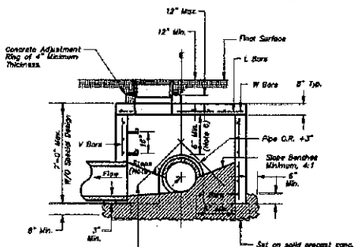
1. Locate ring and cover over outlet.
2. All work and materials shall conform to Section 2800 APWA.
3. Use ¾" Chamfer strip or ¾" R edger tool on all exposed concrete corners.
4. Steps required at 16" O.C. when depth from top of casting to invert exceeds 4'.
5. Barrels will not be allowed to project through the corners of the structure and the minimum distance between barrels is 6" with 1 corner bar.
6. The minimum reinforcing shall be 1 H–Bar over a cast–in place pipe and 2 H–Bars over a precast barrel.
7. Limit opening height to 5' with No. 5 galvanized bars extending to corner rebars.
8. Show field inlet orientation on plans plus number and size of openings locating point at center of structure.
9. O.D. = are bell outside pipe diameter (O.D.).
10. Reinforcing of covers in streets require special design.
11. Ring & Cover to be Neenah R-1736, Clay & Bailey #2000, Dexter #1015, or approved equal. (Tossing may vary by municipality, refer to plans & contract documents.)

REINFORCING

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



SECTION A–A
(Cast in Place)



SECTION A–A
(Precast)

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
JUNCTION BOX DETAILS	STANDARD DRAWING NUMBER JB – 1 ADOPTED: APRIL 17, 1996

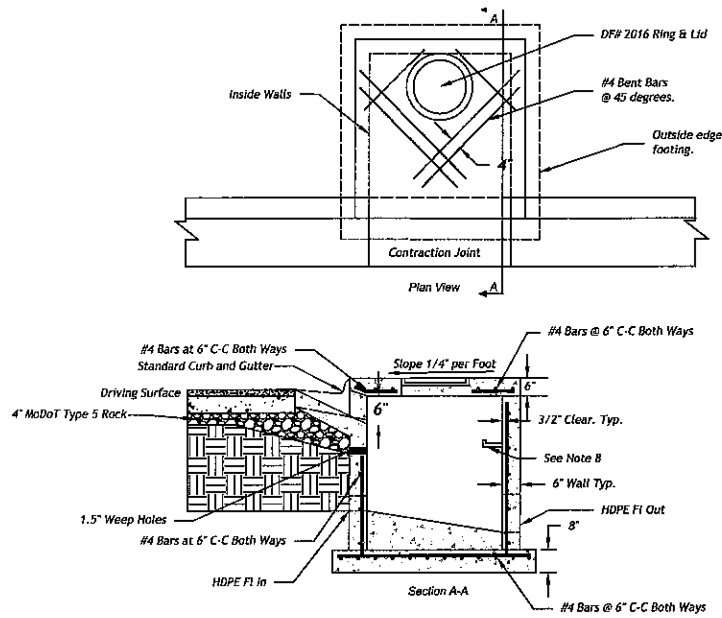
CONSTRUCTION DOCUMENTS

STORM SEWER DETAILS

AMENDMENT 4

SPW MES 06/27/14

Renaissance Infrastructure



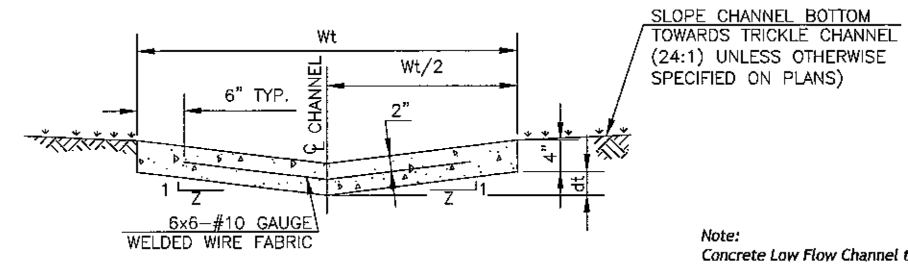
Notes:

1. All Concrete shall be KCMMB-4k.
2. Inlet Construction notes shall list the "L" Dimension first, the "W" dimension second, and the "H" dimension third.
3. Floor of inlets shall have a shaped concrete invert to provide for smooth flow.
4. The minimum dimension between top of pipe and top of box shall be 2' 6" (Typical all walls.)
5. All ingrade inlets shall conform to street grade. All inlets in sump shall be level. Bevel all exposed edges with 3/4" triangular molding.
8. Steps shall be spaced 1'-4" O.C. Vertically.
9. Any inlet, yard inlet, or junction box over 10 ft in length, 8 ft in width, or 12 ft in depth shall be considered non-standard, and a detail shall be shown. Any such detail shall be sealed by a structural engineer.
10. The throat and transition are subsidiary to the structure.
11. Lid shall be set true to line and grade along curb profile.

Standard Non-Setback Inlet Detail

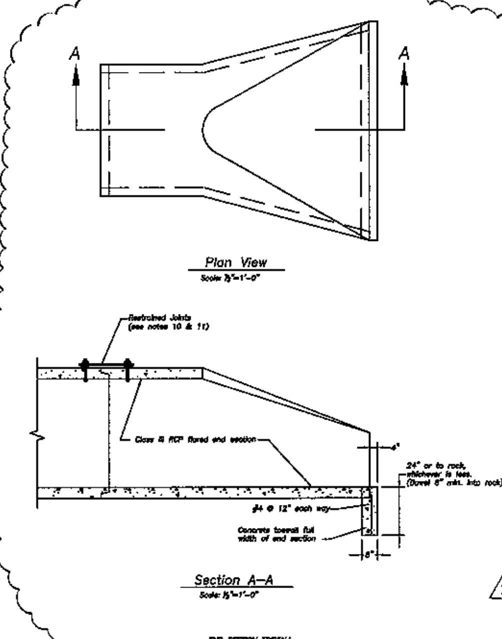
NTS

tt MINIMUM SIZE REQUIREMENTS
Wt = 4' (MIN)
dt = 0.5' (MIN)
Z = 4 (MIN)



CONCRETE LOW FLOW CHANNEL

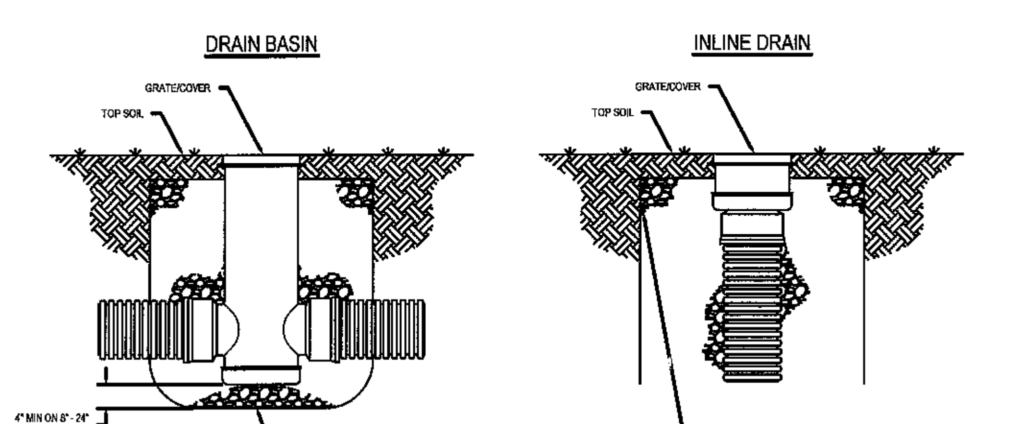
Note:
Concrete Low Flow Channel to be used in parking lots only.



End Section Notes

1. Use KCMMB4K Concrete throughout.
2. All concrete used in this work shall meet the requirements of the City of Lee's Summit Standards and Specifications.
3. Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold.
4. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/- 1/8" shall be permitted.
5. All lap splices not shown shall be a minimum of 40 bar diameters in length.
6. All concrete construction shall meet the applicable requirements of the City of Lee's Summit Standard and Specifications latest edition for Construction within the City of Lee's Summit.
7. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.
8. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
9. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
10. The last three joints of RCP, including the end section, shall be mechanically restrained where discharging into unimproved systems.
11. The restrained joints shall be dip zinc coated in accordance with ASTM A-123.

NON TRAFFIC INSTALLATION



THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, OR AS DETERMINED BY LOCAL STANDARDS & SITE ENGINEER. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

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DRAWN BY CJA | DATE 9-30-99 | REVISED BY EBC | DATE 2-26-10 | MATERIAL | PROJECT NO./NAME

Nyloplast — 3130 VERONA AVE, BUFORD, GA 30518, PHN (770) 932-2443, FAX (770) 932-2490, www.nyloplast-us.com

TITLE: DRAIN BASIN & INLINE DRAIN NON TRAFFIC INSTALLATION

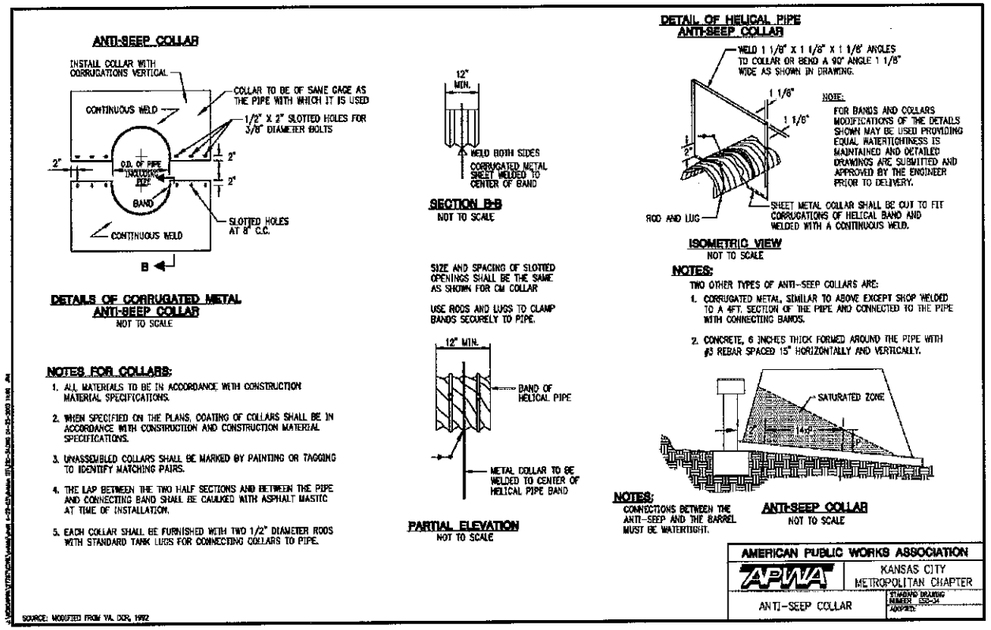
CONSTRUCTION DOCUMENTS

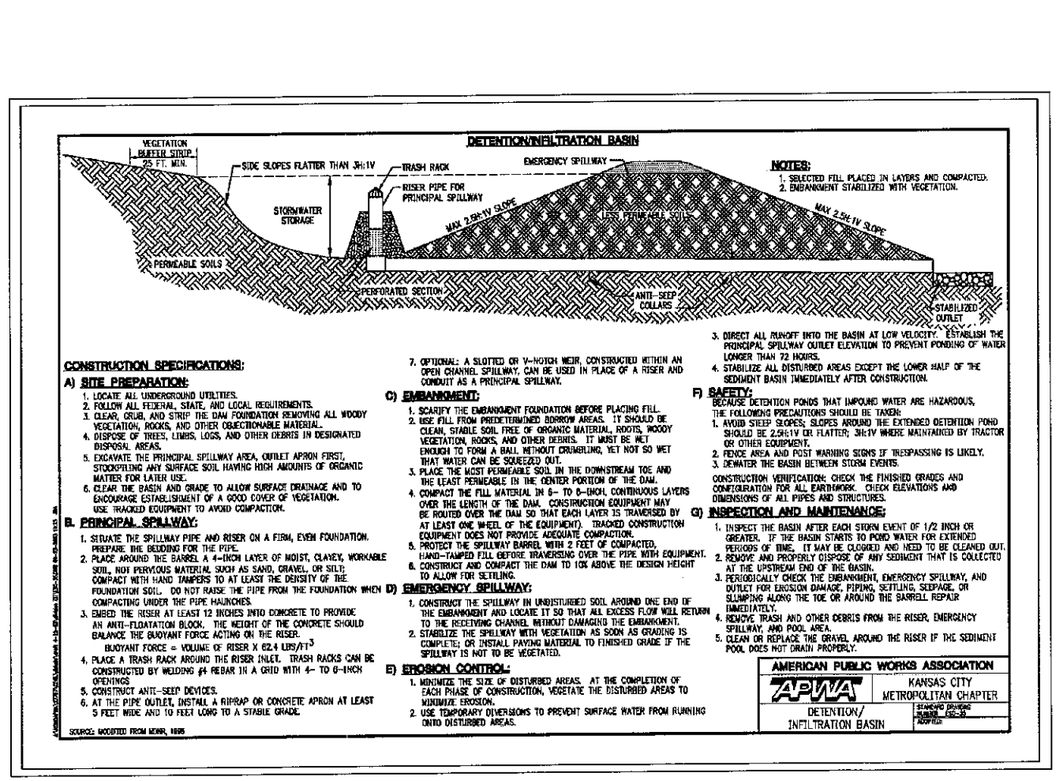
STORM SEWER DETAILS

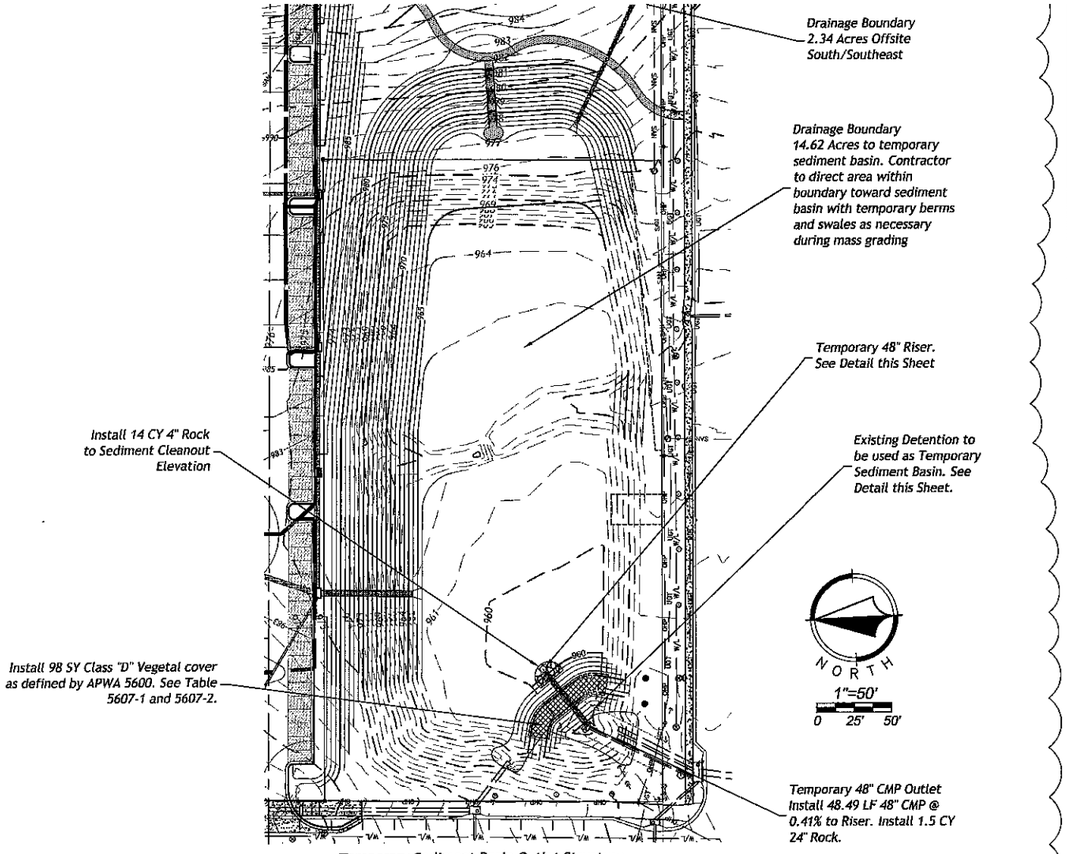
AMMENDMENT 4

SPW | MES | 06/27/14

Renaissance Infrastructure

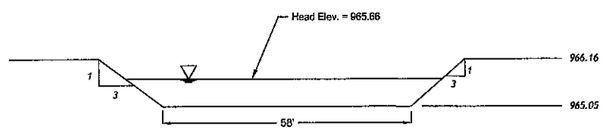






Temporary Sediment Basin Outlet Structure

SEDIMENT BASIN DESIGN SUMMARY			
DESIGN ITEM	BASIN	UNITS	NOTES
SITE DATA:			
Tributary Drainage Area to Pond	14.62	Acres	
50% (2 yr) Design Flow	51.60	cfs	
4% (25 yr) Design Flow	110.04	cfs	
POND DATA:			
Minimum Sediment Storage Volume	1959	cu yd	134 cy/acre required minimum. 8873 CY Provided (Existing Contours)
Bottom Elevation	958.30	ft.	
Sediment Cleanout Elevation	961.97	ft.	Elevation equal to 20% of original design volume
Top of Riser Elevation	964.05	ft.	Top of dry storage volume
Emergency Spillway Elevation	965.05	ft.	At or above Q-2 elevation. 1.0 ft min. above principal spillway
Top of Dam Elevation	965.32	ft.	0.5 ft min. above Q-25 elevation
BASIN SHAPE DATA:			
A = Area of Bottom of Basin	33,830	sf	
L = Length of Bottom of Basin	940	ft.	
We = Effective Width = A/L	36	ft	
Length to Width Ratio	26.00		If Length/Width Ratio is less than 2, a min. of 2 Baffles are required
PRINCIPAL SPILLWAY DATA:			
Riser Pipe Dia.	48	in.	48" CMP. Use 4 Column Riser with 0.7" holes to Sediment Cleanout Elevation. Use Solid Riser to Top of Riser
Barrel Pipe Dia.	48	in	Standard 48" CMP
Concrete Base Size for Riser Pipe	1.0	cy	Size to prevent flotation. 1.25 safety factor required
EMERGENCY SPILLWAY DATA:			
Design Depth in Spillway	0.81	ft.	Q-25 Yr, 100' Weir for Basin North. Q-25 Yr, 200' Weir for Basin South
Design Velocity in Spillway	2.39	ft/sec	
Lining Material	Natural Vegetation		



Broad Crested Weir Calculation
*Q=Cd*L*H^1.5*
where Q=Flow(Q25%=110.04 CFS
L=Length of Weir(58FT)
H=Head over Weir(FT)
Cd=Broad-crested Weir coefficient(2.65)
*For Q25% => 110.04=2.65*58*H^1.5*
H=0.61 FT

2

CONSTRUCTION DOCUMENTS
EROSION CONTROL
AMENDMENT 4
SPW MES 06/21/14
Renaissance Infrastructure
STATE OF KANSAS
PE PROFESSIONAL ENGINEER