Permit Application Review

Permit No. 2020-11 Received complete: February 5, 2020

Applicant: Gary Wallace; Greystar Real Estate Partners

Consultant: David Bade; Westwood Professional Services

Project: Edina Promenade Residences

Location: 3650 Hazelton Road: Edina

Rule(s): 4,5,11,12

Reviewer: BCO

General Background & Comments

The project proposes the constructed of a 19-story, 186 unit apartment building including six townhomes to be located on the former Guitar Center site at 3650 Hazelton Road in Edina. The building will include two levels of below grade parking.

The site is 1.29 acres in area with an additional 0.14 acres of the easterly adjacent city promenade included at the request of the Edina City Council for the development of a water amenity (rainwater garden) providing a transition between the private development and public park land. The project site information is:

- Total Site Area: 1.29 acres (56,000 square feet)
- Adjacent City Outlot: 5,935 square feet
- Total Project Area: 61,935 square feet
- Existing Total Site Impervious Area: 41,580 square feet
- New Total Site Impervious Area: 39,457 square feet (a reduction of 2,123 square feet in impervious area)
- 5.1% decrease in the site impervious area
- 100% of existing impervious area will be disturbed

The Nine Mile Creek Watershed District's Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on a parcel or will increase the imperviousness of the parcel by more than 50%, storm water management will apply to the entire project parcel. Otherwise, the storm water requirements will apply only to the disturbed areas and additional impervious area on the parcel. Since the entire site

impervious area will be disturbed, storm water management is required for the entire project area of 61,935 square feet including the 39,457 square feet of impervious area.

The District's requirements for both storm water management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5000 square feet or more surface area disturbed, Rules 4.2.1a and b and 5.2.1a and b.

Storm water management is to be provided within three BMP's; 1) a proposed underground storm water management facility (UGSWMF), 2) a rainwater garden area and 3) pervious pavers that will provide volume retention, rate control and water quality management. The UGSWMF will receive the majority of the runoff from the new building. Runoff from the eastern portion of the site, Promenade Townhomes associated patios, sidewalks and lawn area will be directed to an infiltration, rainwater garden, area. The driveway entrance will be constructed of pervious pavers.

As previously stated, two levels of underground parking is proposed resulting in a low floor elevation of the structure 18 feet below grade — elevation 855.9 M.S.L. The geotechnical report provided states that a groundwater elevation of 853.4 +/- M.S.L. can be assumed based on the elevation observed in the on-site borings and elevations observed by the geotechnical engineer, Braun Intertec, on properties in the general area of 3650 Hazelton Road. No District rule requires a specific distance separation between the low floor elevation of a structure and groundwater, however the applicant is advised that seasonal fluctuations of the groundwater elevation can occur that could cause seepage into the parking facility. Greystar Real Estate Partners is advised to include in the building design measures for preventing seepage in the event of a rise in the groundwater elevation, should it occur.

Silt fence is to be constructed at the limits of construction, inlet protection and a rock construction entrance will be provided for erosion control.

Exhibits

- Permit Application dated February 4, 2020.
- 2. Plans date February 4, 2020 prepared by Westwood Professional Services.
- 3. Storm Water Management calculations dated February 4, 2020 prepared by Westwood Professional Services.
- 4. Geo-technical Report dated July 17, 2018 prepared by Braun Intertec.
- 5. Edina City correspondence dated February 4, 2020 regarding the private use of public property for the Edina Promenade Apartments.

4.0 Stormwater Management

A UGSWMF, rainwater garden and pervious pavers to be constructed will provide volume retention, rate control and water quality management. (The UGSWMF and pervious pavers are on the applicant's property, the rainwater garden, as noted, is on City property.)

Runoff from the site is directed to the existing trunk storm sewer system along the east side of the site, within the Promenade, that discharges to Centennial Lakes. The existing and proposed 2, 10 and 100 year frequency discharges from the site are:

Frequency	Existing Discharge c.f.s.	Proposed Discharge c.f.s.
2 year	4.3	1.5
10 year	7.0	2.8
100 year	13.3	8.8

Rule 4.3.1b is met.

An infiltration volume of 3,617 cubic feet is required for 1.1-inches of runoff from the 39,457 square feet of site impervious area. Soil borings indicate the underlying soil as poorly graded sand (SP). An infiltration rate of 0.8 inches/hour has been assumed using the Minnesota Storm Water Manual. An area of 1,129 square feet is required for volume retention using this infiltration rate. The three storm water BMP's will provide a volume of 8,778 cubic feet at a maximum inundation depth of 3.2 feet allowable for the volume retention of 3,617 cubic feet to be drawn down within 48 hours using an infiltration rate of 0.8 inches/hour. At a depth of 3.2 feet, an area of 7,765 square feet will be provided (1,129 square feet required).

The District's water quality criterion requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. The results of a MIDS calculator, provided in the following table, indicates the following removal efficiencies for the three proposed BMP's.

Stormwater Facility	Annual Removal Efficiency for Total Suspended Solids	Annual Removal Efficiency for total Phosphorous
UGSWMF	91% (208 lbs.)	91% (1.21 lbs.)
Rainwater Garden	97% (85 lbs.)	96% (0.48 lbs.)
Pervious Pavers	100% (45 lbs.)	100% (0.25 lbs.)

Rule 4.3.1c is met. The project agent has requested that the excess volume credits created by the project be banked, in accordance with Rule 4.4, for runoff retention and water quality volume credits. The credits available to be banked are 5,161 cubic feet (the difference between the volume provided, 8,778 cubic feet, minus the volume required for volume retention, 3,617 cubic feet. Final approval of deposit of the banked volume amount(s), however will need to be determined based on submission of as-builts for the facilities and confirmation of stormwater-treatment volumes achieved, as well as the city's and applicant's determination as to the ownership of the portion of the banked volume that is provided by the rain garden.

The soil boring logs indicates that groundwater was encountered at elevation 853.4 +/- M.S.L. The bottom of the UGSWMF is shown to be 861.3 M.S.L., a separation of 8.3 feet; the bottom of the rainwater garden at elevation 868.4 M.S.L., a separation of 15 feet and the bottom of the pervious pavers at elevation 867.5 M.S.L., a separation of 14.1 feet. A 3 foot of separation is required between the bottom of an infiltration facility and groundwater.

Rule 4.3.2 a states, all structures riparian to inundation areas or constructed or natural storm water management facilities must be located and elevations must be set according to Appendix 4a, "Suggested Low Floor Guidance." Referring to Plot 6, Appendix 4A of the District Rules for the pervious pavers (closest of the three stormwater facilities to the structure) being 8 feet from the wall of the building, a minimum (vertical) separation of 0.35 feet is required between the low floor elevation of the structure (855.9 M.S.L) and groundwater (853.4 M.S.L.). A separation of 2.9 feet is to be provided. Rule 4.3.2 is met.

As stated earlier, the siting of the low floor of a structure in relationship to the elevation of groundwater is not a requirement or rule of the District. However the applicant is advised that seasonal fluctuations of the groundwater elevation can occur that could cause seepage into the parking facility. Greystar Real Estate Partners is advised to include in the building design measures for preventing seepage in the event of a rise in the groundwater elevation, should it occur.

In accordance with Rule 4.3.1a (i), where below-ground infiltration facilities, practices or systems are proposed, pretreatment of runoff must be provided. The plans show that a sump manhole will provide the pretreatment of storm water upstream of the UGSWMF and the rock foundation material will provide the pretreatment for the pavers. Pretreatment will be required upstream of the rainwater garden.

In accordance with Rule 4.3.4, a post-project chloride management plan must be provided that will, 1) designate an individual authorized to implement the chloride-use plan and 2) designate a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site.

5.0 Erosion and Sediment Control

The submitted erosion and sediment control plan includes silt fence at the limits of construction, inlet protection and a gravel construction entrance. The project contact is David Bade, Westwood Professional Services.

11.0 Fees

Fees for the project are:

Rules 2.0-6.0 \$750

12.0 Financial Assurances

Financial Assurances for the project are:

Rule 4.0 Volume Retention: 1,129 sq. ft. x \$12/sq. ft. = \$13,548 \$13,548

Chloride Management: \$5000

Rule 5: Silt fence: 1,425 L.F. x \$2.50/L.F.= \$3,563

Inlet Control: 4×100 /each = \$400

Site restoration: 1.5 acres x \$2500/acre = \$3.750

\$7,713 Contingency and Administration \$9,239

Findings

The proposed project includes the information necessary, plan sheets and erosion control plan, for review.

1. Rules 4 and 5 are met.

- 2. Since the documentation submitted shows that less than three feet of vertical separation is to be provided between the low floor elevation of the parking garage and groundwater, the applicant is advised that seasonal fluctuations of the groundwater elevation can occur and the building design should include measures for handling a rise in the groundwater elevation, should it occur.
- 3. If proposed, the establishment of a volume bank for runoff retention credits under section 4 of the Stormwater Management Rule must be submitted to the District and approved by the Board of Managers.

Recommendation

Approval, contingent upon:

- 1. General Conditions
- Financial Assurance in the amount of \$35,500 \$30,500 for storm water management. erosion control and site restoration and \$5,000 for compliance with the chloride management requirements.
- Submission of documentation that a drainage easement over the storm watermanagement facility has been submitted to Edina (4.5.4i), if such easement is required by the city, and a receipt showing recordation of a maintenance declaration for the on-site storm water management facility. A draft of the declaration must be approved by the District prior to recordation.
- 4. Submittal of a revised plan showing that pretreatment of runoff will be provided upstream of the proposed rainwater garden to comply with Rule 4.3.1a (i). Constructing manhole OCS-102 with a sump would comply with this requirement.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

- 1. Documentation of the final agreement between the City of Edina and the applicant as to the right of the project property to continue to drain to the rain garden for the surface water runoff from the 0.14 acres of the eastern portion of the promenade included as part of the project and allocation of responsibility for maintenance of the rain garden.
- 2. Per Rule 4.5.6, an as-built drawing of the storm water facility conforming to the design specifications, including a stage volume relationship in tabular form for the UGSWMF. pervious pavers and the rainwater garden, as approved by the District must be submitted.
- 3. Submission of a plan for post-project management of Chloride use on the site. The plan must include 1) the designation of an individual authorized to implement the chloride use plan and 2) the designation of a Minnesota Pollution Control Agency certified salt

- applicator engaged in the implementation of the chloride-use plan for the site. The release of the \$5,000 of the financial assurance required for the chloride-management plan requires that chloride-management plan has been provided and approved by the District's Administrator.
- 4. For the release of the \$30,500 financial assurance required in Recommendation #2, Rule 12.4.1b requires demonstration and confirmation that the storm water management facility has been constructed or installed and is functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the storm water facilities used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.

GRADING LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
	980	INDEX CONTOUR
	982	INTERVAL CONTOUR
		CURB AND GUTTER
		POND NORMAL WATER LEVEL
1 - 17		STORM SEWER
ln .		FLARED END SECTION (WITH RIPRAP)
		WATER MAIN
		SANITARY SEWER
	-	RETAINING WALL
		DRAIN TILE
		RIDGE LINE
		GRADING LIMITS
	SF	SILT FENCE
	162	ROCK CONSTRUCTION ENTRANCE
0		INLET PROTECTION
- 91-97	* 91.00	SPOT ELEVATION
	1.50%	FLOW DIRECTION
	T=98.0 8=87.5	TOP AND BOTTOM OF RETAINING WALL
	E.O.F. 91.00	EMERGENCY OVERFLOW
₹ 51.7	→ SB-19	SOIL BORING LOCATION

GRADING NOTES

- LOCATIONS AND ELEVATIONS OF EQSTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS
 FLAN ARE APPROXIMATE. CONTRACTOR SHALL RIELD VERBY SITE CONDITIONS AND UTILITY
 LOCATIONS PROPOR TO ECCANION/CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED
 IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
- CONTRACTORS SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTBULS, SLOPED PAYEMENT, EQIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS, AND EXACT LOCATIONS AND NUMBER OF DOWNSPOUTS.
- ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "STANDARI SPECIFICATIONS FOR TRENCH EXCAVATION AND BACKFILLSURFACE RESTORATION" AS PREPARED BY THE CITY FRIGINEERS ASSOCIATION OF MINNESOTA.
- all disturbed unpayed areas are to receive SIX inches of topsoil and SOD or SEED. THESE Areas shall be watered until a healthy stand of Grass is obtained. See landscape plan for planting and turf establishment.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEPICES SUCH AS BARDICADES, WARNING SIGNS, DIRECTIONAL SIGNS, RIAGNED AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE MECSSARY, PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE BROINLER PROR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL DEVICES SHALL CONTROL DEVICES MAINTO STANDARD WITHOUT STANDARD.
- 6. ALL SLOPES SHALL BE GRADED TO 3:2 OR FLATTER, UNLESS OTHERWISE INDICATED ON THIS SHEET.
- CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING AND PROVIDE A SMOOTH FINISHED SURFACE WITH UNIFORM SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN OR BETWEEN SUCH POINTS AND EXISTING GRADES.
- B. SPOT ELEVATIONS SHOWN INDICATE FRISHED PAVEMENT ELEVATIONS & GUTTER FLOW LINE UNLESS OTHERWISE NOTED. PROPOSED CONTOURS ARE TO FINISHED SURFACE GRADE.
- 9. SEE SOILS REPORT FOR PAVEMENT THICKNESSES AND HOLD DOWNS.
- 10. CONTRACTOR SMALL DISPOSE OF ANY EXCESS SOIL MATERIAL THAT EXISTS AFTER THE SITE GRADING AND UTILITY CONSTRUCTION IS COMPLETE. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS SOIL MATERIAL IN A MANNER ACCEPTABLE TO THE OWNER AND THE REGULATING AGENCES.
- 11. CONTRACTOR SHALL PROVIDE A STRUCTURAL RETAINING WALL DESIGN CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER.
- PRIOR TO PLACEMENT OF ANY STRUCTURE OR PAVEMENT, A PROOF ROLL, AT MINIMUM, WILL BE REQUIRED ON THE SUBGADE, PROOF ROLUNG SHALL BE ACCOMPLISTED BY MAXING MINIMUM OF 2 COMPLETE PASSES WITH PALLY ALODED TANDEM-AXED UNIDY TRUCK, OR APPROVED EQUAL, IN EACH OF 2 PERPENDICULAR DIRECTIONS WHILE UNDER SUPERVISION AND DIRECTION OF THE INDEPENDENT TESTING LABORATORY. AREAS OF FAILURE SHALL BE DICAVATED AND RE-COMPACTED AS SPECIFIED HEREIN.
- EMBANKMENT MATERIAL PLACED BENEATH BUILDINGS AND STREET OR PARKING AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFIED DENSITY METHOD AS OUTLINED IN MINDOT 2103-291 AND THE REQUIREMENTS OF THE GEOFECHNICAL EMBINATION
- EMBANKMENT MATERIAL NOT PLACED IN THE BUILDING PAD, STREETS OR PARKING AREA, SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE ORDINARY COMPACTION METHOD AS OUTLINED IN MINDOT 2105.3FZ.
- 16. ALL SORS AND MATERIALS TESTING SHALL BE COMPLETED BY AN INDEPENDENT GEOTECHNICAL ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSULTRAIL SOILS SHALL BE COMPLETED AS REQUIRED BYTH GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND INSPECTIONS WITH THE GEOTECHNICAL ENGINE.

GENERAL EROSION CONTROL NOTES

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF DISTING UTILITIES AS SHOWN ON THESS FLANS ARE BASED ON RECORDS OF THE WARDOUS UTILITY COMPANIES AND LIMITED MASSIGNMENTS TAKEN IN THE FILLE. THE INFORMATION SHALL NOT BE RELED ON AS BEING BOACH OR COMPRISE THE CONTRACTOR SHALL WEST BOACH OF COMPRISE THE CONTRACTOR SHALL WEST BOACH OF COMPRISE CONTRACTOR SHALL WEST BOACH OF COMPRISE CONTRACTOR SHALL WEST BOACH OF THE CONTRACTOR SHALL WE SHALL W
- 2 ALL SILT FENCE AND OTHER EROSION CONTROL FEATURES SHALL BE IN-PLACE PRIOR TO ANY DECAMATION/CONSTRUCTION AND SHALL BE MAINTAINED UNTIL VIABLE TURF OR GROUND COVER HAS BEEN ESTABLESHO. DESTRING SILT FENCE ON-SITE SHALL BE MAINTAINED AND OR REMOVED AND SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONTRACT. IT IS OF DITRIBUTED PROPRIANCE TO BE AWARD FO CURRENT FIELD CONDITIONS WITH RESPECT TO EROSION CONTROL. TEMPORARY FORDING, DIKES, HAYBALES, ETC, REQUIRED BY THE CITY SHALL BE BY COLORISING OF GRADING CONTROL.
- SHALL BE INCIDENTAL TO THE GRADING CONTROL (ESQ. THE CONTRACTOR SHALL ASSUME COMMETTE RESPONSIBILITY FOR CONTROLLING ALL SITATION AND REDOOD OF THE PROBECT AREA. THE RESPONSIBILITY FOR CONTROLLING ALL SITATION AND REDOOD OF THE PROBECT AREA. THE RESPONSIBILITY FOR CONTROLLING ALL SITATION AND RESPONSIBLE ASSUME CONTROLLING AND ADDRESS OF THE PROBECT AREA. THE SITATION AND RESPONSIBLE OF THE PROBECT ASSUME AND ADDRESS OF THE CONTROLLING AND RESPONSIBLE OF THE CONTRACTOR OF THE WORK BY THE CONTRACTOR'S RESPONSIBILITY INCLUDES ALL IMPLEMENTATION AS REQUIRED TO PREVENT RESOON AND THE PROPERTY AND OTHER OWNER AND THE CONTRACTOR'S RESPONSIBLE OF THE CONTRACTOR'S RESPONSIBLE OF THE CONTRACTOR SITE OF THE CONTRACTOR AND THE PROBE OF THE CONTRACTOR SITE OF THE CONTRACTOR AND THE PROPERTY AND CONTRACTOR SITE OF THE CONTRACTOR AND THE CONTRACTOR AFTER THE THE FIRST SECRET ASSUMED.
- 4. ALL STREETS DISTURBED DURING WORKING HOURS MUST BE CLEANED AT THE END OF EACH WORKING DAY. A CONSTRUCTION ENTRANCE TO THE SITE MUST BE PROVIDED ACCORDING TO DETAILS TO REDUCE TRACKING OF DIRT ONTO PUBLIC STREETS.
- PROPOSED PONDS SHALL BE EXCAVATED FIRST AND USED AS TEMPORARY PONDING DURING CONSTRUCTION.
- WHEN INSTALLING END-OF-LINE FLARED END SECTIONS, BRING THE SLT FENCE UP & OVER THE FLARED END SECTIONS & COVER DISTURBED AREAS WITH BIP RAP. THE UPSTREAM FLARED END SECTIONS SHALL HAVE WOOD FIBER BLANKER INSTALLED ON THE DISTURBED SOILS.
- ALL UNPAVED AREAS ALTERED DUE TO CONSTRUCTION ACTIVITIES MUST BE RESTORED WITH SEED AND MULCH, SOD, EROSION CONTROL BLANKET OR BE HARD SURFACE WITHIN 2 WEEKS OF COMPLETION OF CONSTRUCTION.
- THE SITE MUST BE STABILIZED WITH A 25-151 SEED MIX AT 70-POUNDS FER ACRE AND TYPE I MULCH AT 2-TONS PER ACRE IN ACCORDANCE WITH MNDOT 2575 UNLESS OTHERWISE NOTED
- 9 TEMPORARY SEEDING SHALL BE MINJOOT SEED MIX 22-111 AT 40-POUNDS PER ACRE AND TYPE IMULCH AT 2-TONS PER ACRE IN ACCORDANCE WITH MINDOT 2575 UNLESS OTHERWISE NOTED.
- FOR AREAS WITH SLOPE OF 3:1 OR GREATER, RESTORATION WITH SOD OR EROSION CONTROL BLANKET IS REQUIRED.
- ALL TEMPORARY STOCKPILES MUST HAVE SILT FENCE INSTALLED AROUND THEM TO TRAP SEDIMENT.
- ALL PERMANENT PONDS USED AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION SHALL BE DREDGED AFTER THE SITE HAS BEEN STABILIZED TO RESTORE THE POND TO THE PROPOSED BOTTOM ELEVATION.
- ALL CONSTRUCTION SHALL CONFORM TO LOCAL AND STATE RULES INCLUDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.
- 14. THE SITE MUST BE KEPT IN A WELL-DRAINED CONDITION AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY DITCHES, PIPING OR OTHER MEANS REQUIRED TO INSURE PROPER DRAINAGE DURING CONSTRUCTION. LOW POINTS IN ROADWAY'S OR BUILDING ROAD MUST BE PROVIDED WITH A POSITIVE OUTFLOW.
- PUBLIC STREETS USED FOR HAULING SHALL BE KEPT FREE OF SOIL AND DEBRIS. STREET SWEEPING SHALL BE CONCURRENT WITH SITE WORK.

811 or call811.com

St B St





GP, II LLC GREYSTAR (750 BERING DR. 17 HOUSTON, 17

Westwood

Phon 622 93-535

fr. gip 91-5359

Infine (819 91-535)

Infine (819 91-535)

ಷ ರ

GRADING 8 CONTRO

C300

NOT FOR CONSTRUCTION DATE 02/04/20

FOOTING AND FOUNDATION PERMIT

LAST REVISED: BU/31/18 STXX

60" PERFORATED CMP

STORM SEWER LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
		EASEMENT LINE
		CURB AND GUTTER
	 	SANITARY SEWER
	FM	SANITARY SEWER FORCE MAIN
		STORM SEWER
		WATER MAIN
		HYDRANT
		GAS
		UNDERGROUND ELECTRIC
	POH	OVERHEAD ELECTRIC
		UNDERGROUND TELEPHONE
		OVERHEAD TELEPHONE
		TELEPHONE FIBER OPTIC
		CABLE TELEVISION
		DRAIN TILE
	H	GATE VALVE
8		FLARED END SECTION (WITH RIPRAP)
	*	EIGHT POLE
	(ICI)	VERTICAL UTILITY SEPARATION

GENERAL STORM SEWER NOTES

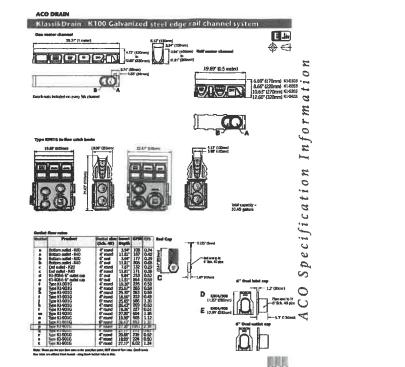
- UTILITY SERVICES TYPICALLY TERMINATE 5' OUTSIDE BUILDING WALL UNLESS OTHERWISE SHOWN OR NOTED.
- A RCP AND HDPE PIPE MAY BE INSTALLED WITH APPROVAL OF LOCAL GOVERNING AGENC

- ALL STORM SEWER JOINTS AND STRUCTURE CONNECTIONS SHALL BE GASTIGHT WATERTIGHT AS REQUIRED BY MINNESOTA PLUMBING CODE, PART 707.3. STORW. OCATED WITHIN 10-FEET OF A BUILDING AND/OR WATER LINE SHALL BE TESTED WINNESOTA PLUMBING CODE, PART 712.

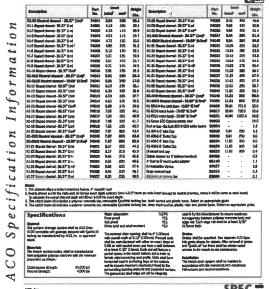
STORM SEWER CASTING SCHEDULE				
STRUCTURE			CASTING TYPE	
NUMBER	TYPE	DIA.	CASTING TIPE	
101	STMH	48"	R-1642	
102	NYOPLAST	24"		
103	FES	6"		
201	STMH	48"	8-1442	
202	CBMH		X3010	

Rainwater Garden Underground Stormwater Management System

811 or call811.com



KlassikDvain - K100 Galvanized steel edge rall ch



ACO



FOOTING AND FOUNDATION PERMIT NOT FOR CONSTRUCTION

STORM SEWER PLAN C500

Westwood
For 672 517-520 Abstracts At three (545) 917-510 Abstracts At three (545) 917-510