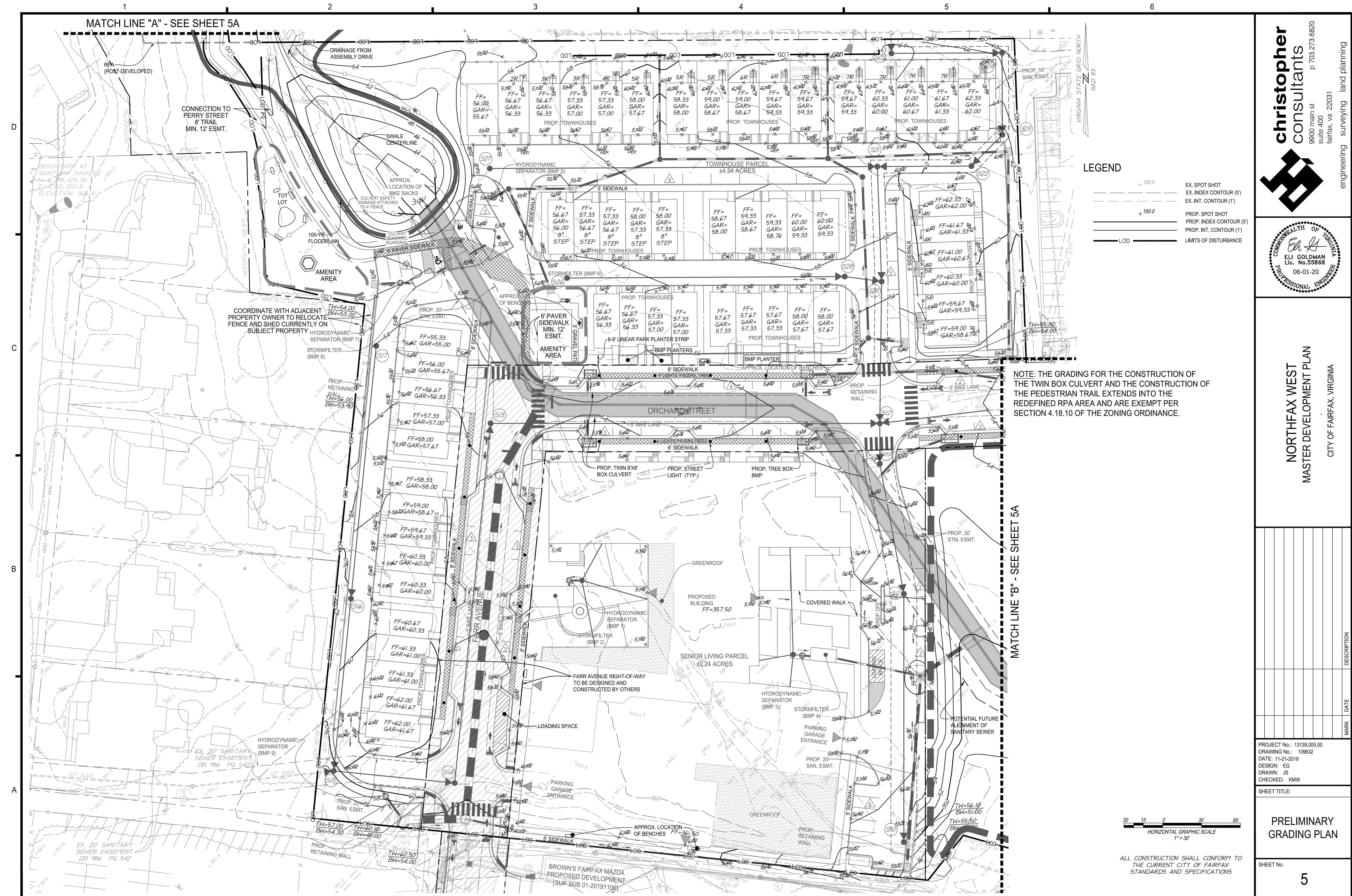
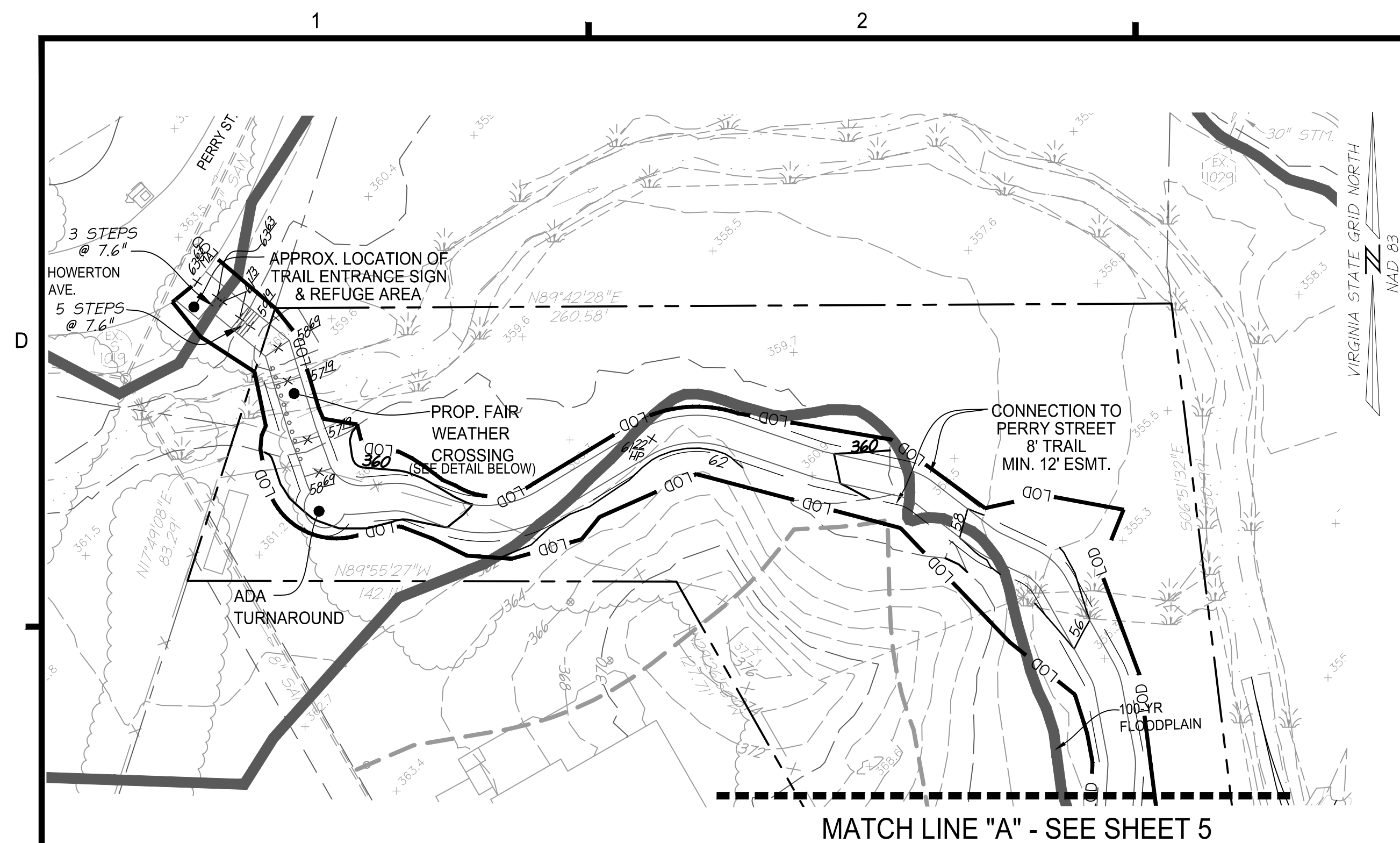


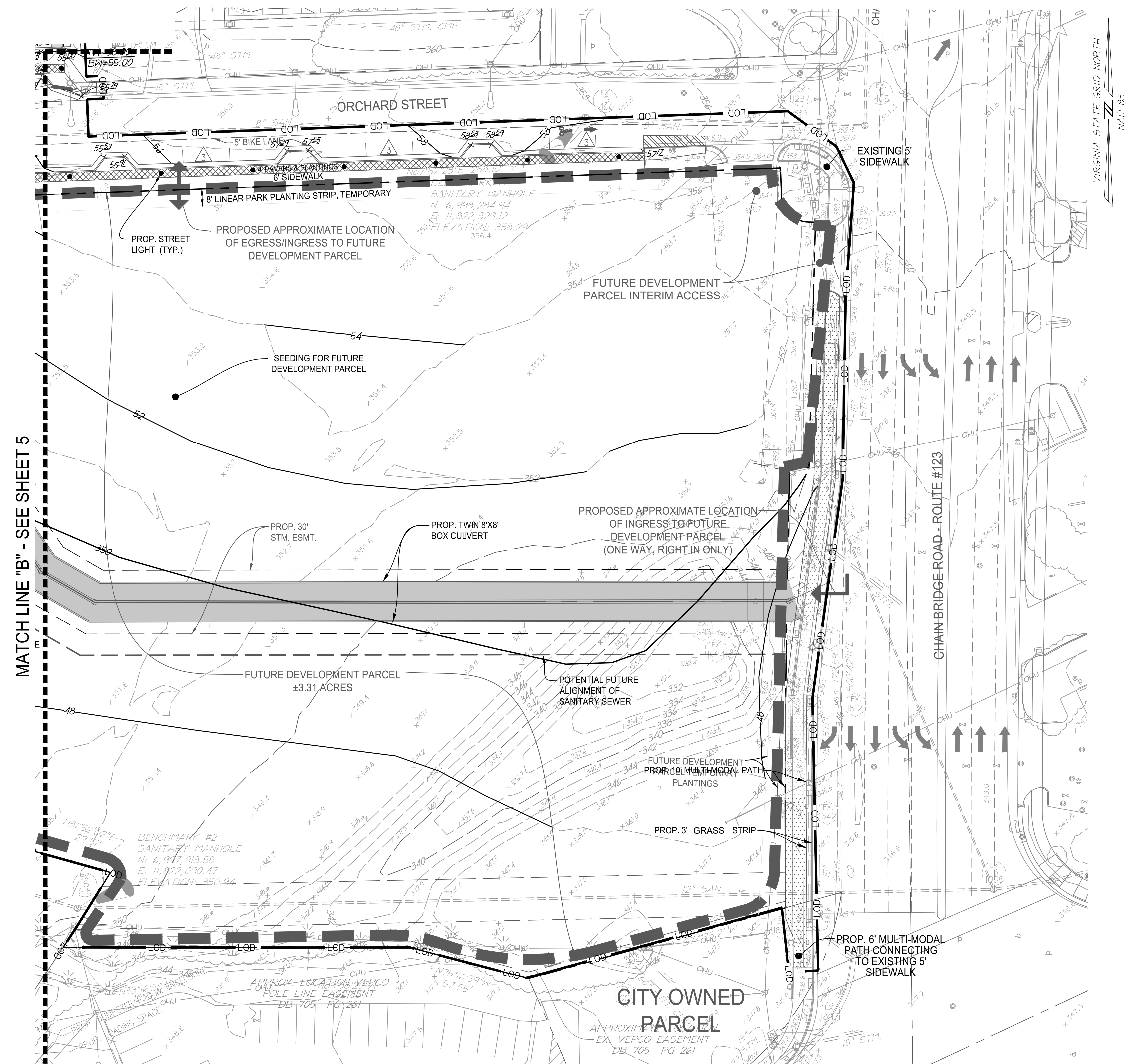
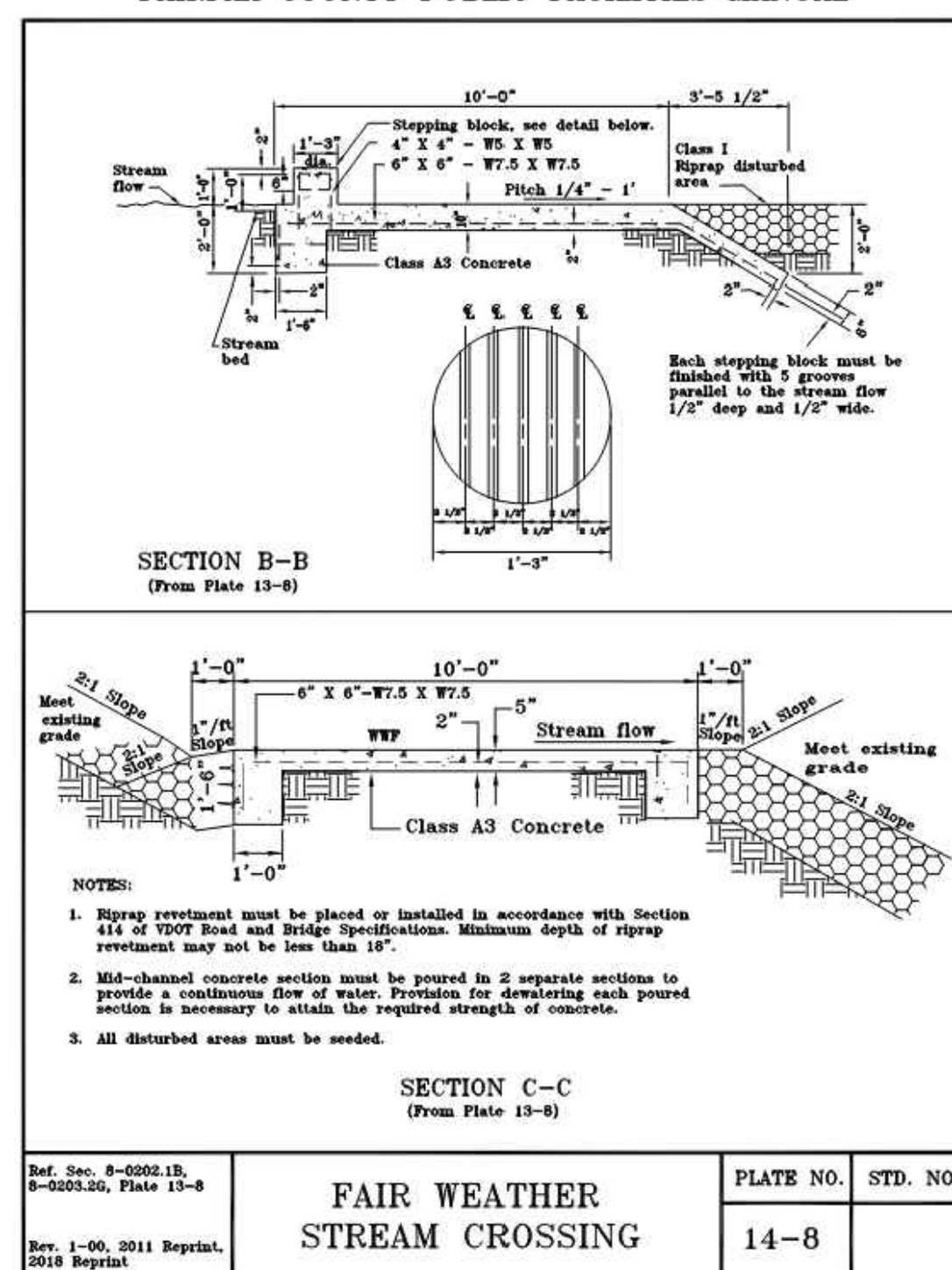
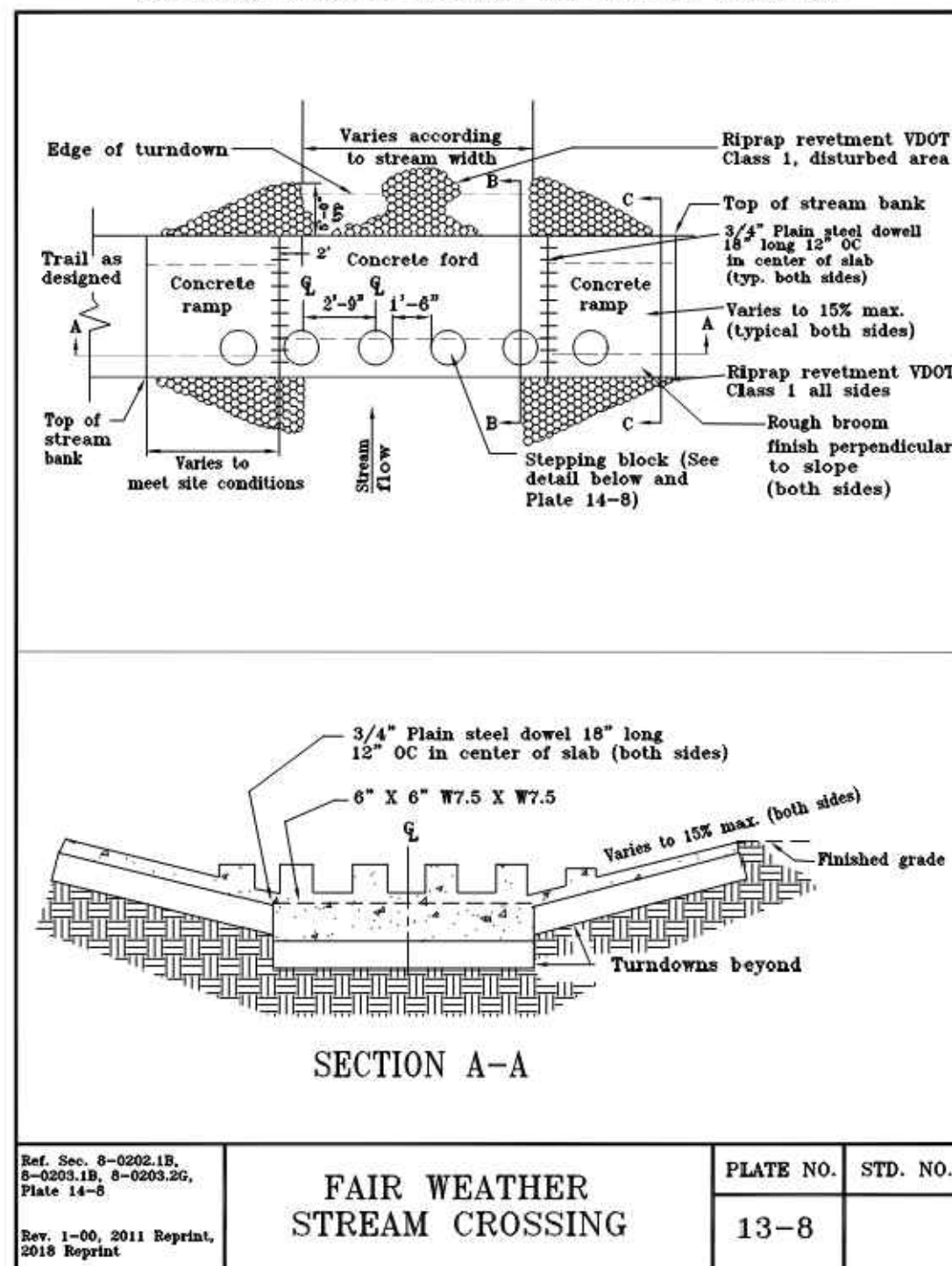
[illegible]



FAIR WEATHER STREAM CROSSING EXAMPLE



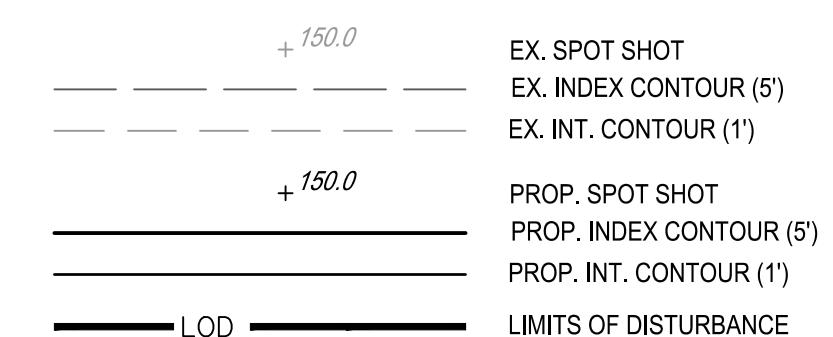
PHOTO CREDIT: RESTONPATHS.COM / CITY OF FAIRFAX



INTERIM GRADING NARRATIVE:
THE GRADING SHOWN ON THIS PLAN IS FINAL GRADING THAT WILL BE SET AT THE COMPLETION OF THE DEVELOPMENT. PENDING THE COMPLETION OF CONSTRUCTION OF BOTH THE BROWN'S MAZDA SITE LOCATED TO THE SOUTH AND THE CITY'S FARR AVENUE PROJECT. IF THE CONSTRUCTION OF EITHER OF THOSE PROJECTS ARE DELAYED, THE GRADING FOR THIS SITE WILL BE IMPACTED AND THEN REQUIRE INTERIM GRADING. AT THE TIME OF FINAL SITE PLAN FOR THE TOWNHOUSE PARCEL OR SENIOR LIVING PARCEL, AND FOR THE PUBLIC IMPROVEMENT PLAN (STORM CULVERT, UTILITIES AND ORCHARD STREET), THE GRADING MAY BE MODIFIED BASED ON FIELD CONDITIONS AND STILL MEET THE OVERALL INTENT OF THE GRADING THAT IS GENERALLY SHOWN ON THIS MAP.

NOTE: THE GRADING FOR THE CONSTRUCTION OF THE TWIN BOX CULVERT AND THE CONSTRUCTION OF THE PEDESTRIAN TRAIL EXTENDS INTO THE REDEFINED RPA AREA AND ARE EXEMPT PER SECTION 4.18.10 OF THE ZONING ORDINANCE.

LEGEND



ALL CONSTRUCTION SHALL CONFORM TO
THE CURRENT CITY OF FAIRFAX
STANDARDS AND SPECIFICATIONS

[illegible]

PROJECT No.: 13139.005.00
DRAWING No.: 109632
DATE: 11-21-2019
DESIGN: EG
DRAWN: JS
CHECKED: KMW

SHEET TITLE:

PRELIMINARY GRADING PLAN

SHEET No.

5A

D

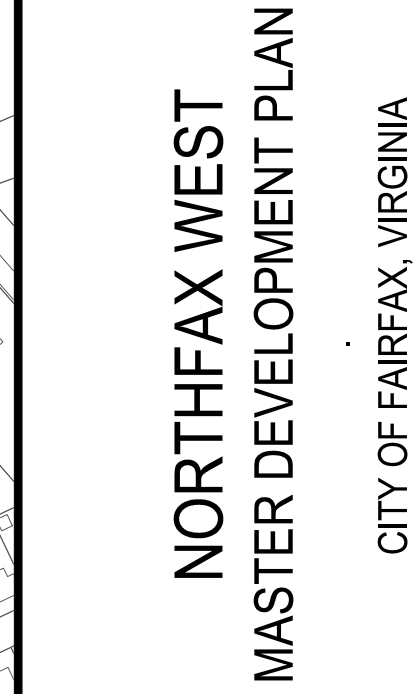
C

B

A

TOTAL PEAK FLOW = 449,464 GPD = 0.45 MGD

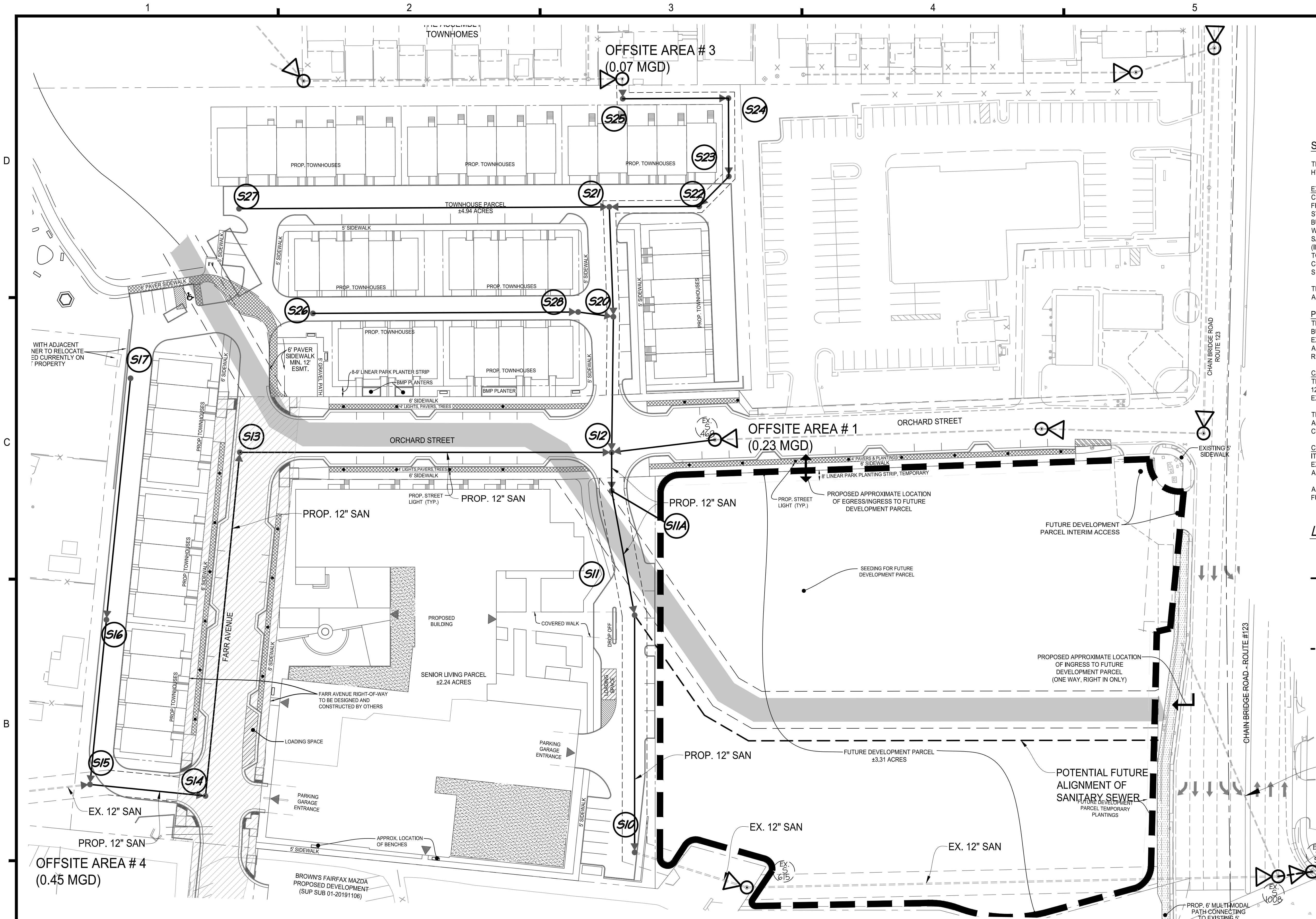
SCALE: 1"=300'



SHEET TITLE:

SHEET No.

8



SANITARY SEWER ANALYSIS

THE PURPOSE OF THIS ANALYSIS IS TO DEMONSTRATE THE CAPACITY AND HYDRAULIC ADEQUACY OF THE DOWN STREAM SANITARY SEWER MAIN.

EXISTING CONDITIONS:
CURRENTLY, THE EXISTING SITE CONSISTS OF TWO (2) 1-STORY BRICK & FRAME BUILDINGS, ONE (1) 4-STORY OFFICE BUILDING, AND ONE GASOLINE STATION WITH CONVENIENCE STORE. THE TWO (2) 1-STORY BRICK & FRAME BUILDINGS CONNECT TO EXISTING SANITARY LINE AT ORCHARD STREET. WHILE THE OFFICE BUILDING AND GASOLINE STORE CONNECT TO EXISTING SANITARY MAIN AT CHAIN BRIDGE ROAD AND ENTER INTO ORCHARD STREET (INTO THE PROJECT SITE). THE EXISTING SANITARY SEWER CONTINUE TOWARDS THE SOUTH INTO EXISTING MANHOLE S615 AND RUNS ACROSS THE CHAIN BRIDGE ROAD TO A 12-INCH SEWER MAIN INTO EXISTING MANHOLE S1008.

THE UPSTREAM FOR THIS SEWER-SHED IS SHOWN ON SHEET 8, DESIGNATED AS ESTIMATED FLOW #1, #3 AND #4.

PROPOSED CONDITIONS:
THE ON-SITE LATERALS WILL BE DEMOLISHED TO MAKE ROOM FOR THE NEW BUILDING. NEW LATERALS AND SANITARY MAIN WILL BE CONSTRUCTED. EXISTING SANITARY MAIN FROM THE WEST WILL BE REROUTED TO EX. S469. ALSO THE EXISTING SANITARY LINE FROM THE NORTH SIDE WILL BE REROUTED TO CONNECT TO THE PROPOSED MANHOLE S22.

CAPACITY AND HYDRAULIC ANALYSIS:
THE SANITARY SEWER WAS ANALYZED FROM THE ON-SITE 10-INCH AND 12-INCH SEWER TO EXISTING MANHOLE S469 AND THEN TO THE OUTFALL TO EXISTING MANHOLE S-S1.

THE VOLUME OF FLOW USED IN THIS ANALYSIS HAS BEEN COMPUTED IN ACCORDANCE WITH STATE CODE 9VAC25-790-460 AND 9VAC25-790-310. SEE COMPUTATIONS ON THIS SHEET.

CONCLUSION:
IT IS OUR CONCLUSION THAT THE PROPOSED ON-SITE 12-INCH SEWER AND EXISTING DOWNSTREAM 12-INCH SEWER HAS CAPACITY AND HYDRAULIC ADEQUACY WITH THE ADDED REDEVELOPMENT FLOWS.

A SEPARATE SANITARY SEWER ANALYSIS WILL BE COMPLETED FOR THE FUTURE DEVELOPMENT PARCEL ONCE THE PROGRAM IS KNOWN.

LEGEND

- : PROPOSED SANITARY MANHOLE AND FLOW DIRECTION
- : PROPOSED SANITARY SEWER
- : PROPOSED SANITARY STRUCTURE NUMBER
- : EXISTING SANITARY MANHOLE AND FLOW DIRECTION
- : EX. SANITARY SEWER
- : EX. SANITARY STRUCTURE NUMBER

CONTRIBUTING SEWAGE FLOW ESTIMATE:

Discharge Facility	No. of Units	No. of People	No. of Dwellings	Average Flow for Dwellings (100 gpd/person)	No. of Beds	Average Flow per Bed (200 gpd/bed)	Ultimate Floor Space	Average Flow per 1000 sf (250 gpd/1,000sf)	Total Incremental Flow (gpd)	Total Cumulative Flow (gpd)	Sanitary From	Sanitary To
Townhouses	15	5	75	7500				7,500	7,500		S15	S14
Townhouses	41	5	205	20500				20,500	28,000		S12	S11
Senior Living					200	40,000		40,200	68,200		S11	S10
Future Development							114,000	28500	114,000	182,200	EX.S615	EX.S1008

SANITARY COMPUTATION:

TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Assumptions	Inc (MGD)	Peak Flow Factor	Design Inc (MGD)
S15	349.36	348.79	110.02	0.52	12	PVC	0.013	3.27	2.11	0.70	0.450	3.1	PEAK FLOW FROM OFFSITE AREA #4 = 0.45 MGD			0.450
S14	349.26	348.32	94.00	1.00	12	PVC	0.013	3.20	2.07	0.73	0.473	3.1		0.006	4.0	0.023
S13	348.22	346.72	279.62	0.54	12	PVC	0.013	3.20	2.07	0.73	0.473	3.1				0.000
S12	346.62	345.12	300.39	0.50	12	PVC	0.013	2.71	1.75	0.73	0.473	3.1				0.000
S11	342.60	342.35	31.20	0.80	12	PVC	0.013	3.43	2.22	0.93	0.604	4.1	PEAK FLOW FROM OFFSITE AREA #3 = 0.07 MGD	0.015	4.0	0.132
S11	342.25	341.50	102.40	0.73	12	PVC	0.013	3.27	2.11	0.93	0.604	3.8				0.000
S10	341.40	339.69	192.60	0.89	12	PVC	0.011	3.61	2.33	1.48	0.955	4.6	PEAK FLOW FROM OFFSITE AREA #1 = 0.23 MGD	0.030	4.0	0.351
EX. S615	339.59	337.15	114.70	2.13	12	RCP	0.015	4.85	3.13	1.48	0.955	5.0				0.000
EX. S1008	336.89	332.59	430.00	1.00	12	RCP	0.015	3.32	2.15	2.01	1.297	4.2		0.086	4.0	0.342

ing sewage flow estimates on sheet 8.
shown are calculated per a partial flow analysis.
> 4.0 was used on all flows.
rt of EX. S1008 is an assumed elevation and will need to be surveyed.

**NORTHFAX WEST
MASTER DEVELOPMENT PLAN**

CITY OF FAIRFAX, VIRGINIA

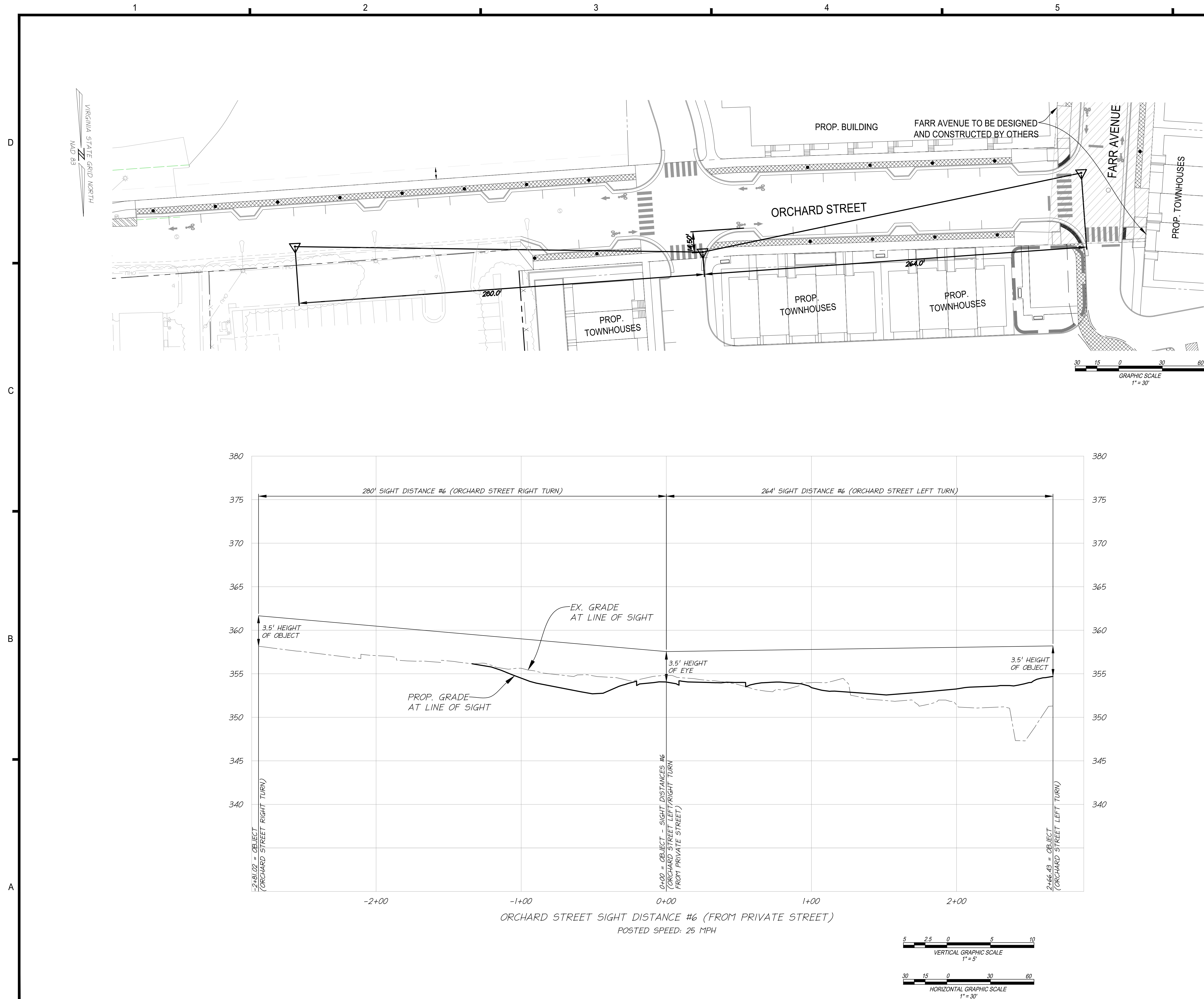
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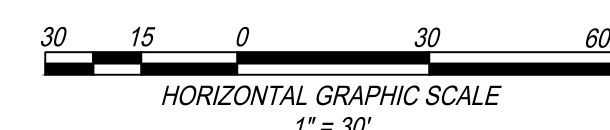
SHEET TITLE:

SHEET No.

3

SCALE: SEE DWGS.

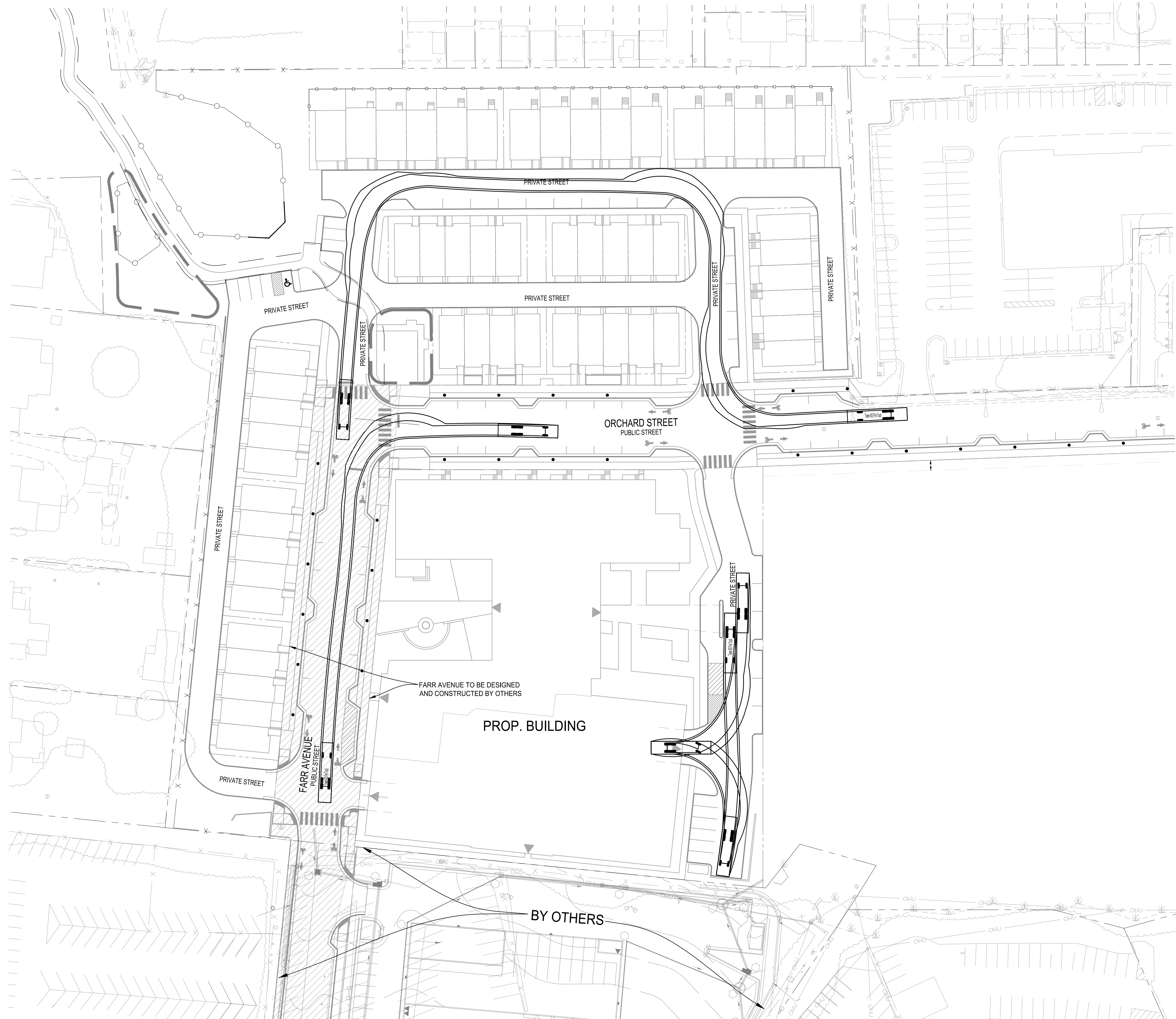




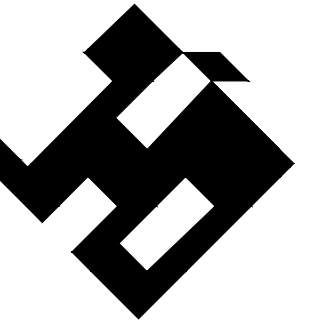


Copy of Tower 403 Fire Truck

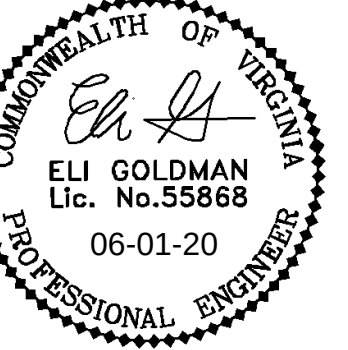
Overall Length	47.375ft
Overall Width	10.083ft
Overall Body Height	12.125ft
Min Body Ground Clearance	1.512ft
Track Width	7.667ft
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	54.980ft



VIRGINIA STATE GRID NORTH
NAD 83



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suite 400
fairfax, va 22031
p 703.273.6820
surveying land planning



**NORTHFAX WEST
MASTER DEVELOPMENT PLAN**

CITY OF FAIRFAX, VIRGINIA

[illegible]

PROJECT No.: 13139.005.00
DRAWING No.: 109632
DATE: 11-21-2019
DESIGN: EG
DRAWN: JS
CHECKED: KMW

SHEET TITLE:

TURNING MOVEMENTS

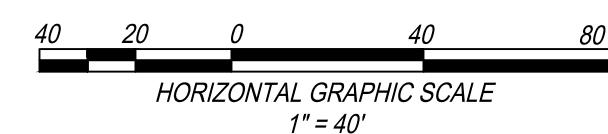
SHEET No.

5

SCALE: 1"=40'

FIRE TRUCK TURNING MOVEMENTS

SCALE: 1"=40'



ALL CONSTRUCTION SHALL CONFORM TO
THE CURRENT FAIRFAX CITY AND VIRGINIA
DEPARTMENT OF TRANSPORTATION
STANDARDS AND SPECIFICATIONS

C

B

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