

**C4.20**

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WET UTILITY NARRATIVE:

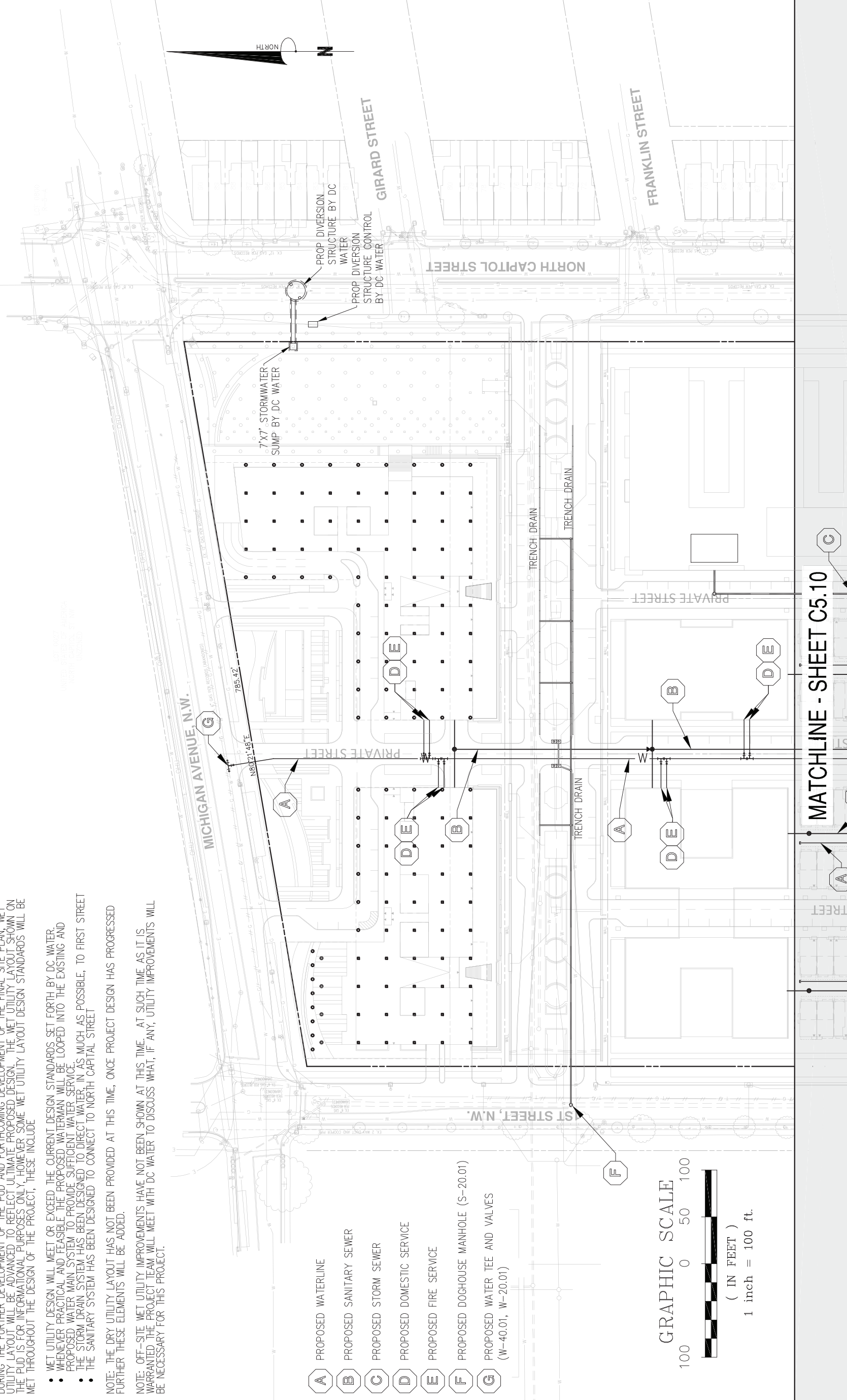
CONCEPTUAL WET UTILITY LAYOUT PROVIDED FOR PUD REVIEW ONLY. WET UTILITY LAYOUT IS SUBJECT TO CHANGE. DURING THE FURTHER DEVELOPMENT OF THE PUD AND FORTHCOMING DEVELOPMENT OF THE FINAL SITE PLAN, WET UTILITY LAYOUT WILL BE ADVANCED TO REFLECT ULTIMATE PROPOSED DESIGN. THE WET UTILITY LAYOUT SHOWN ON THE PUD IS FOR INFORMATIONAL PURPOSES ONLY, HOWEVER SOME WET UTILITY LAYOUT DESIGN STANDARDS WILL BE MET THROUGHOUT THE DESIGN OF THE PROJECT, THESE INCLUDE

- WET UTILITY DESIGN WILL MEET OR EXCEED THE CURRENT DESIGN STANDARDS SET FORTH BY DC WATER.
- WHENEVER PRACTICAL AND FEASIBLE THE PROPOSED WATERMAIN WILL BE LOOPED INTO THE EXISTING AND PROPOSED WATER MAIN SYSTEM TO PROVIDE SUFFICIENT WATER SERVICE
- THE STORM DRAIN SYSTEM HAS BEEN DESIGNED TO DIRECT WATER, IN AS MUCH AS POSSIBLE, TO FIRST STREET
- THE SANITARY SYSTEM HAS BEEN DESIGNED TO CONNECT TO NORTH CAPITAL STREET

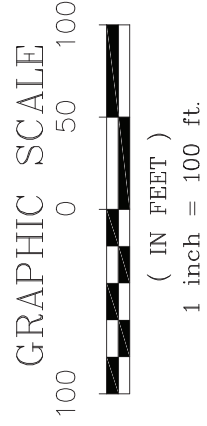
NOTE: THE DRY UTILITY LAYOUT HAS NOT BEEN PROVIDED AT THIS TIME, ONCE PROJECT DESIGN HAS PROGRESSED FURTHER THESE ELEMENTS WILL BE ADDED.

NOTE: OFF-SITE WET UTILITY IMPROVEMENTS HAVE NOT BEEN SHOWN AT THIS TIME. AT SUCH TIME AS IT IS WARRANTED THE PROJECT TEAM WILL MEET WITH DC WATER TO DISCUSS WHAT, IF ANY, UTILITY IMPROVEMENTS WILL BE NECESSARY FOR THIS PROJECT.

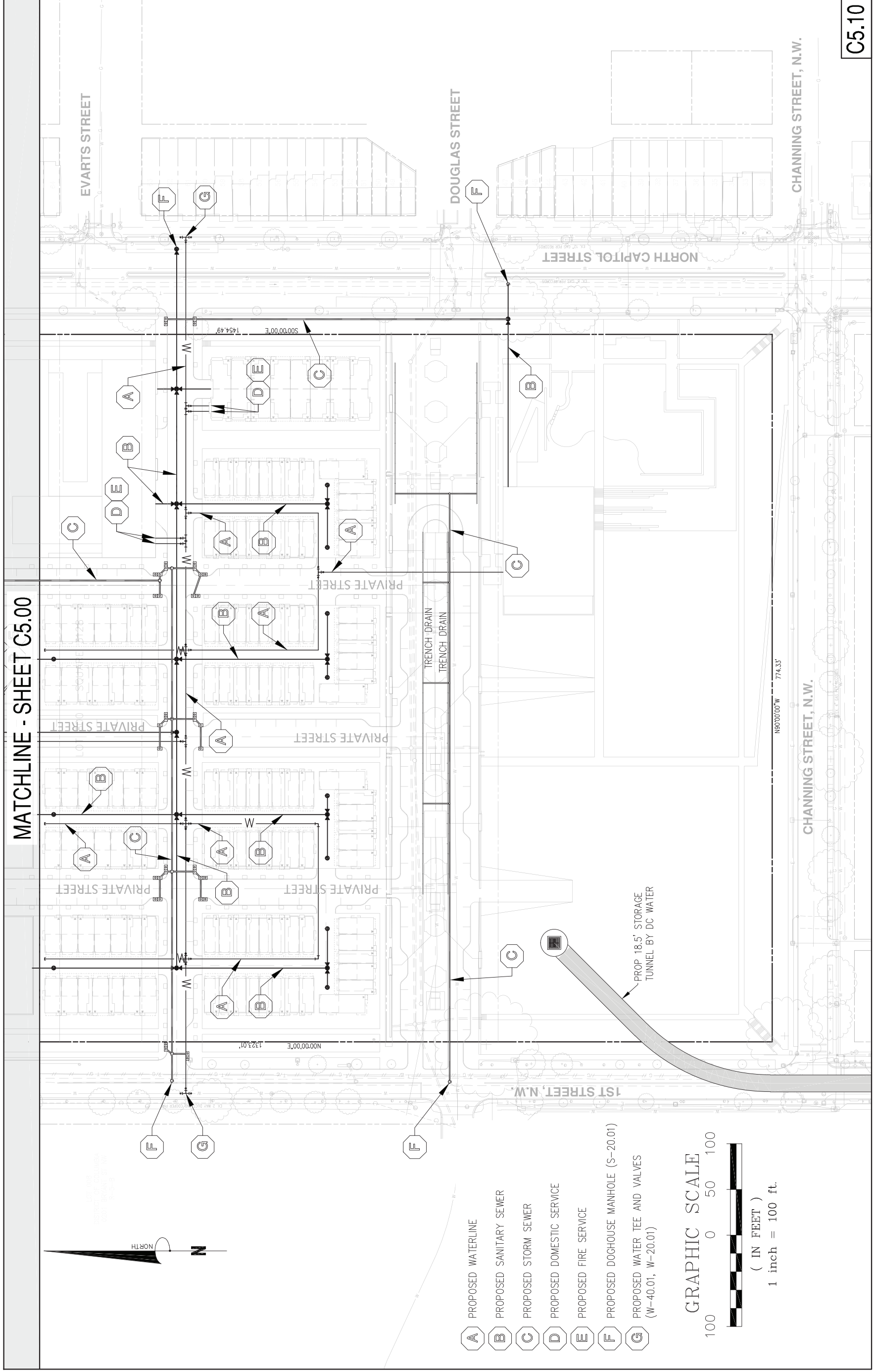
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- A PROPOSED WATERLINE
- B PROPOSED SANITARY SEWER
- C PROPOSED STORM SEWER
- D PROPOSED DOMESTIC SERVICE
- E PROPOSED FIRE SERVICE
- F PROPOSED DOGHOUSE MANHOLE (S-20.01)
- G PROPOSED WATER TEE AND VALVES (W-40.01, W-20.01)



MATCHLINE - SHEET C5.10



C5.10

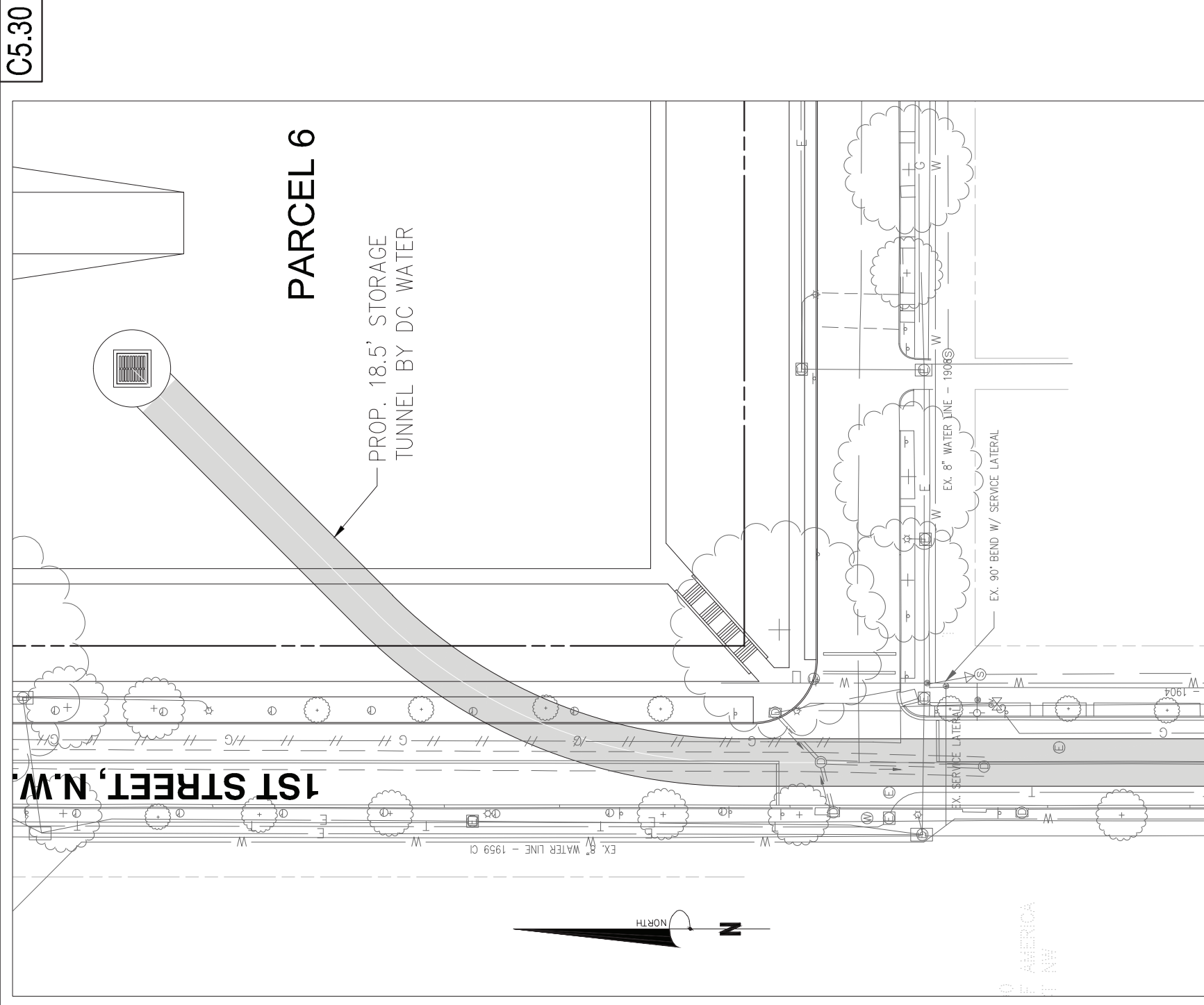
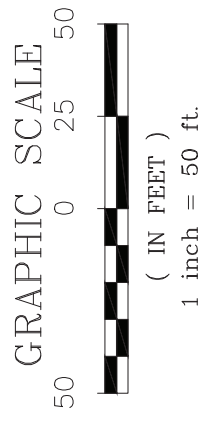
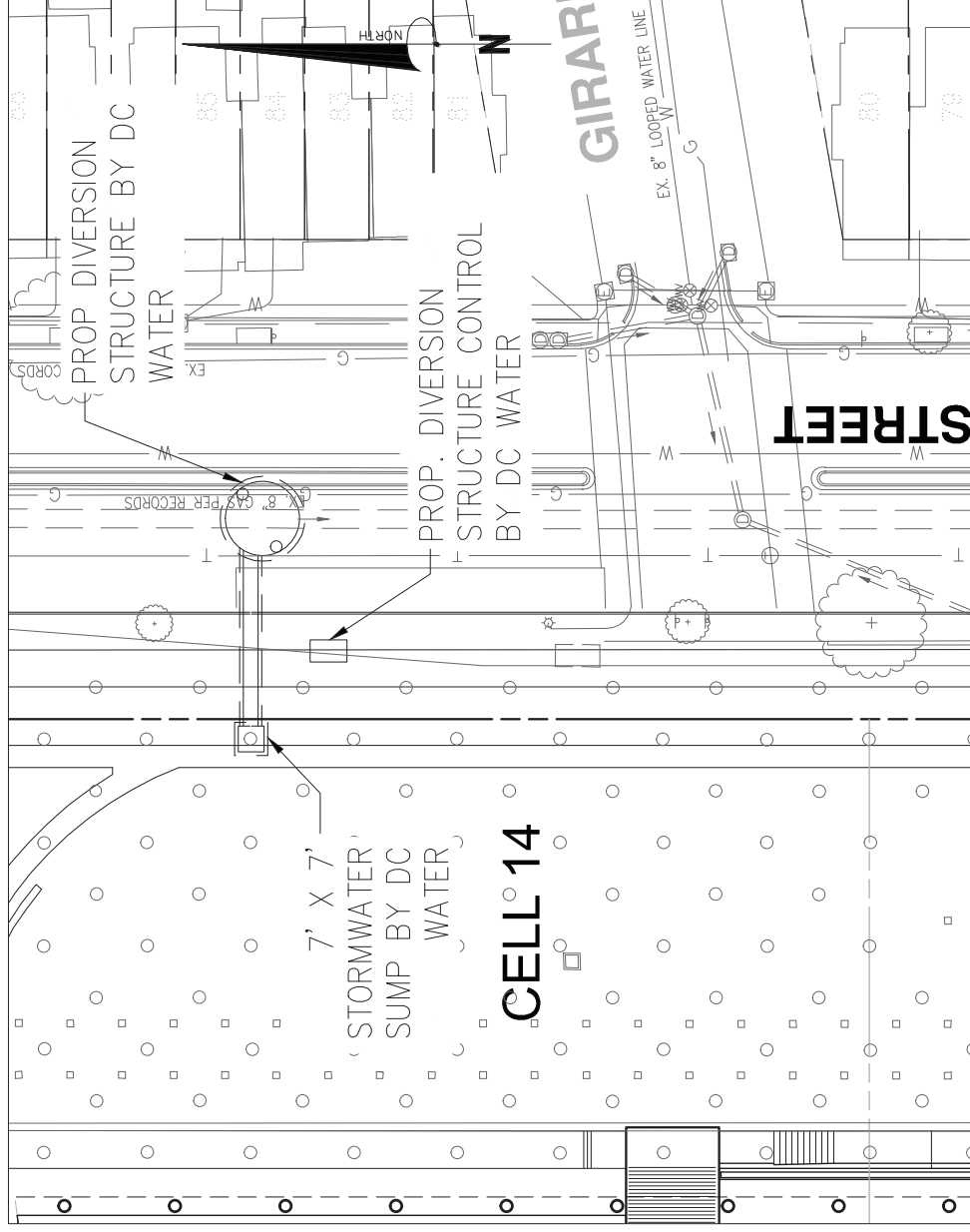
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Estimated Water and Sanitary Sewer Usage Chart						
Water Usage Estimate						
Type of Use	# of Units	Total SF	Average Daily Flow (GPD/Unit) or (GPD / 1,000 SF)	Peak Factor	Peak Flow (GPD)	
PARCEL 1						
OFFICE / RETAIL	-	875,000	200	6	1,050,000	
PARCEL 2						
FUTURE RETAIL	-	23,250	200	6	27,900	
FUTURE RESIDENTIAL	258	-	300	6	464,400	
PARCEL 3						
FUTURE OFFICE / RETAIL	-	173,000	200	6	207,600	
PARCEL 4						
RETAIL	-	52,920	200	6	63,504	
RESIDENTIAL	278	-	300	6	500,400	
PARCEL 5						
RESIDENTIAL	146	-	300	6	262,800	
PARCEL 6						
PARK / COMMUNITY CENTER	-	17,500	200	6	21,000	
PARCEL 7						
PUBLIC SPACE	-	-	-	-	-	
<b>Total</b>					<b>2,597,604</b>	
Sewer Usage Estimate						
Type of Use	# of Units	Total SF	Average Daily Flow (GPD/Unit) or (GPD / 1,000 SF)	Peak Factor	Peak Flow	
PARCEL 1						
OFFICE / RETAIL	-	875,000	200	6	1,050,000	
PARCEL 2						
FUTURE RETAIL	-	23,250	200	6	27,900	
FUTURE RESIDENTIAL	258	-	300	6	464,400	
PARCEL 3						
FUTURE OFFICE / RETAIL	-	173,000	200	6	207,600	
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PARCEL 5						
RESIDENTIAL	146	-	300	6	262,800	
PARCEL 6						
PARK / COMMUNITY CENTER	-	17,500	200	6	21,000	
PARCEL 7						
PUBLIC SPACE	-	-	-	-	-	
<b>Total</b>					<b>2,597,604</b>	

DC WATER NARRATIVE:

DC WATER HAS PROPOSED TWO FACILITIES ONSITE TO HELP ALLEVIATE DOWNSTREAM FLOODING DURING CERTAIN STORM EVENTS AND TO BETTER CONTAIN COMBINED SEWER FLOW DURING RAIN EVENTS.

- THE FIRST FACILITY, WHICH IS CURRENTLY UNDER CONSTRUCTION, IS LOCATED WITHIN CELL 14 OF THE EXISTING MCMILLAN SAND FILTRATION FACILITY. A STORMWATER DIVERSION DEVICE IS BEING CONSTRUCTED ALONG THE LARGE TRUNK STORM DRAIN THAT RUNS WITHIN NORTH CAPITAL STREET. THE DIVERSION DEVICE DIRECTS WATER INTO CELL 14 FOR TEMPORARY STORAGE DURING CERTAIN STORM EVENTS TO HELP ALLEVIATE DOWNSTREAM FLOODING.
- THE SECOND FACILITY, KNOWN AS THE LONG TERM CONTROL PROJECT, IS LOCATED IN THE SOUTH WEST CORNER OF THE PARK. THE MCMILLAN SITE WILL BE THE LOCATION FOR ONE OF THE STARTING POINTS OF THE PROJECT WITH THE MCMILLAN SITE ALSO BEING USED FOR CONSTRUCTION STAGING. THE LONG TERM CONTROL PROJECT IS A SET OF LARGE DIAMETER TUNNELS THAT RUN UNDERNEATH THE CITY AND COLLECT AND DETAIN COMBINED SANITARY FLOWS BEFORE THEY CAN BE RELEASED INTO THE CITY'S WATERWAYS. CONSTRUCTION OF THE PROJECT IS SET TO BEGAIN THIS UPCOMING YEAR AND RUN FOR APPROXIMATELY 8 YEARS.



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GRADING NARRATIVE:

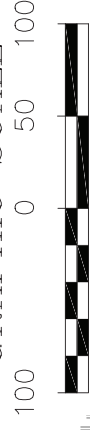
CONCEPTUAL GRADING PROVIDED FOR PUD REVIEW ONLY AND CONCEPTUAL GRADING IS SUBJECT TO CHANGE. DURING THE FURTHER DEVELOPMENT OF THE PUD AND FORTHCOMING DEVELOPMENT OF THE FINAL SITE PLAN, GRADING WILL BE ADVANCED TO REFLECT ULTIMATE PROPOSED DESIGN. THE GRADING SHOWN ON THE PUD IS FOR INFORMATIONAL PURPOSES ONLY. HOWEVER, SOME GRADING DESIGN STANDARDS WILL BE MET THROUGHOUT THE DESIGN OF THE PROJECT. THESE INCLUDE:

- ROADWAYS AND ALLEYS WILL HAVE A CROSS SLOPE OF 2%.
- SIDEWALKS AND TRAILS WILL BE DESIGNED TO BE ADA COMPLIANT, OR AN ACCEPTABLE ADA PATH WILL BE PROVIDED. THE PARK AT CELL 14 WILL REMAIN AT THE CURRENT HISTORIC ELEVATION OF 170 FT WITH THE EXCEPTION OF MINIMAL GRADING TO SUPPORT DRAINAGE OF THE PARK AND TO TIE INTO EXISTING GRADES AT NORTH CAPITOL STREET AND MICHIGAN AVENUE.
- THE NORTH SERVICE COURT WILL REMAIN AT THE CURRENT HISTORIC ELEVATION OF 165 FT WITH THE EXCEPTION OF MINIMAL GRADING TO SUPPORT DRAINAGE OF THE ROADWAY AND TO TIE INTO EXISTING GRADES AT NORTH CAPITOL STREET AND FIRST STREET.
- THE OLMSTED WALK ALONG NORTH CAPITOL STREET AND CHANNING STREET WILL HAVE A CONSTANT ELEVATION OF 170 FT EXCEPT BETWEEN THE NORTH SERVICE COURT AND THE SOUTH SERVICE COURT WHERE THE OLMSTED WALK WILL HAVE AN ELEVATION OF 168 FT. THE OLMSTED WALK ON MICHIGAN AVENUE AND FIRST STREET WILL FOLLOW ROADWAY GRADES. OVERLAND RELIEF CANNOT BE PROVIDED FOR THE NORTH SERVICE COURT AND ALL AREAS THAT DRAIN TO IT. IN LIEU OF OVERLAND RELIEF, THE STORM DRAIN SYSTEM IN THE NORTH SERVICE COURT WILL BE SIZED TO ACCOMMODATE THE 100 YEAR STORM.
- THE SOUTH SERVICE COURT WILL REMAIN AT THE CURRENT HISTORIC ELEVATION OF 165 FT WITH THE EXCEPTION OF MINIMAL GRADING TO SUPPORT DRAINAGE OF THE ROADWAY AND TO TIE INTO EXISTING GRADES AT FIRST STREET.
- THE PARK WILL REMAIN AT THE CURRENT HISTORIC ELEVATION OF 170 FT WITH THE EXCEPTION OF MINIMAL GRADING TO SUPPORT DRAINAGE OF THE PARK AND TO CREATE A COMMUNITY GATHERING FEATURE ALONG NORTH CAPITOL STREET.
- THE HISTORIC WALLS IN THE NORTH AND SOUTH SERVICE COURT TO REMAIN. ADDITIONAL PROPOSED WALLS TO BE LOCATED IN THE PARK AREA.

NOTE: FINISHED FLOOR ELEVATIONS AND PROPOSED CONTOURS HAVE NOT BEEN PROVIDED AT THIS TIME. ONCE PROJECT DESIGN HAS PROGRESSED FURTHER THESE ELEMENTS WILL BE ADDED.

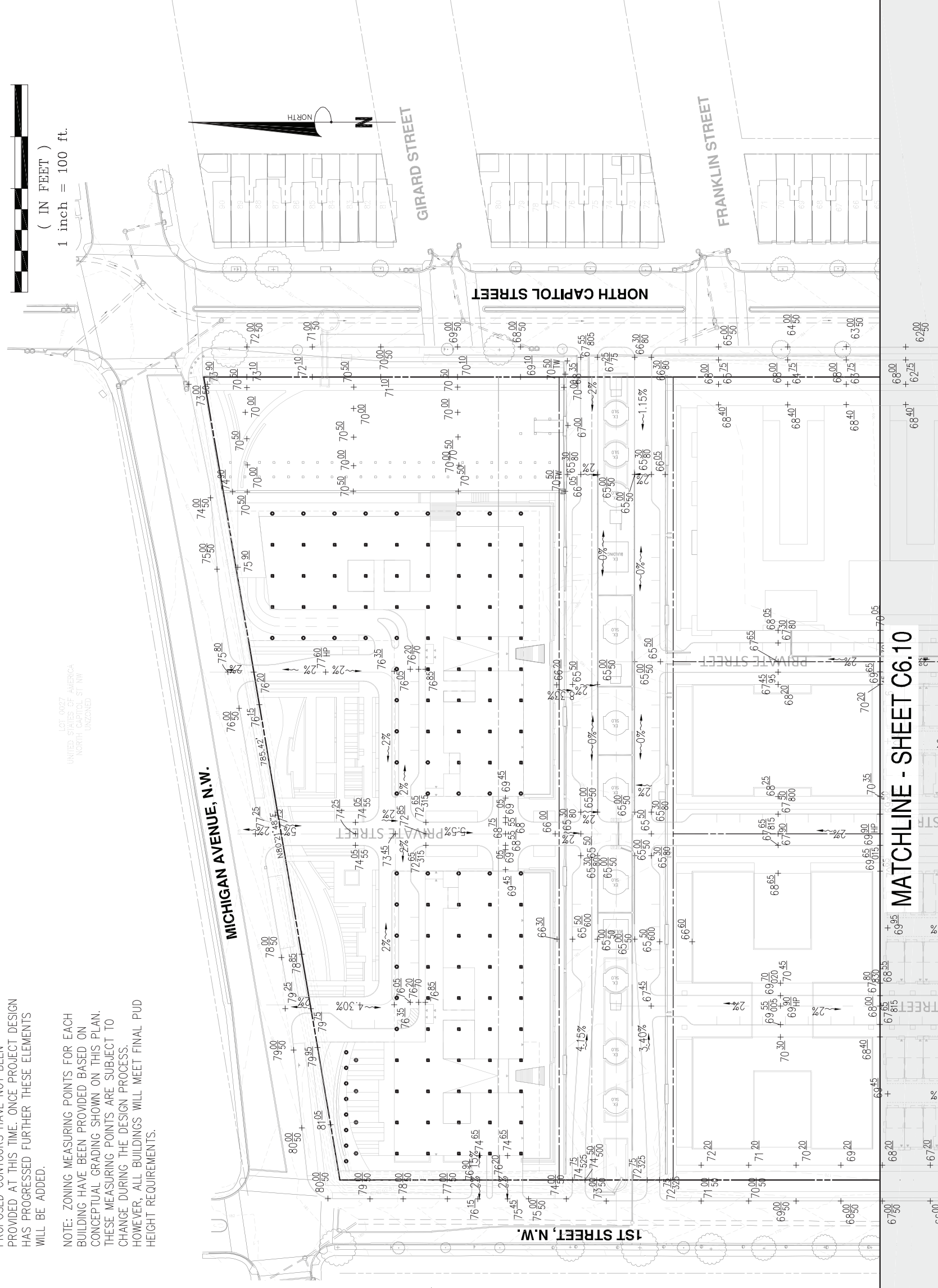
NOTE: ZONING MEASURING POINTS FOR EACH BUILDING HAVE BEEN PROVIDED BASED ON CONCEPTUAL GRADING SHOWN ON THIS PLAN. THESE MEASURING POINTS ARE SUBJECT TO CHANGE DURING THE DESIGN PROCESS. HOWEVER, ALL BUILDINGS WILL MEET FINAL PUD HEIGHT REQUIREMENTS.

GRAPHIC SCALE



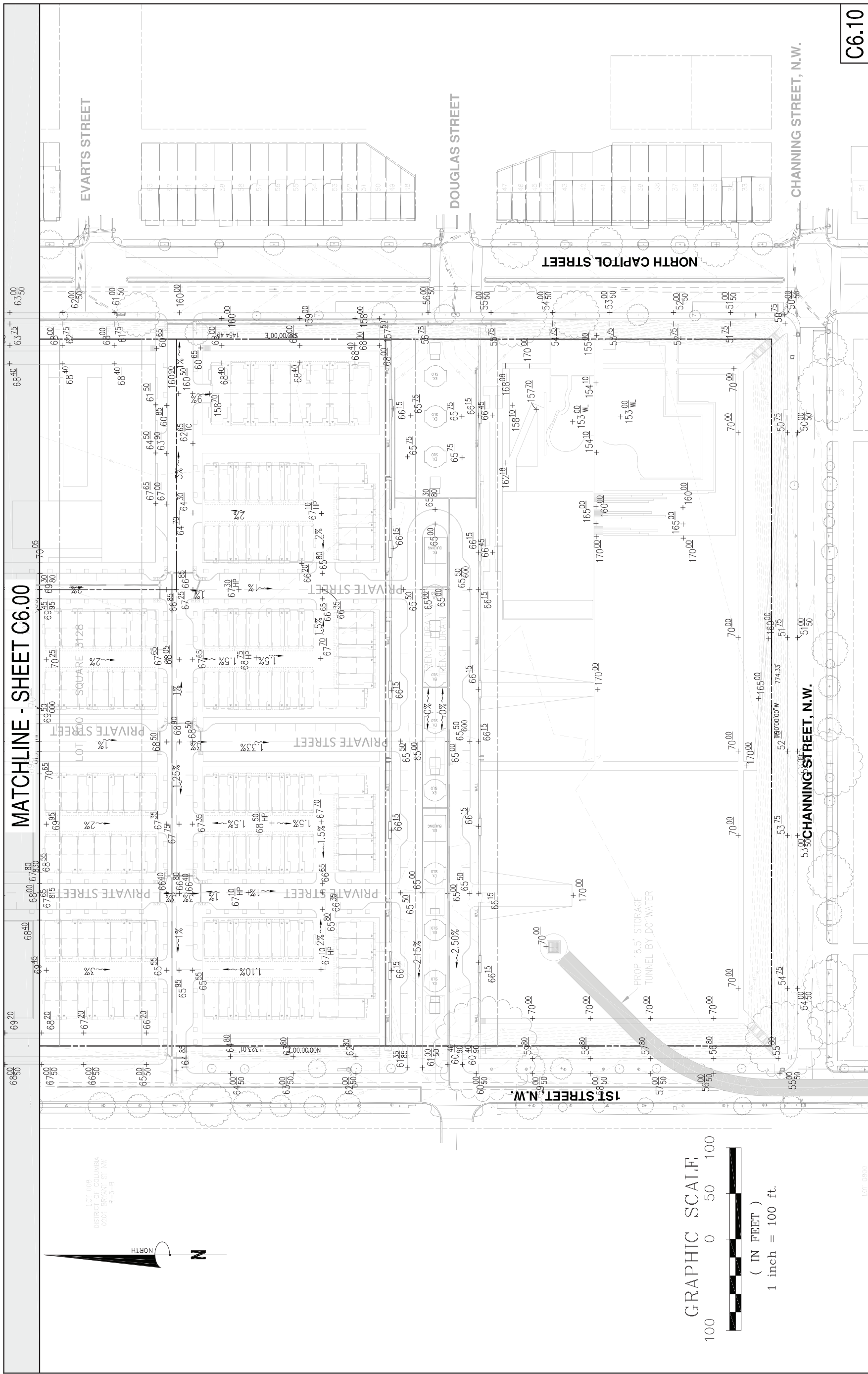
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LOT #027  
UNITED STATES OF AMERICA  
NORTH UNINCORPORATED

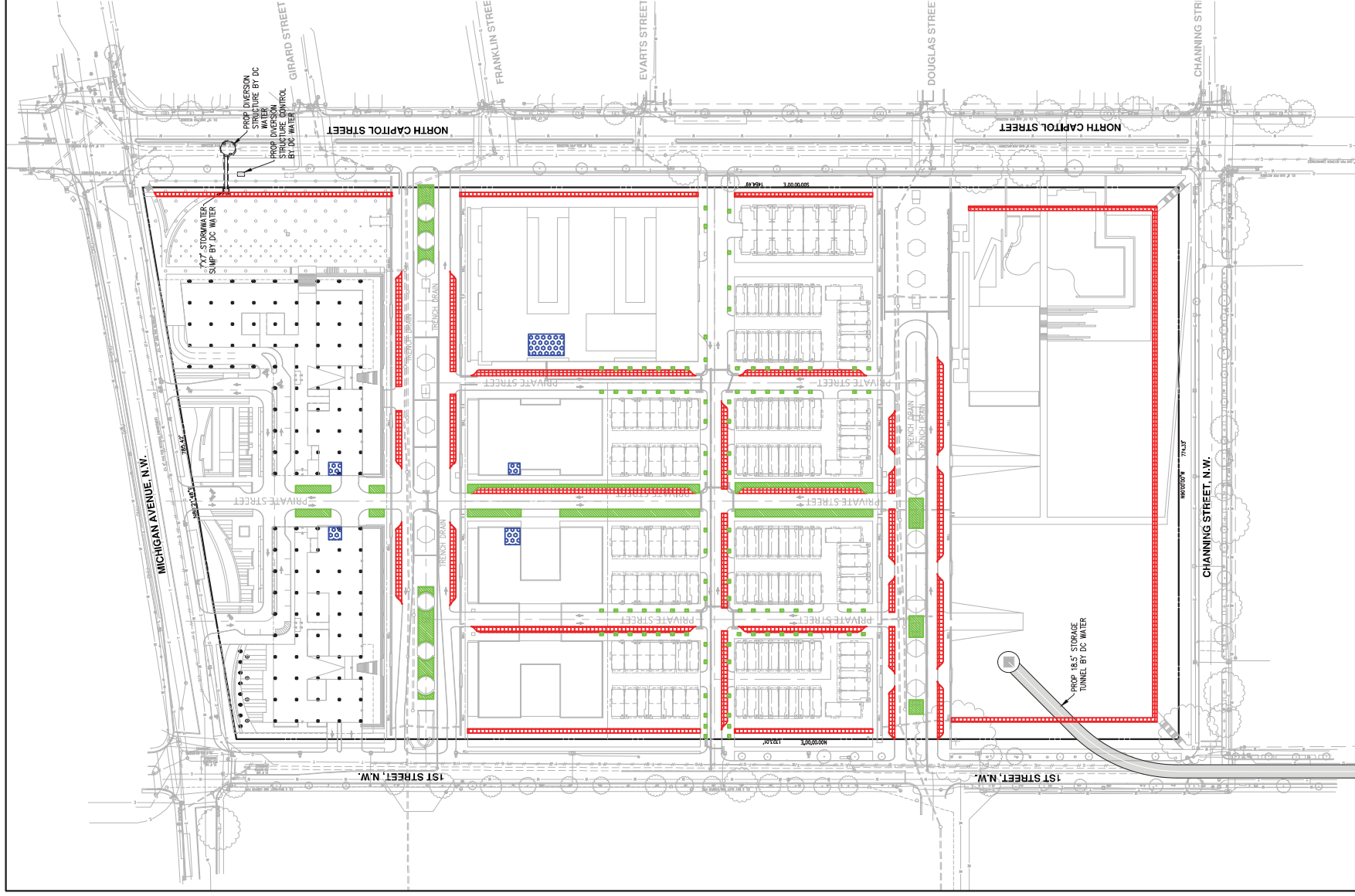


MATCHLINE - SHEET C6.10

MATCHLINE - SHEET C6.00





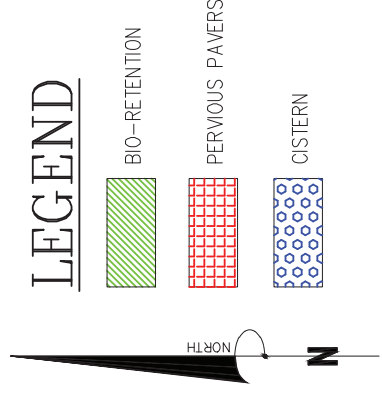


STORMWATER MANAGEMENT NARRATIVE:

CONCEPTUAL STORMWATER MANAGEMENT PROVIDED FOR PUD REVIEW ONLY; STORMWATER MANAGEMENT DESIGN IS SUBJECT TO CHANGE. DURING THE FURTHER DEVELOPMENT OF THE PUD AND FORTHCOMING DEVELOPMENT OF THE FINAL SITE PLAN, STORMWATER MANAGEMENT DESIGN WILL BE ADVANCED TO REFLECT ULTIMATE PROPOSED DESIGN. THE STORMWATER MANAGEMENT DESIGN SHOWN ON THE PUD IS FOR INFORMATIONAL PURPOSES ONLY; HOWEVER, SOME STORMWATER MANAGEMENT DESIGN STANDARDS WILL BE MET THROUGHOUT THE DESIGN OF THE PROJECT. THESE INCLUDE:

- STORMWATER MANAGEMENT DESIGN WILL MEET OR EXCEED THE NEW DESIGN STANDARDS SET FORTH BY DDOE
- THE STORMWATER RUNOFF FROM THE INTERNAL STREETS, NORTH SERVICE COURT, SOUTH SERVICE COURT, CELL 14 PARK, AND THE PARK WILL BE TREATED USING LOW IMPACT DEVELOPMENT BMP MEASURES.
- THE STORMWATER RUNOFF FROM PARCEL 5 WILL BE TREATED USING LOW IMPACT DEVELOPMENT BMP MEASURES
- THE STORMWATER RUNOFF FROM PARCELS 1, 2, 3, AND 4 WILL BE TREATED USING A COMBINATION OF ON-SITE STORMWATER MANAGEMENT PRACTICES SUCH AS GREEN ROOF AND CISTERNS.

NOTE: ONLY APPROXIMATE AREAS WHERE STORMWATER MANAGEMENT PRACTICES WILL BE LOCATED HAVE BEEN SHOWN ON THE PLAN, THE ACTUAL DESIGN OF THE FACILITIES WILL BE PROVIDED DURING FINAL SITE PLAN.



McMillan			
Stormwater Management Tabulations			
Total Site Area	Square Feet	Acres	
	1,075,409	24.69	
2-Year Runoff Pre-Development			
Runoff C Value (City Standard)		0.35	--
2-Year Storm Intensity		5.28	in/hr
Time of Concentration (Tc)		5	Minutes
Total Site Area		24.69	Acres
<b>2-yr Runoff (Q<sub>2</sub>) = CIA</b>		<b>45.62</b>	<b>cfs</b>
15-Year Runoff Post-Development			
Runoff C Value (City Standard)		0.70	--
15-Year Storm Intensity		7.56	in/hr
Time of Concentration (Tc)		5	Minutes
Total Site Area		24.69	Acres
<b>15-yr Runoff (Q<sub>15</sub>) = CIA</b>		<b>130.65</b>	<b>cfs</b>
Computed Storage Volume Required			
Requirement		Volume (cf)	
Vd = 300(Q <sub>15</sub> - Q <sub>2</sub> )*1.25		31,885	
Stormwater Retention Required			
Requirement		Volume (cf)	
From Title 21 Chapter 5 Section 520.3*		87,379	
Stormwater Retention/Storage Provided*			
SWM/BMP Practice	Area (sf)	Volume (cf)	
Bio-Retention	15,900	42,516	
Pervious Paver	41,750	24,458	
Cisterns (45% Retention)		21,197	
<b>Total Retention Provided*</b>		<b>88,171</b>	

\*Uses DC Stormwater General Compliance Spreadsheet