

CONSTRUCTION DOCUMENTS

STORM DRAINAGE IMPROVEMENTS

52ND CIRCLE AND 53RD STREET EAST OF NIEMAN ROAD SHAWNEE, KANSAS

City Project No. 3402
SMAC Project No. TC - 21 - 071

CONSULTANT/APPLICANT

Renaissance Infrastructure Consulting
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New Century, Kansas 66031
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SHEET

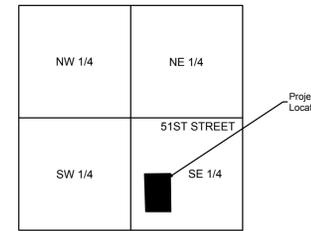
C01

CONSTRUCTION DOCUMENTS
15-0221
52ND CIR. & 53RD ST., EAST OF NIEMAN RD.
STORM DRAINAGE IMPROVEMENTS

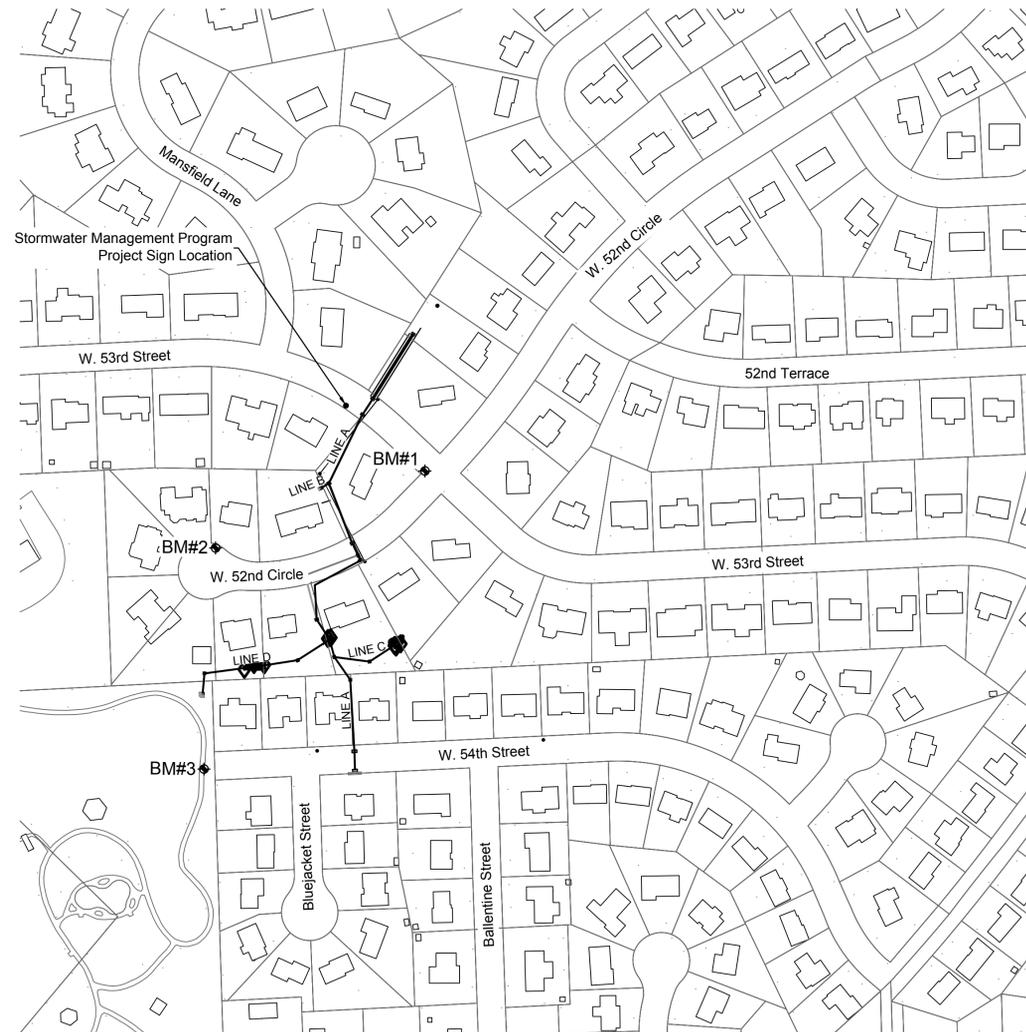
TITLE SHEET

LEGEND

	Existing Section Line		Proposed Right-of-Way
	Existing Right-of-Way Line		Proposed Property Line
	Existing Lot Line		Proposed Lot Line
	Existing Easement Line		Proposed Easement
	Existing Curb & Gutter		Proposed Curb & Gutter
	Existing Sidewalk		Proposed Sidewalk
	Existing Storm Sewer		Proposed Storm Sewer
	Existing Storm Structure		Proposed Storm Structure
	Existing Waterline		Proposed Fire Hydrant
	Existing Gas Main		Proposed Waterline
	Existing Sanitary Sewer		Proposed Sanitary Sewer
	Existing Sanitary Manhole		Proposed Sanitary Manhole
	Existing Contour Major		Proposed Contour Major
	Existing Contour Minor		Proposed Contour Minor
			Future Curb and Gutter



LOCATION MAP
SECTION 2-12-24



APPROVED BY THE CITY OF SHAWNEE

DOUG WESSELSCHMIDT P.E.
CITY ENGINEER

DATE: _____

FUNDING APPROVED - PROJECT CONFORMS TO STORMWATER MANAGEMENT PROGRAM REQUIREMENTS.

KENT LAGE, P.E.
JOHNSON COUNTY, STORMWATER MANAGEMENT PROGRAM MANAGER

DATE: _____



KANSAS CITY POWER & LIGHT
19950 Newton
Stillwell, Kansas 66085
Attn: Raymond Dumont
Phone: 913681.7213
raymond.dumont@kcpl.com

UTILITY CONTACT INFORMATION

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Shawnee, Kansas 66203
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rp5951@att.com

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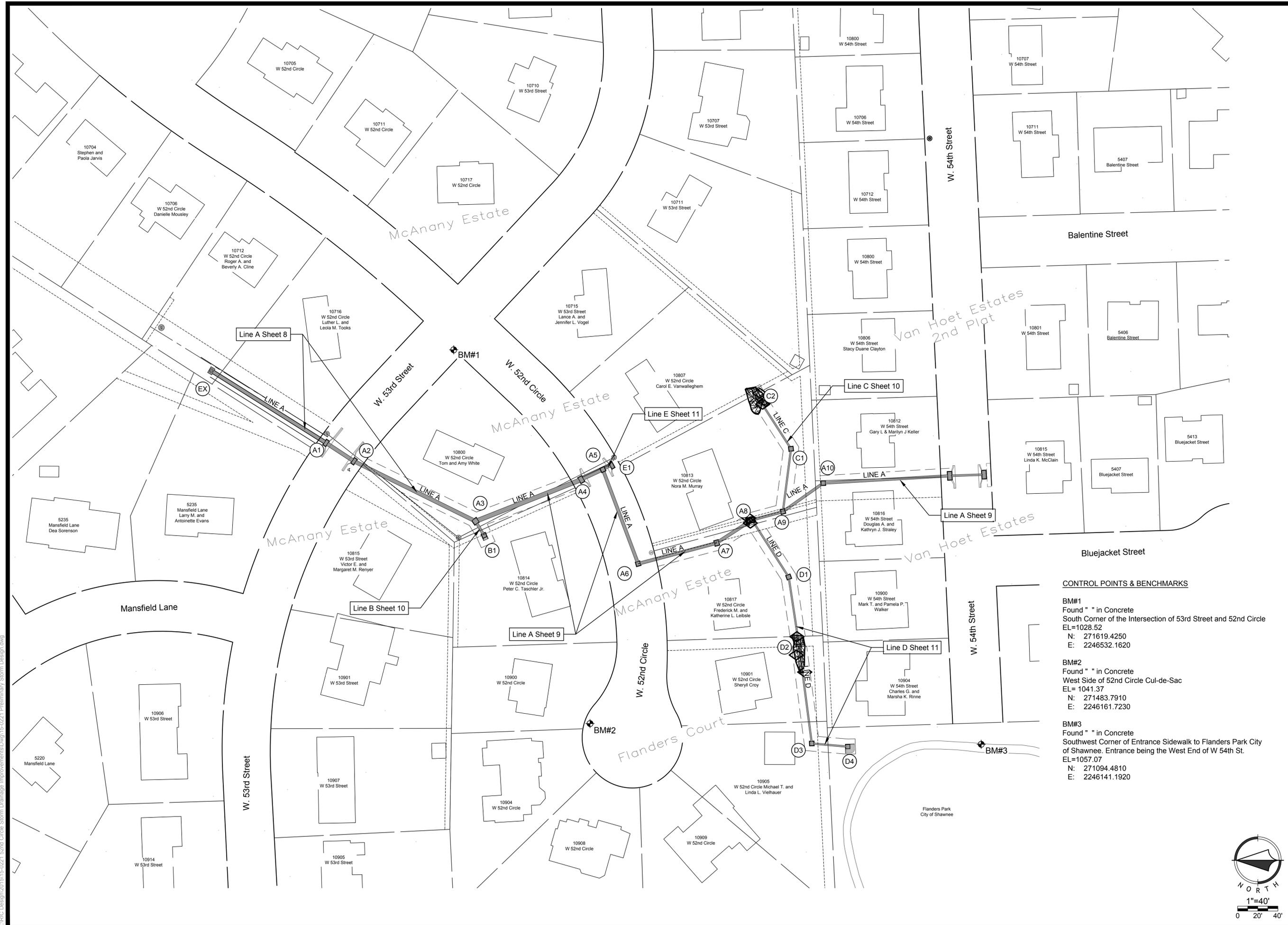


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CONTROL POINTS & BENCHMARKS

- BM#1**
Found " " in Concrete
South Corner of the Intersection of 53rd Street and 52nd Circle
EL=1028.52
N: 271619.4250
E: 2246532.1620
- BM#2**
Found " " in Concrete
West Side of 52nd Circle Cul-de-Sac
EL= 1041.37
N: 271483.7910
E: 2246161.7230
- BM#3**
Found " " in Concrete
Southwest Corner of Entrance Sidewalk to Flanders Park City of Shawnee. Entrance being the West End of W 54th St.
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N: 271094.4810
E: 2246141.1920



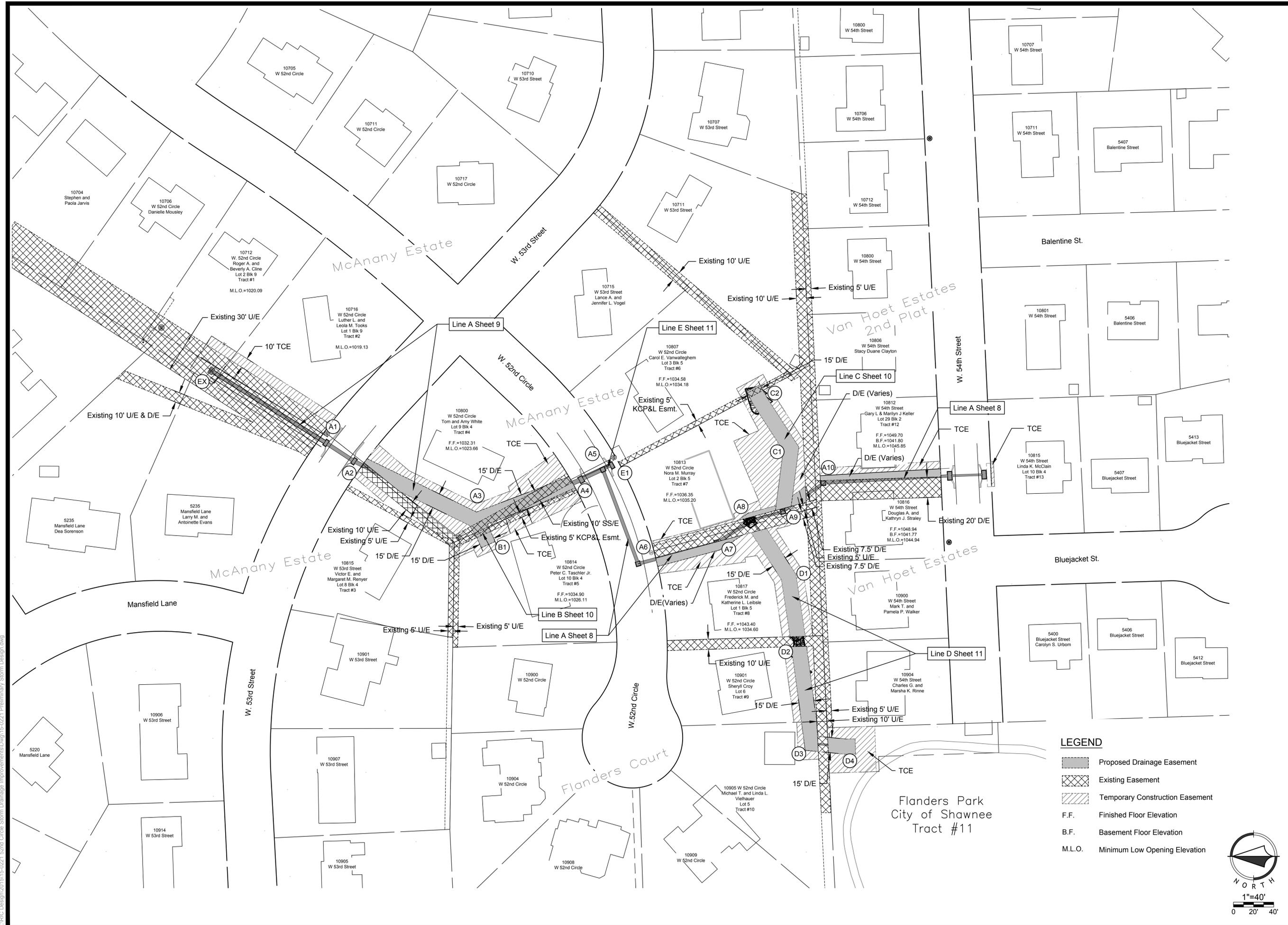
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NO.	BY	DATE	REVISION
1.	AC	3/4/16	PRELIMINARY PLAN
2.	AC	3/4/16	REVISED PRELIMINARY PLAN
3.	PJO	4/27/16	NEIGHBORHOOD MEETING

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1.	ACD	3/4/16	PRELIMINARY PLAN
2.	PJO	4/28/16	REVISED PRELIMINARY PLAN
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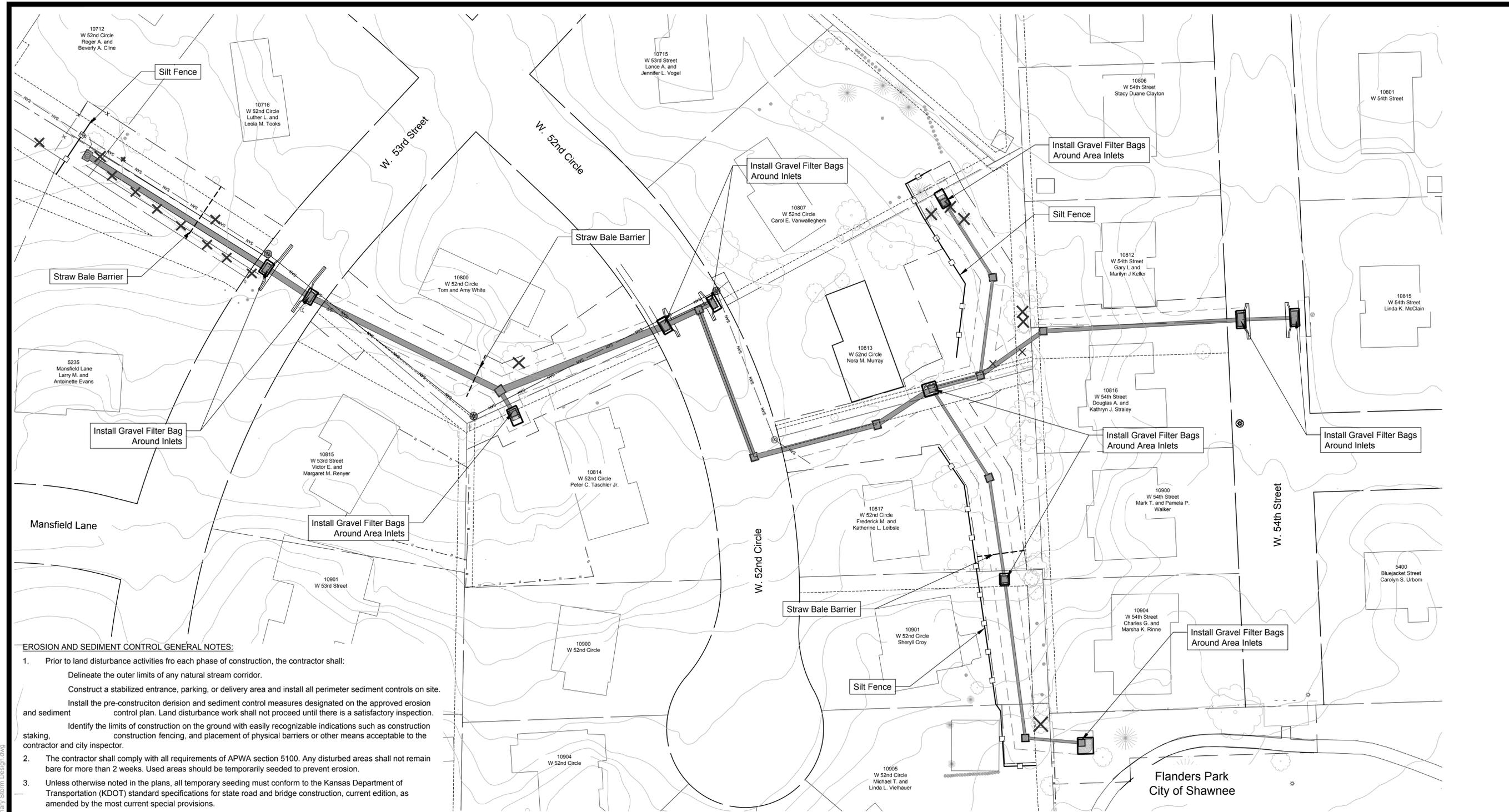
- LEGEND**
- Proposed Drainage Easement
 - Existing Easement
 - Temporary Construction Easement
 - F.F. Finished Floor Elevation
 - B.F. Basement Floor Elevation
 - M.L.O. Minimum Low Opening Elevation



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3.	PJO CRT	4/27/16	NEIGHBORHOOD MEETING
2.	PJO CRT	4/28/16	REVISED PRELIMINARY PLAN
1.	ACD CRT	3/4/16	PRELIMINARY PLAN

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EROSION AND SEDIMENT CONTROL GENERAL NOTES:

- Prior to land disturbance activities for each phase of construction, the contractor shall:
 - Delineate the outer limits of any natural stream corridor.
 - Construct a stabilized entrance, parking, or delivery area and install all perimeter sediment controls on site.
 - Install the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
 - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and placement of physical barriers or other means acceptable to the contractor and city inspector.
- The contractor shall comply with all requirements of APWA section 5100. Any disturbed areas shall not remain bare for more than 2 weeks. Used areas should be temporarily seeded to prevent erosion.
- Unless otherwise noted in the plans, all temporary seeding must conform to the Kansas Department of Transportation (KDOT) standard specifications for state road and bridge construction, current edition, as amended by the most current special provisions.
- The BMP's shown are the minimum requirements for erosion and sediment control. The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as natural stream corridor, areas of the site intended to be left undisturbed a storm sewer, or an on-site drainage channel.
- Chemicals or materials capable of causing pollution may only be stored on-site in their original container and per Manufacturers recommendations. Materials stored outside must be in closed and sealed waterproof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to control them.
- Silt fences and erosion control BMP's which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction; however, anticipated disturbance by utility construction shall not delay installation.
- Install Gravel Filter Bags around all Curb Inlets until completion of project.
- A copy of this plan on the SWPPP should be kept on the site throughout construction. Any revisions should be updated throughout construction.
- Temporary construction entrances shall be in accordance with the APWA entrance detail ESC-01. Wash rack not required on entrances.
- Install temporary slope drains around sanitary sewer manholes to prevent water buildup over sanitary sewer manholes.
- Contractor is responsible for updating and maintaining the storm water prevention plan.
- See sheet C14 for Erosion Control Details

Note:
Silt fence located along the project boundaries shall be installed prior to grading operations

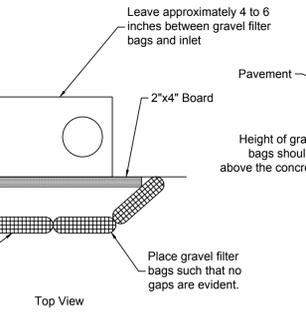
After construction of inlets, filter bags shall be placed around proposed inlets.

Bag is to have a tight curb contact with no gaps, approximately 6-inches from inlet.

3/4 inch gravel contained in pervious burlap bags or synthetic net bags (1/8 inch mesh) approximately 24 inches long, 12 inches wide, and 6 inches (i.e. curb height) high.

Place gravel filter bags such that no gaps are evident.

Top View



GRAVEL FILTER BAGS DETAIL
Not to Scale

Leave approximately 4 to 6 inches between gravel filter bags and inlet

Height of gravel filter bags should not be above the concrete walk

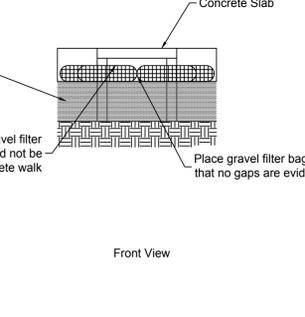
Place gravel filter bags such that no gaps are evident

Front View

Place gravel filter bags such that no gaps are evident

3/4-inch gravel contained in pervious burlap bags or synthetic net bags (1/8-inch mesh). Approximately 24 inches long, 12 inches wide and 6 inches (i.e. curb height) high.

GRAVEL FILTER BAGS DETAIL
Not to Scale

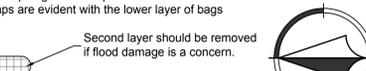


GRAVEL FILTER BAGS DETAIL
Not to Scale

EROSION CONTROL LEGEND

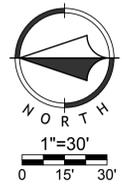
- Gravel Filter Bag
- Silt Fence
- Straw Bale Barrier
- Tree Removal

Gravel filter bags can be a single or double layer. If a double layer of gravel filter bags are used the top bags must be placed such that no gaps are evident with the lower layer of bags. Second layer should be removed if flood damage is a concern.



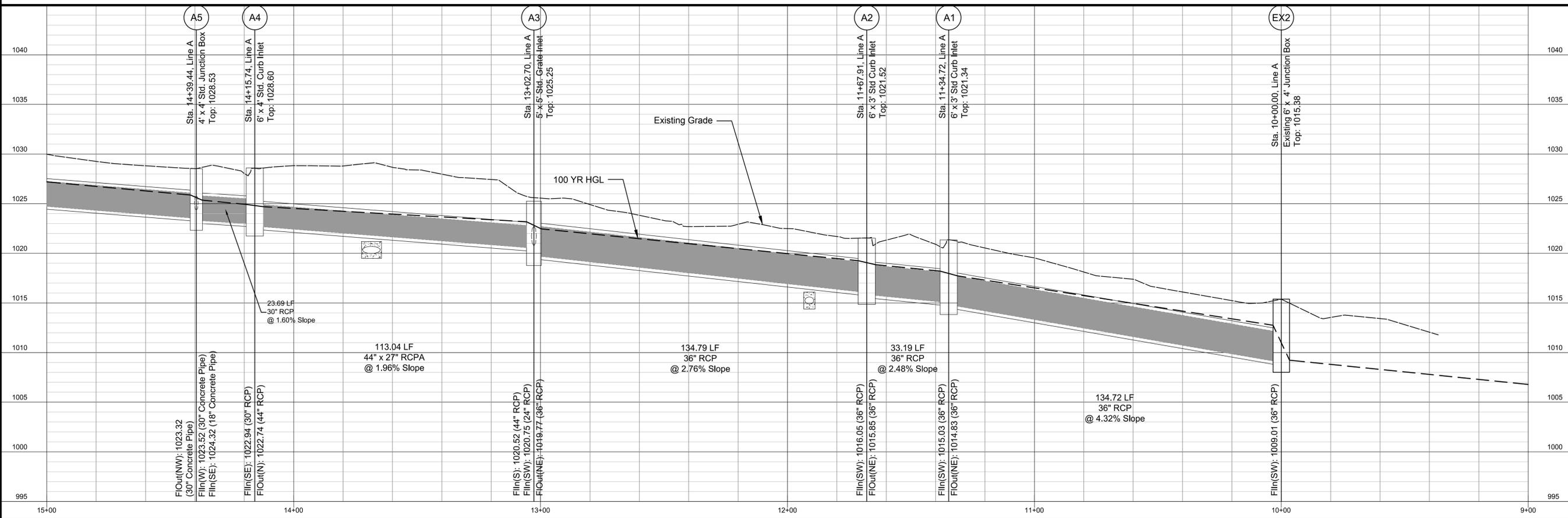
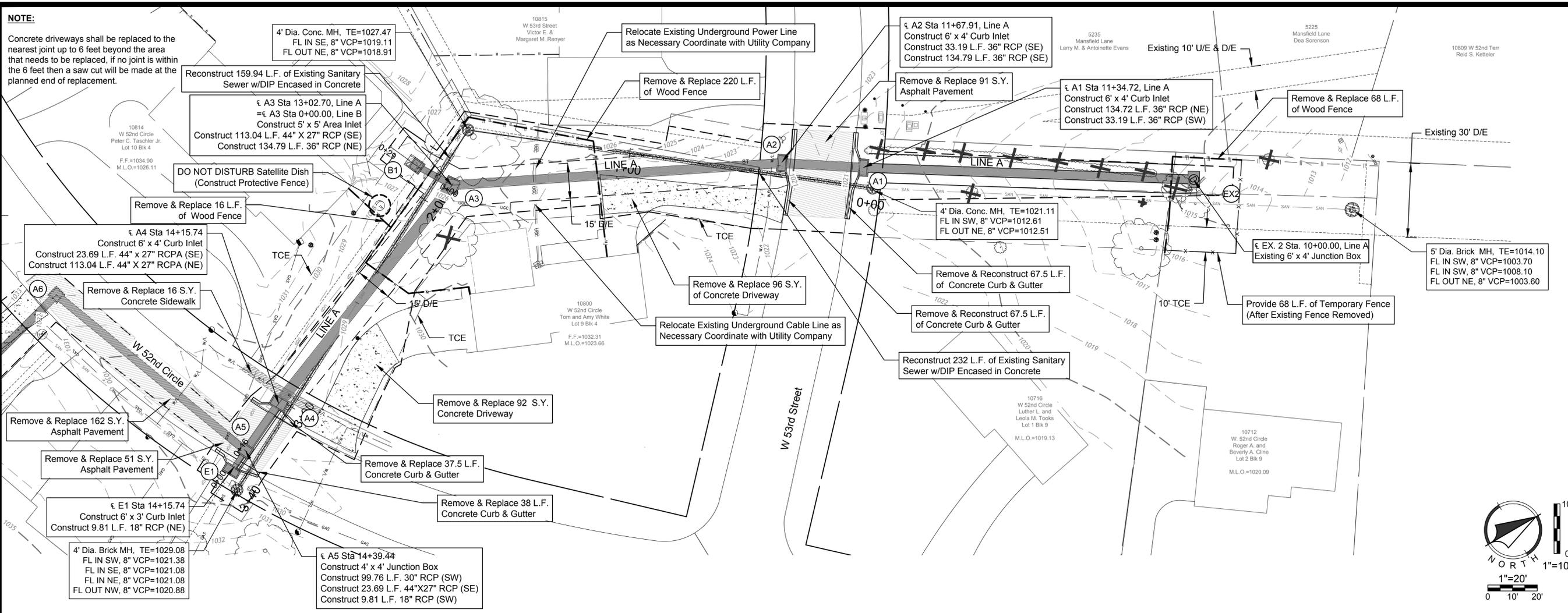
Place gravel filter bags such that no gaps are evident.

GRAVEL FILTER BAGS DETAIL
Not to Scale



NOTE:

Concrete driveways shall be replaced to the nearest joint up to 6 feet beyond the area that needs to be replaced, if no joint is within the 6 feet then a saw cut will be made at the planned end of replacement.



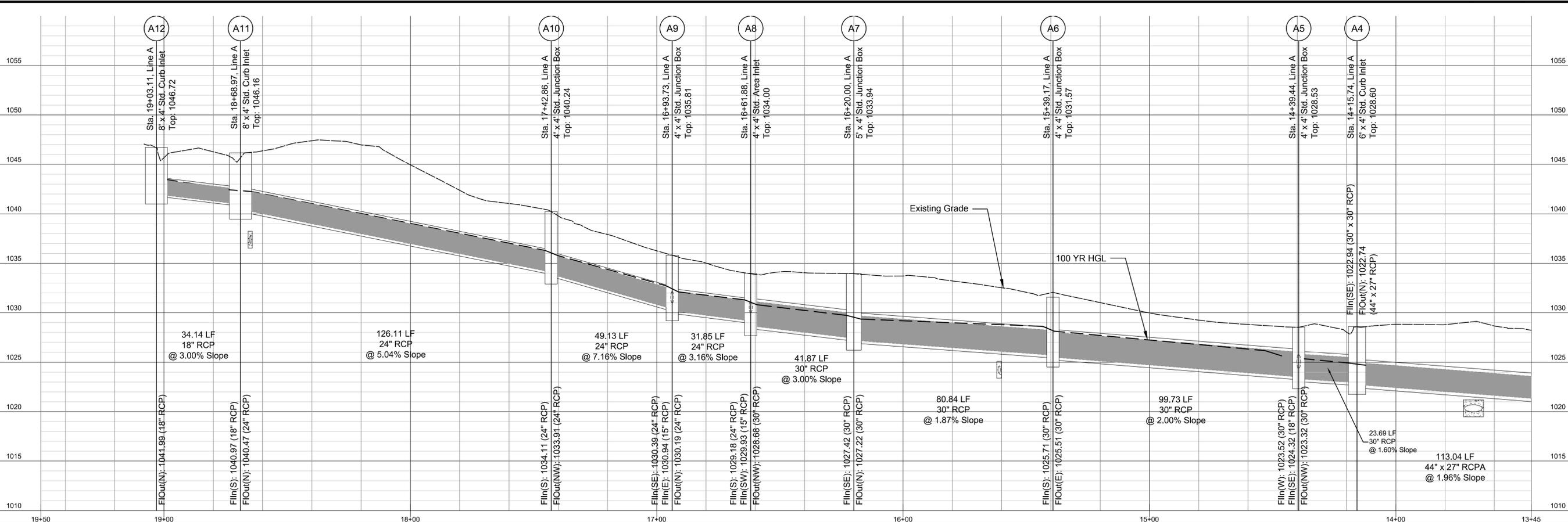
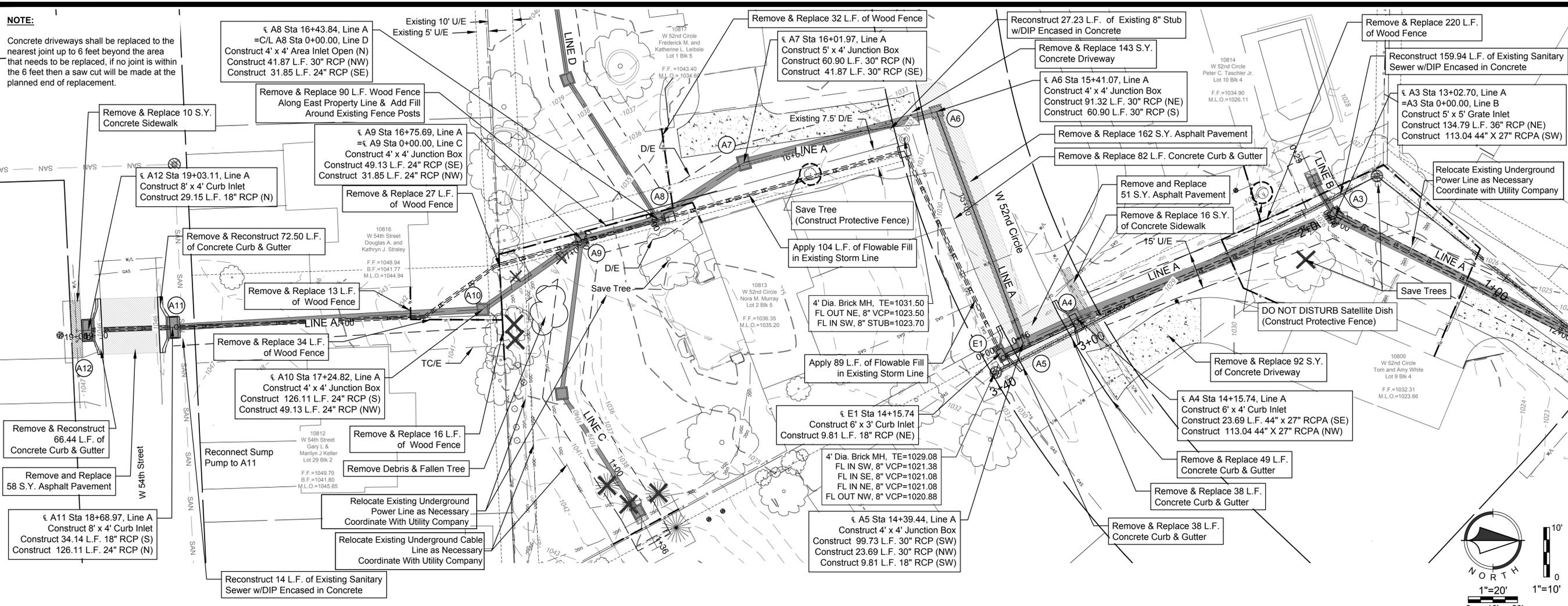
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2.	PJC	CR	4/25/16	REVISED PRELIMINARY PLAN	
1.	AG	CR	3/4/16	PRELIMINARY PLAN	
	NO.	BY	CD <td>DATE</td> <td>REVISION</td>	DATE	REVISION

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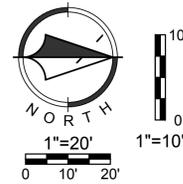
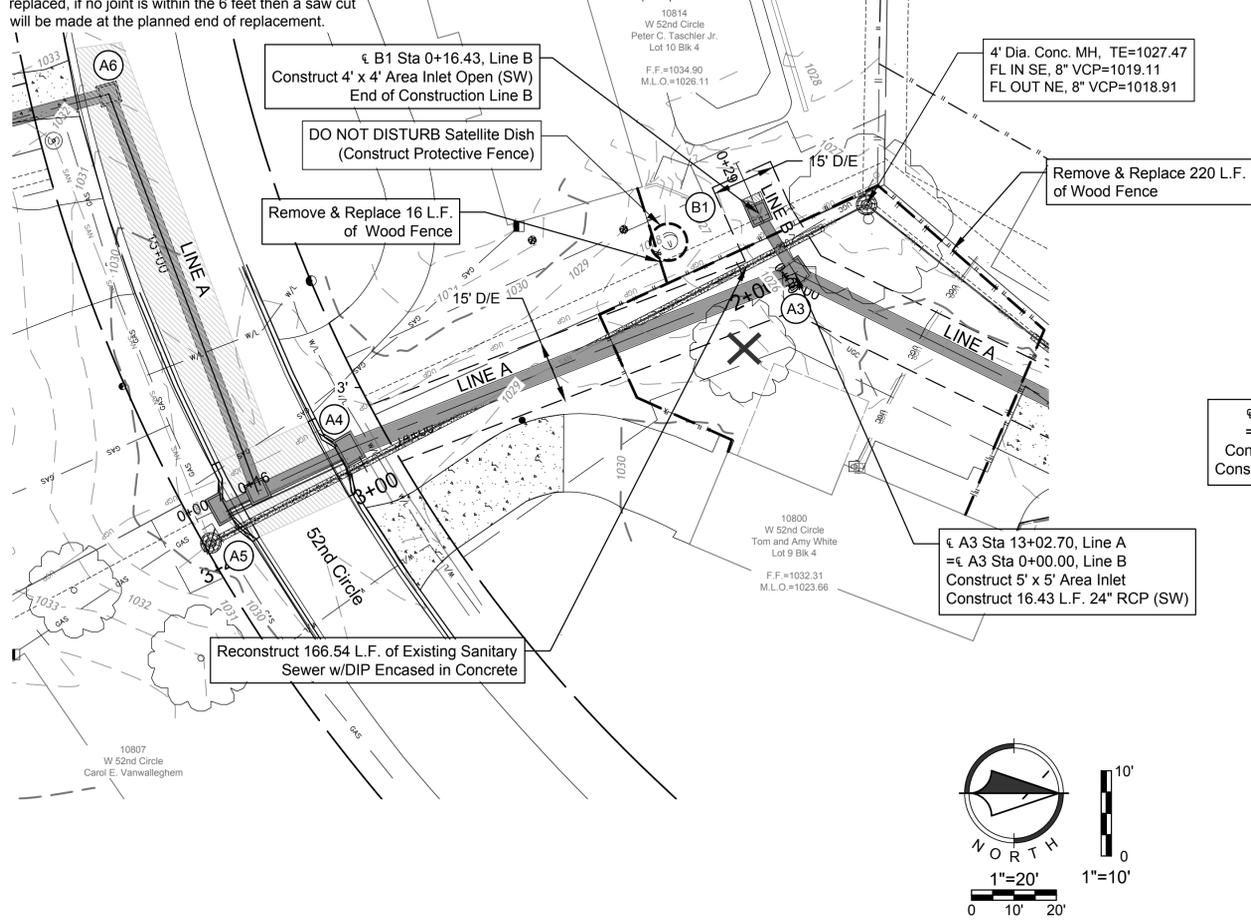
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1.	AG	CRT	3/4/16	PRELIMINARY PLAN
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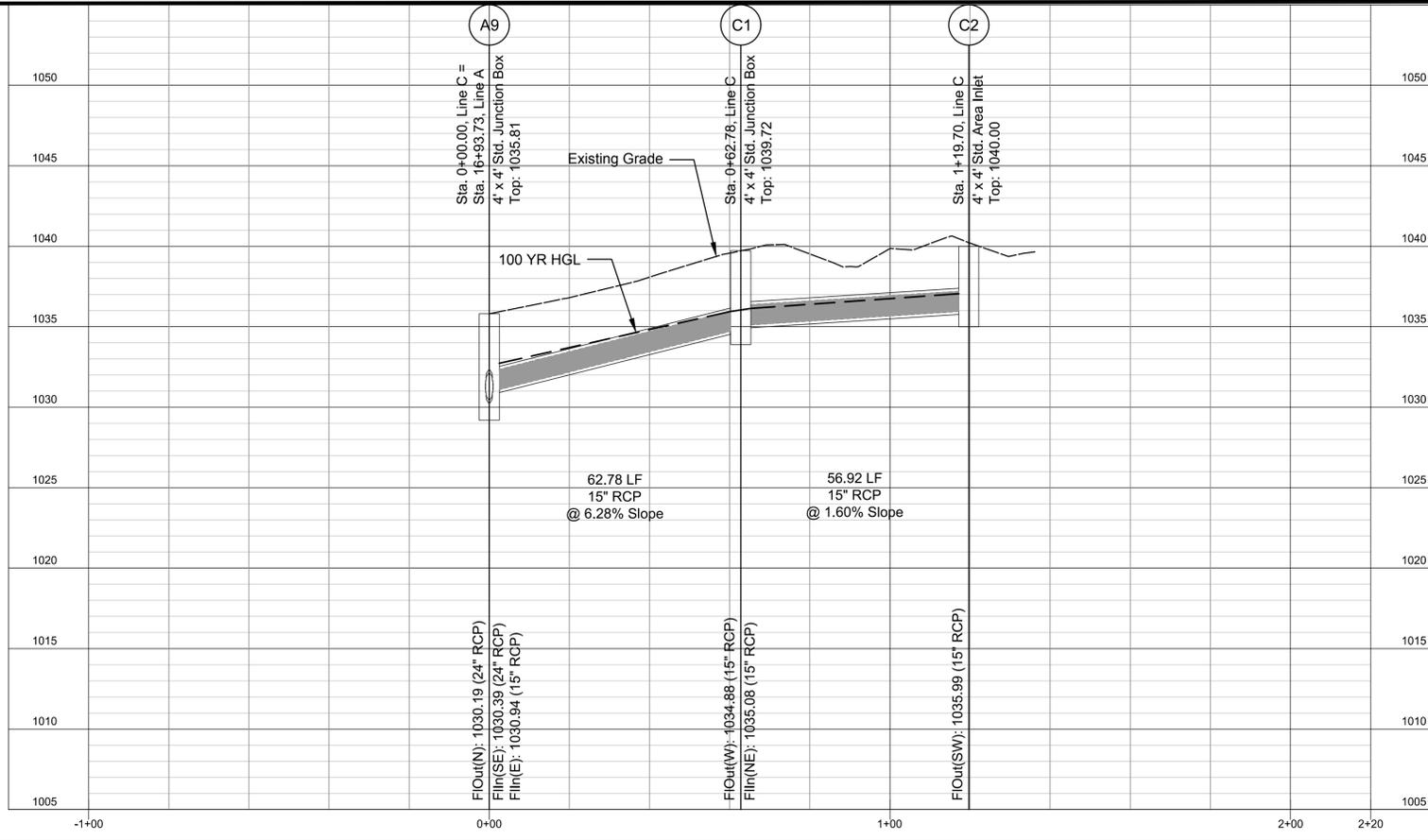
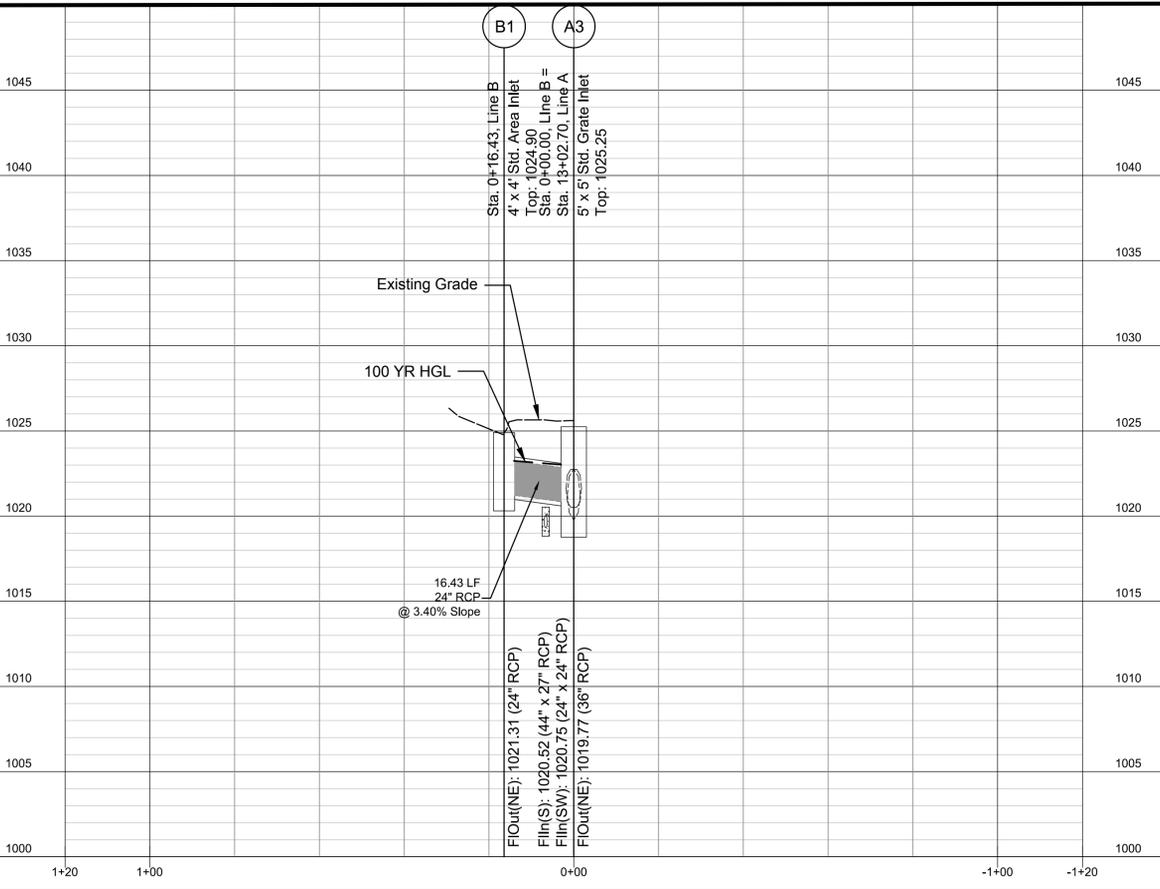
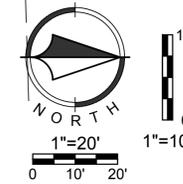
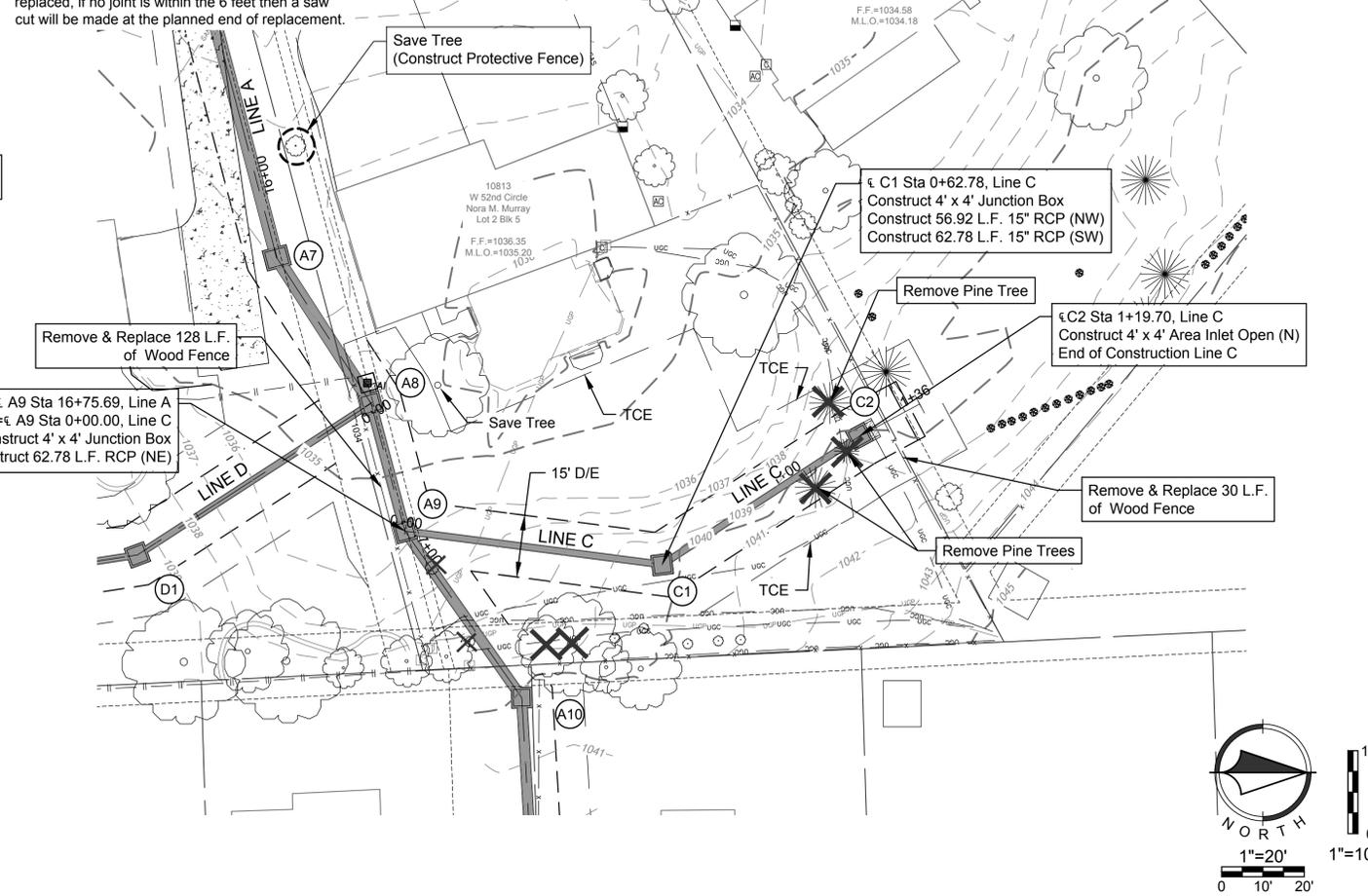
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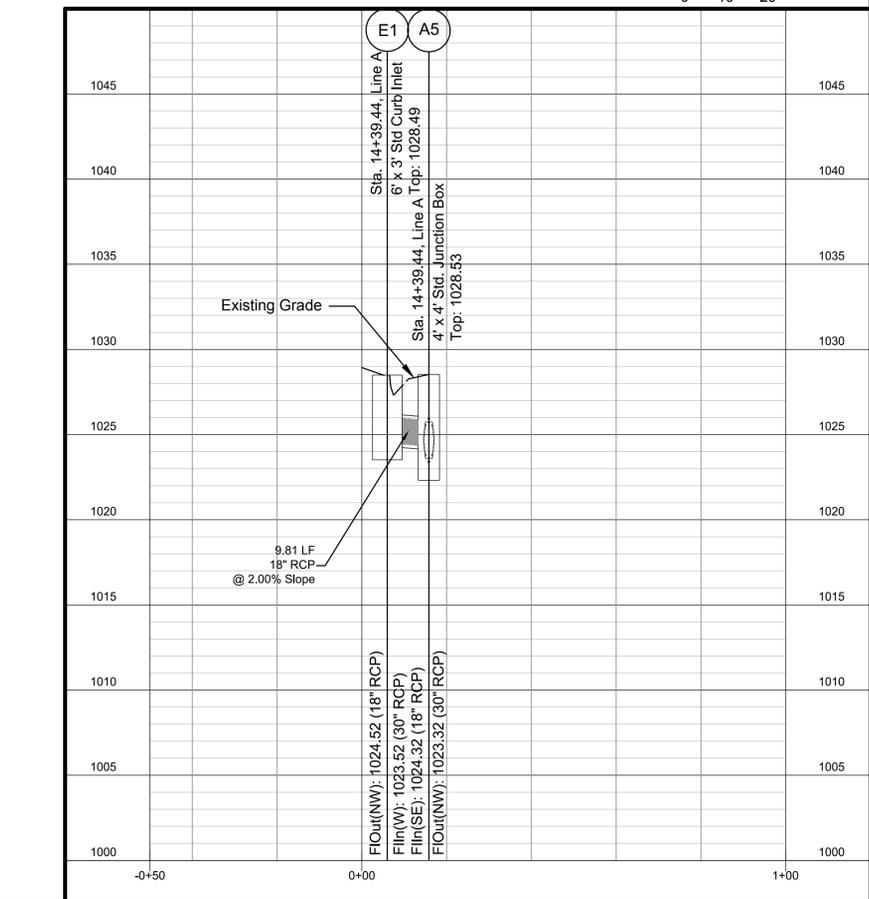
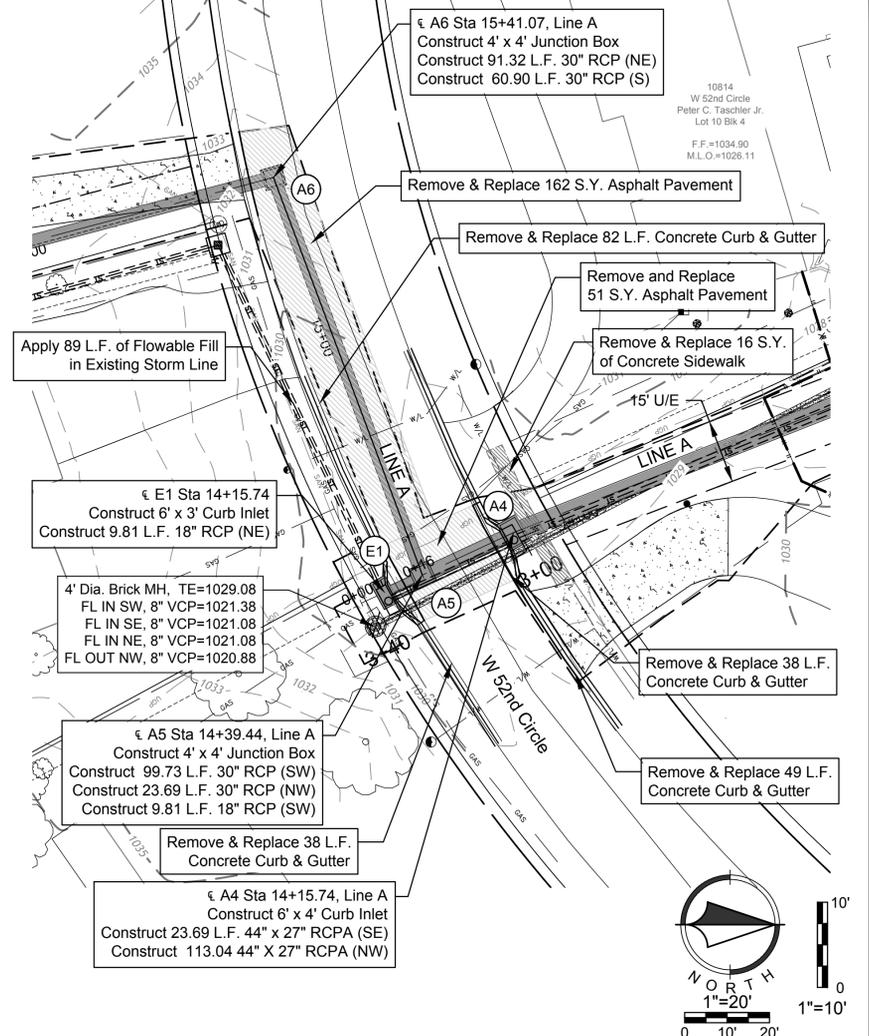
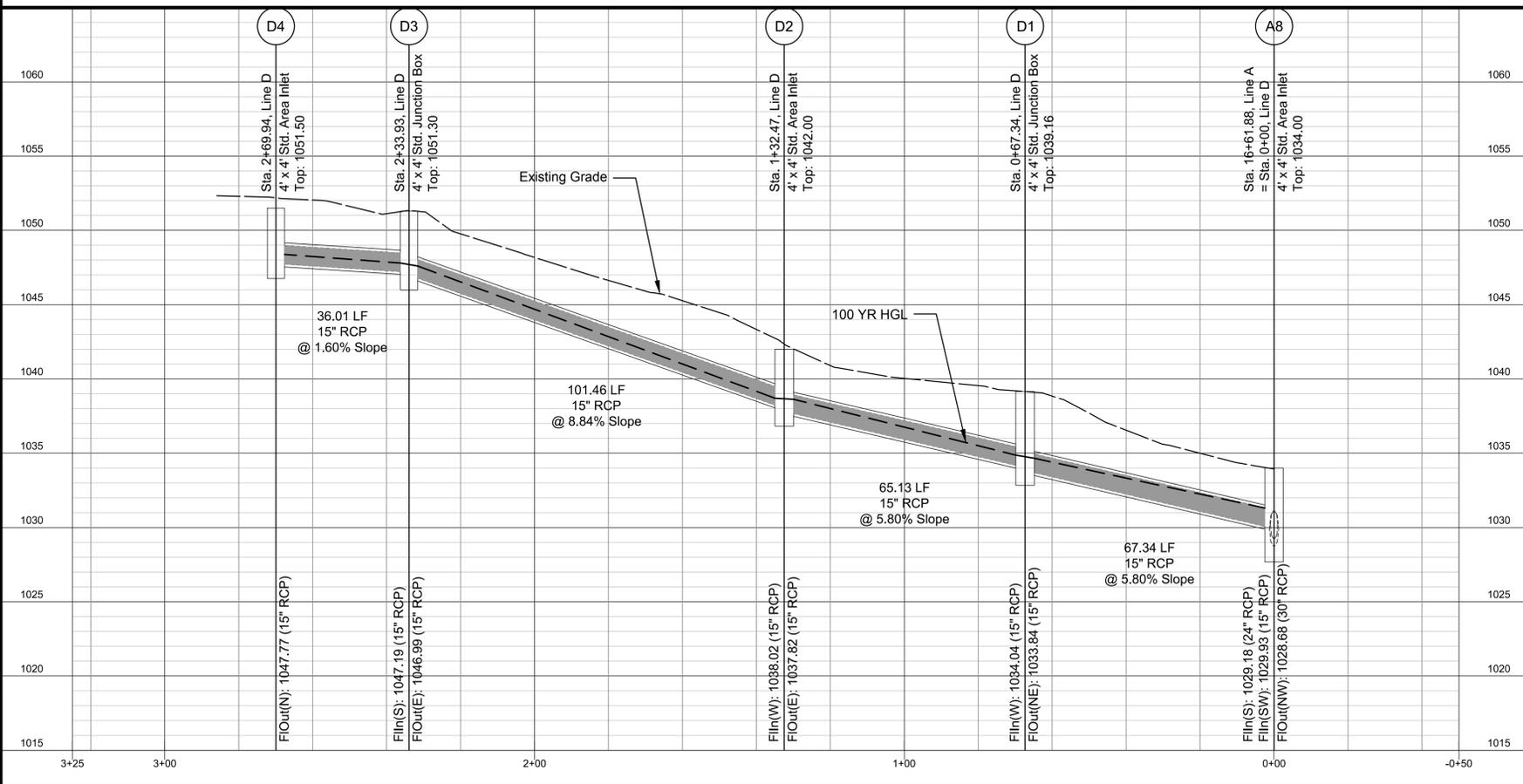
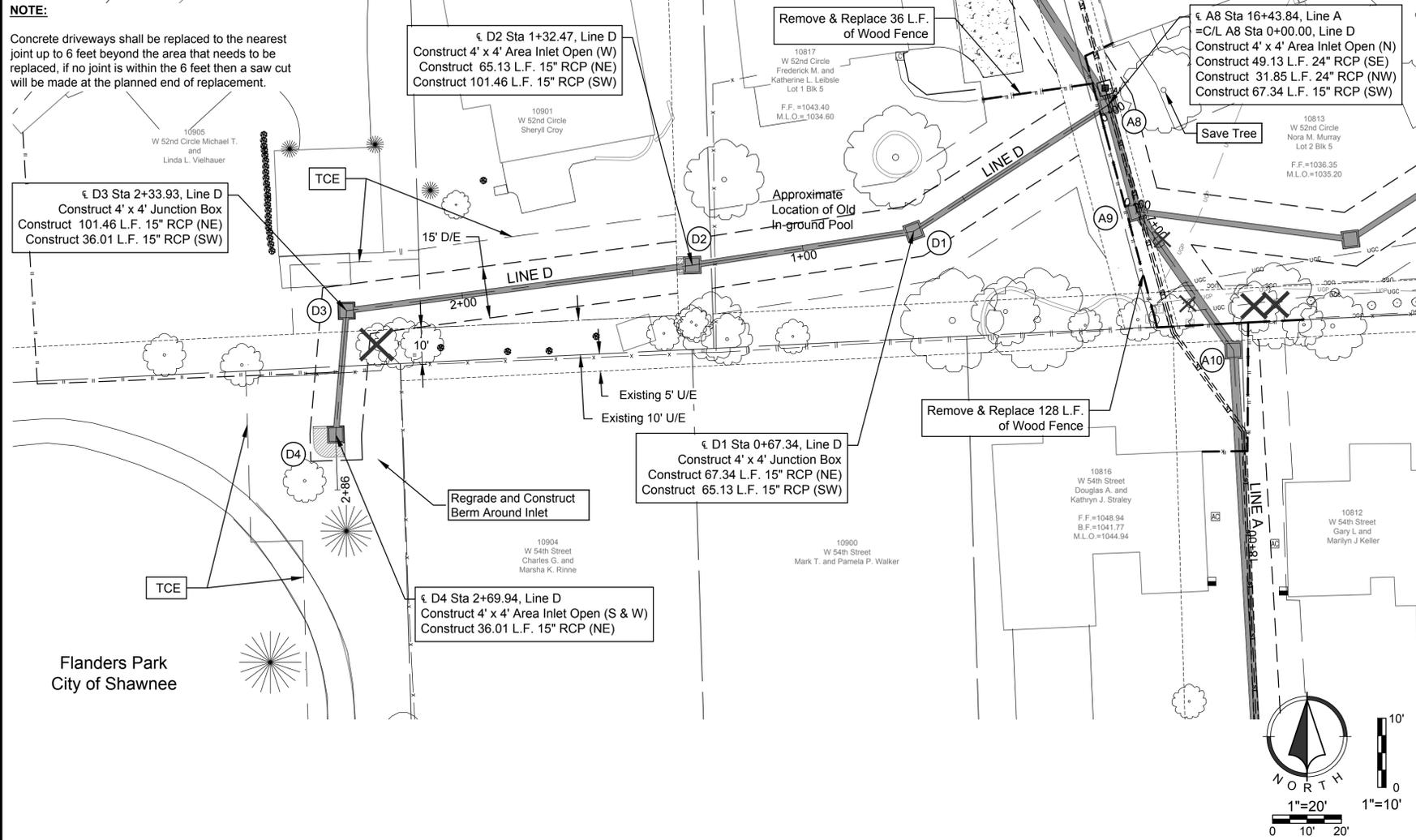


3.	PJC CRT	4/27/16	NEIGHBORHOOD MEETING
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1.	AG CRT	3/4/16	PRELIMINARY PLAN
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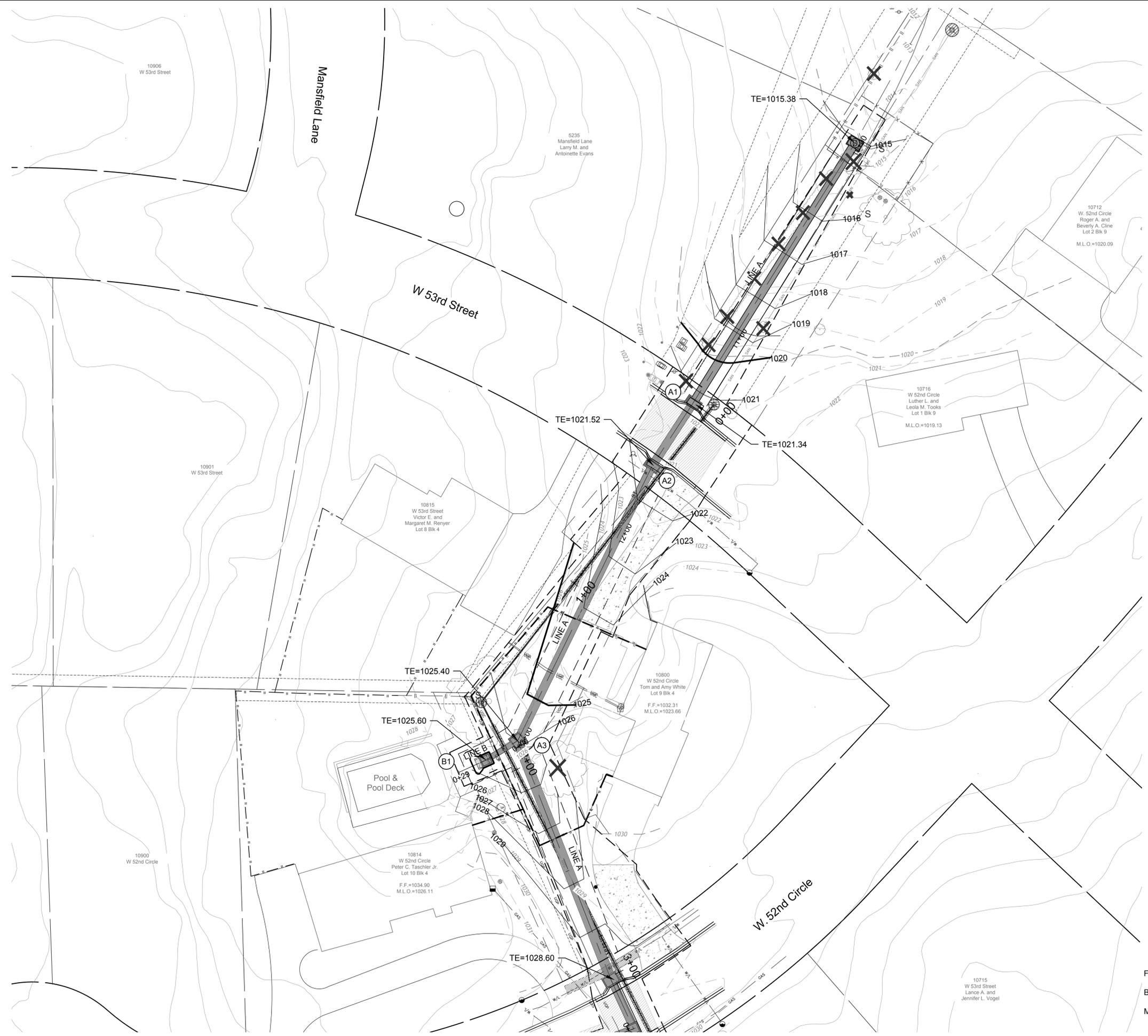
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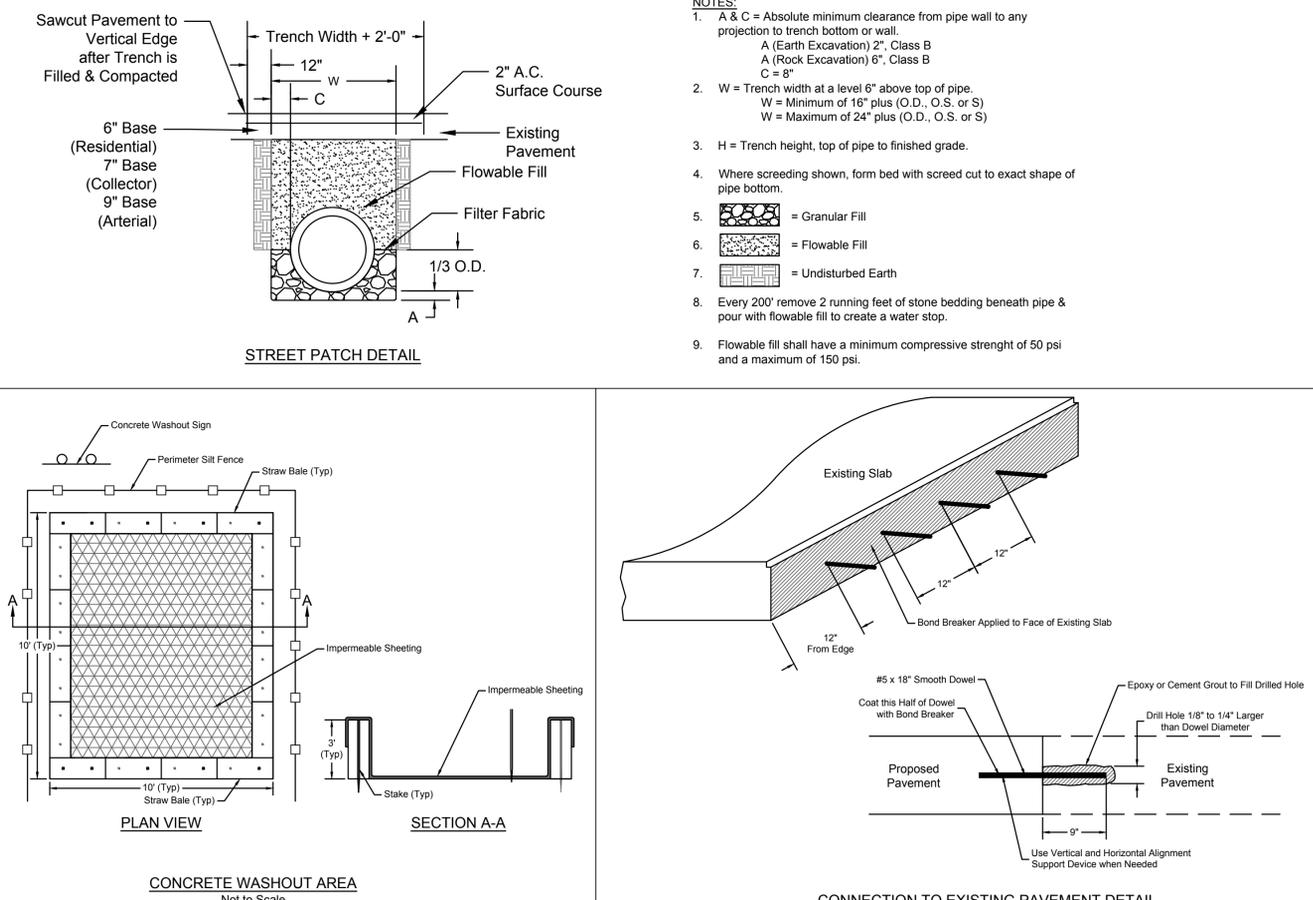
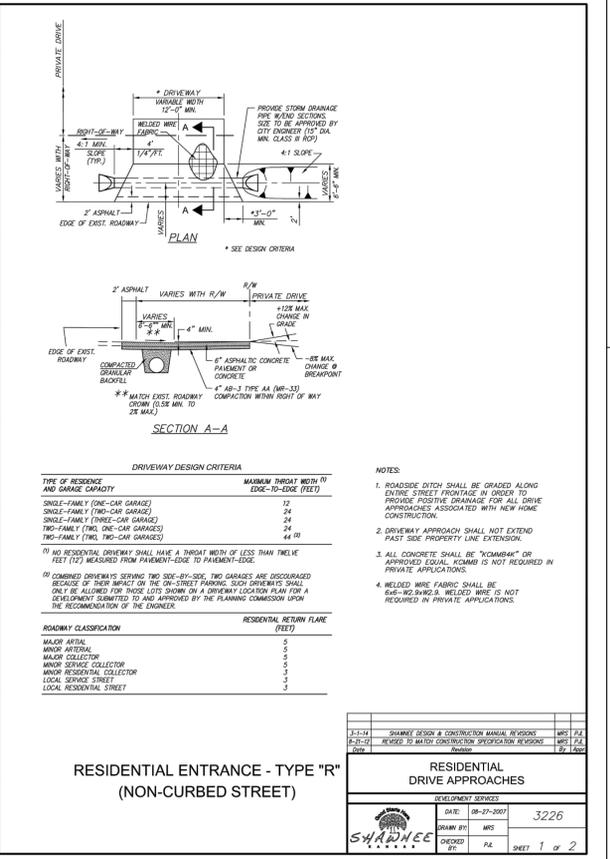
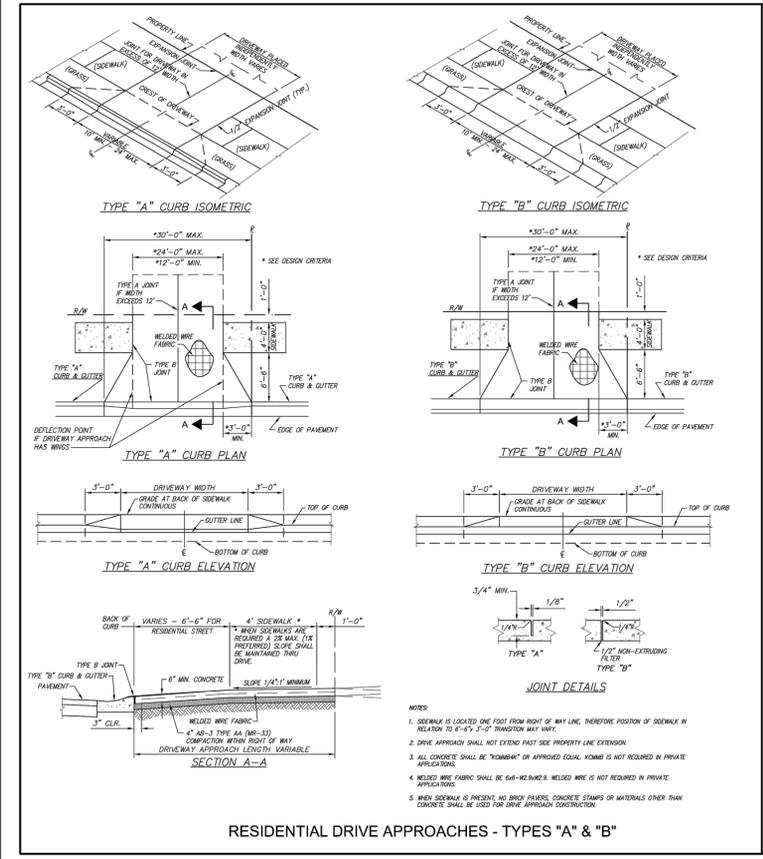
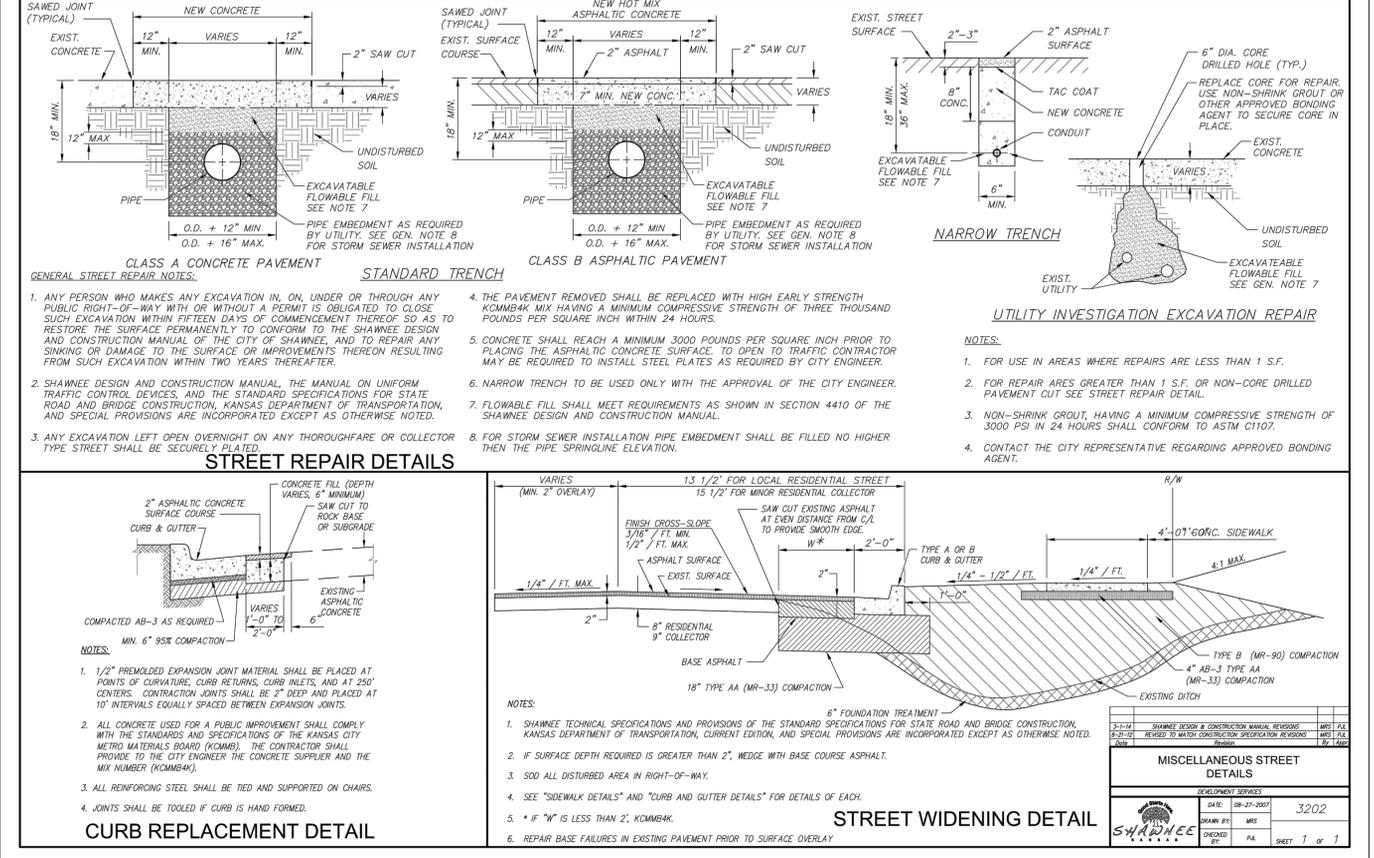
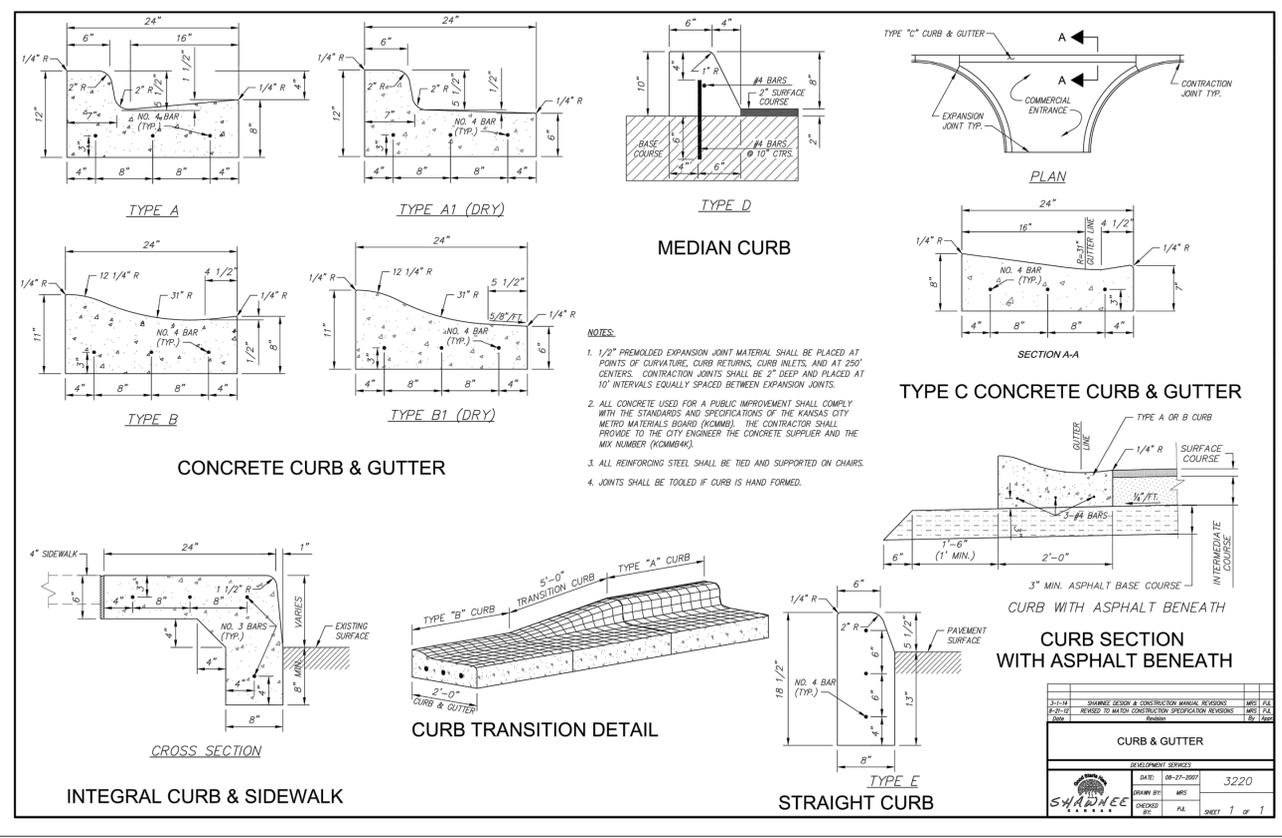
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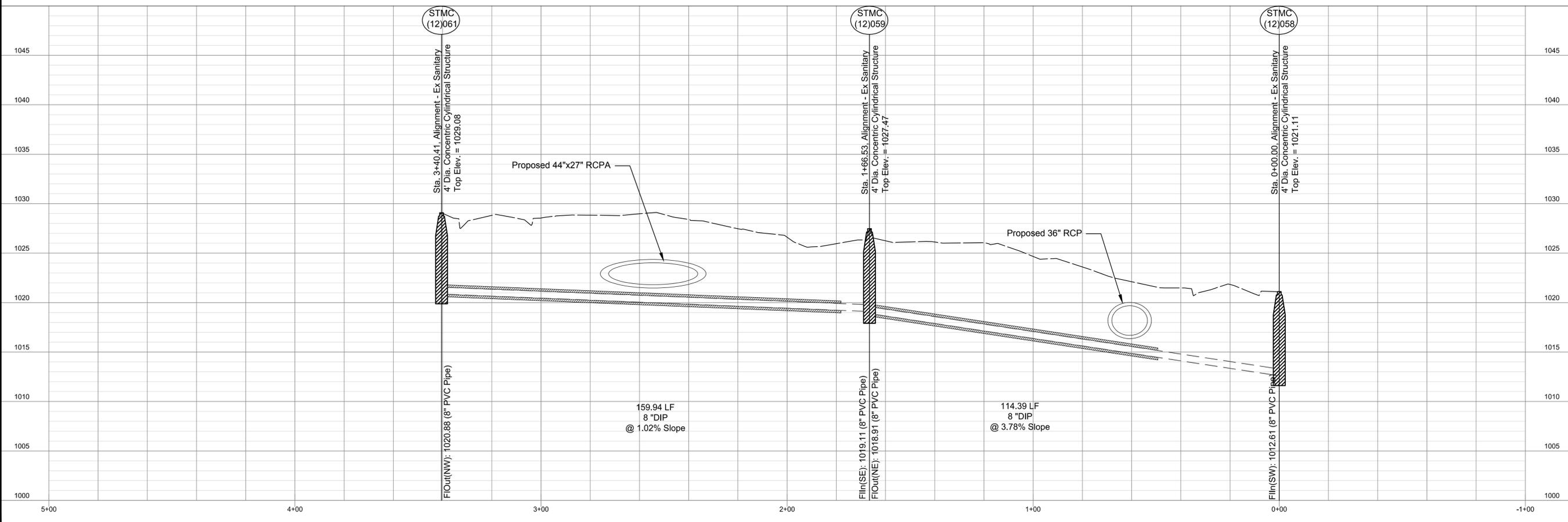
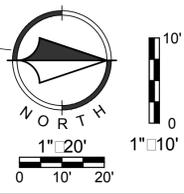
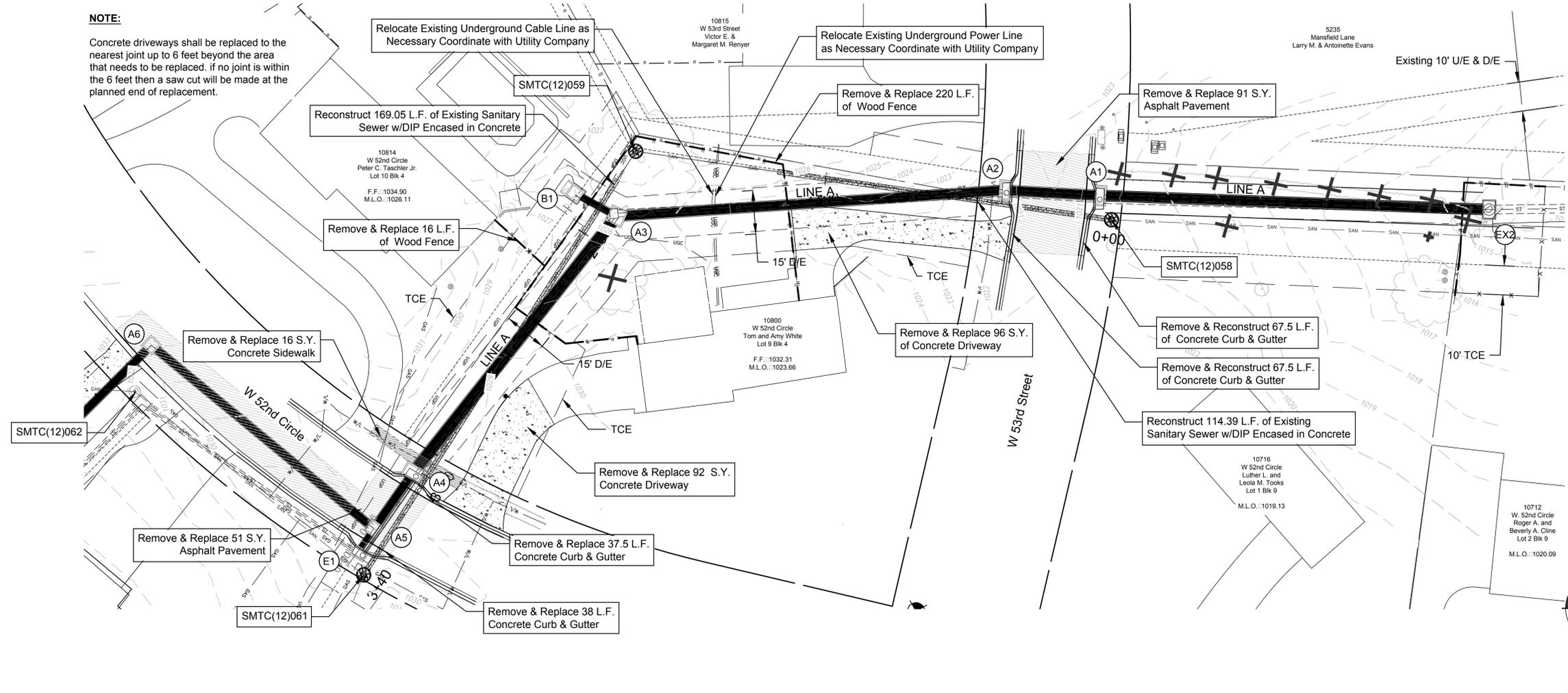
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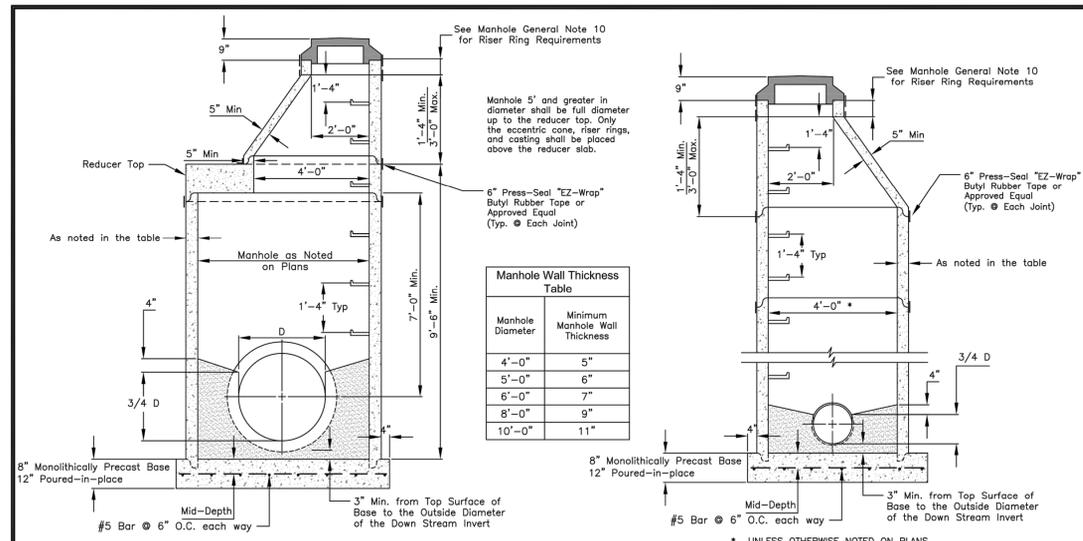


3.	PIU CRT	4/27/16	NEIGHBORHOOD MEETING
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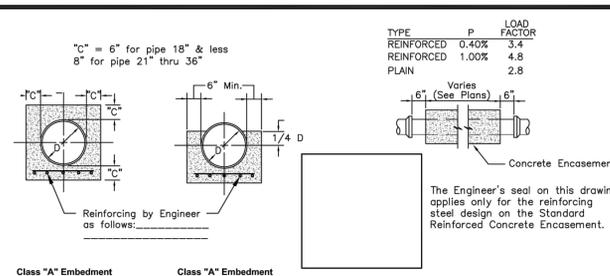
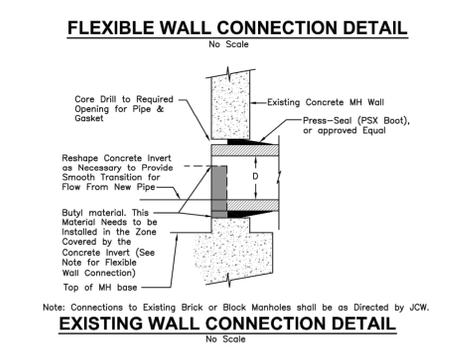
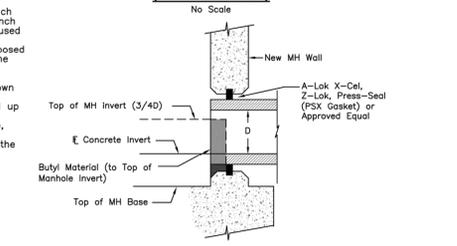
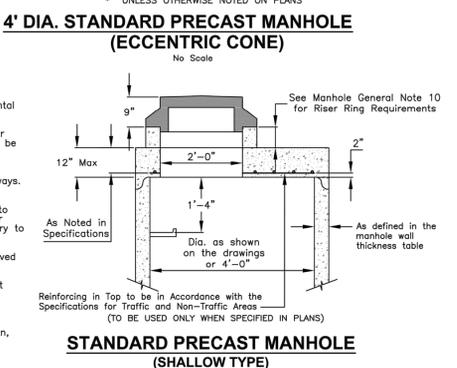
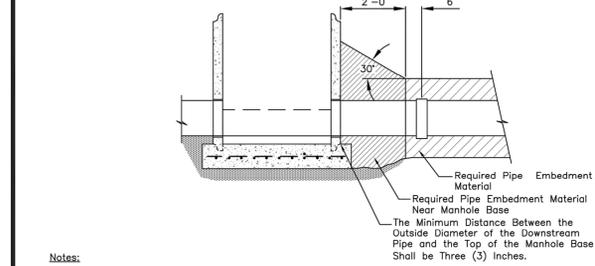
NOTE:
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MANHOLE GENERAL NOTES:

- All manhole rings shall be set in a minimum of two (2) rows of 3/4 to 1 inch pre-formed butyl joint sealer.
- All manhole rings to be placed in pavement or in areas to be subsequently paved shall have "Machined Horizontal Bearing Surfaces" and shall comply with Class #25 as established in ASTM A-48.
- The inside diameter of the manhole shall be 4"-0" for pipe diameters from 8" thru 24" and shall be 5"-0" for pipe diameters from 24" thru 36". In addition, the inside diameter (ID) of manholes up to 20 feet deep shall be 4"-0". ID shall be 5"-0" for depths up to 25 feet and ID shall be 6"-0" for depths exceeding 25 feet unless otherwise noted on the plans.
- All manhole bases (pre-cast or poured-in-place) shall have No. 5 reinforcing bars placed on 6" centers both ways.
- All standard manhole rings and covers to be Deeter 1315-jcs, Neenah NF-15360009/B (frame) and NF-1536010/B (cover), or approved equal. All manhole rings and covers shown in plans to be "bolt-down" to be Day & Bailey Manufacturing Co. No. 20140R, Neenah R-1915-F2 or approved equal. An extra payment for furnishing "bolt-down" ring and cover as shown in plans will not be made, but shall be considered as subsidiary to the item, "Standard Manhole".
- Standard manhole steps to be steel core, plastic coated steps (M.A. Ind., Inc. No. PS1-PF, PS2-PF, or approved equal).
- Maximum grade adjustment allowable is 8". Minimum allowable thickness for precast concrete grade adjustment ring is 4".
- Reinforcement in all precast sections shall equal or exceed A.S.T.M. C-478 specifications.
- Butyl material to be used at all precast sections joints. O-Rings may be used for joints below the cone section, but the cone section itself shall not have O-ring joints.
- Riser Rings:
 - Manholes in Pavement: The thickness of the recycled rubber riser rings shall not be less than one (1) inch nor greater than four (4) inches. If the required thickness of riser rings exceeds 4 inches, a 4-inch or 6-inch precast concrete riser ring may be installed between the rubber riser ring and the cone. Riser rings may be used up to a maximum of 12 inches. The minimum number of riser rings required to achieve the necessary adjustment shall be used. The rubber riser rings shall be tapered to match the slope of the existing or proposed pavement at the manhole. The joints between the cone, rubber riser rings, and casting shall be sealed with the manufacturer-supplied sealant.
 - Manholes Not in Pavement: All manholes shall be provided with riser ring(s) underneath the casting as shown on Drawings. A minimum of one (1) 4-inch riser ring shall be installed on top of the cone section. If a greater depth of adjustment rings is necessary, a combination of 4-inch and 6-inch riser rings may be used up to a maximum of 12 inches of riser rings. The minimum number of riser rings required to achieve the necessary adjustment shall be used. If precast concrete riser rings are used, the joints between the cone, riser rings, and casting shall be sealed with a double bead of preformed butyl rubber sealant. If recycled rubber riser rings are used, the joints between the cone, rubber riser rings, and casting shall be sealed with the manufacturer-supplied sealant.
 - Brick and mortar adjustments will not be allowed.



NOTE: Contractor shall provide documentation supporting the selected strength class of the pipe based on earth loadings and the chosen pipe bedding.

D	Flexible Rigid			
	A	B	A	B
4'-27"	6"	9"	9"	18"
> 27"	6"	9"	9"	18"

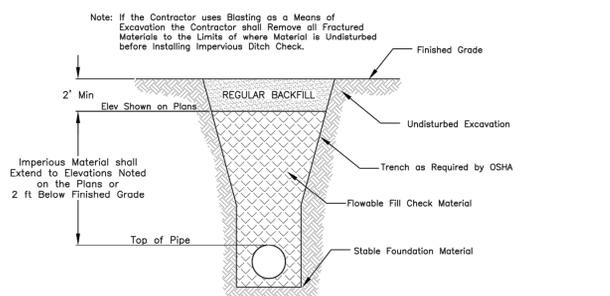
Hand Placed & Hand Tamped Select Earth Backfill

Granular Embedment

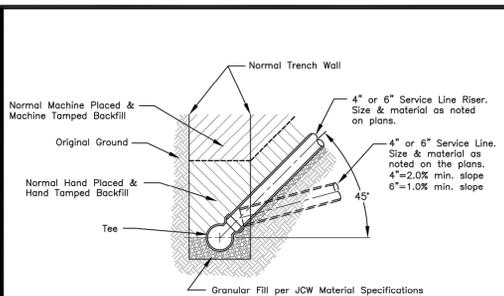
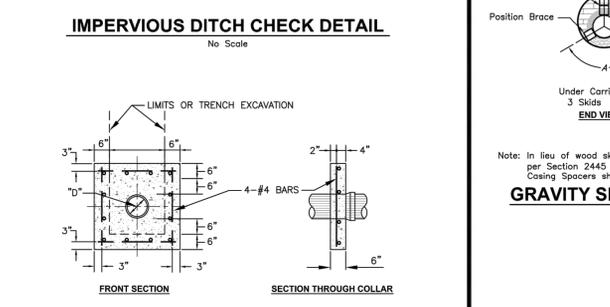
Concrete

D Nominal Pipe Size
A Fill Below Pipe (See Table)
B Side Clearances (See Table)
P Area Transverse Steel Expressed as % of Area of Concrete at Crown

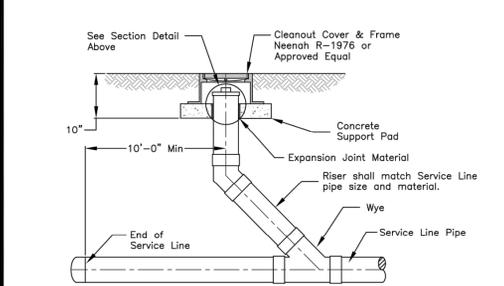
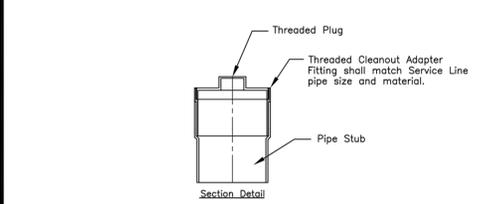
STANDARD EMBEDMENTS
No Scale



- Notes:
- Impervious ditch checks shall be placed where shown on the plans. Length shall be a minimum of 5 LF. Flowable fill shall be used and consist of a Portland cement grout having a minimum 28 day compressive strength of five hundred pounds per square inch (500 psi).
 - Regular backfill (above ditch check) shall be Top Soil.
 - Top of impervious material shall be a minimum of 2'-0" below finished grade.



- Notes:
- Concrete anchors will be required where the service line is installed at a grade of 30" or greater. See Section 2536 of the Specifications and detail on this sheet.
 - No service line shall be installed with a grade greater than 45".



NO.	BY	DATE	REVISION
1.	KWF	7/29/13	UPDATED FLEXIBLE PIPE EMBEDMENT DETAIL TO MATCH JCW SPEC

JCW
Johnson County Wastewater

11815, Sunset Drive Suite 2500
Olathe, KS, 66061
Phone : (913) 715-8500
Fax : (913) 715-8501

Drawn: GBA Date Submitted: 1/18/10 Scale: N.T.S.
Checked: SPL/DWO/GER Date Submitted: 1/18/10 Project #: 0002
Approved: JAM Date Approved: 2/24/10 Sheet: 1 of 1

Title: SANITARY SEWER STANDARD DETAILS
Project: JOHNSON COUNTY WASTEWATER

Renaissance Infrastructure Consulting

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