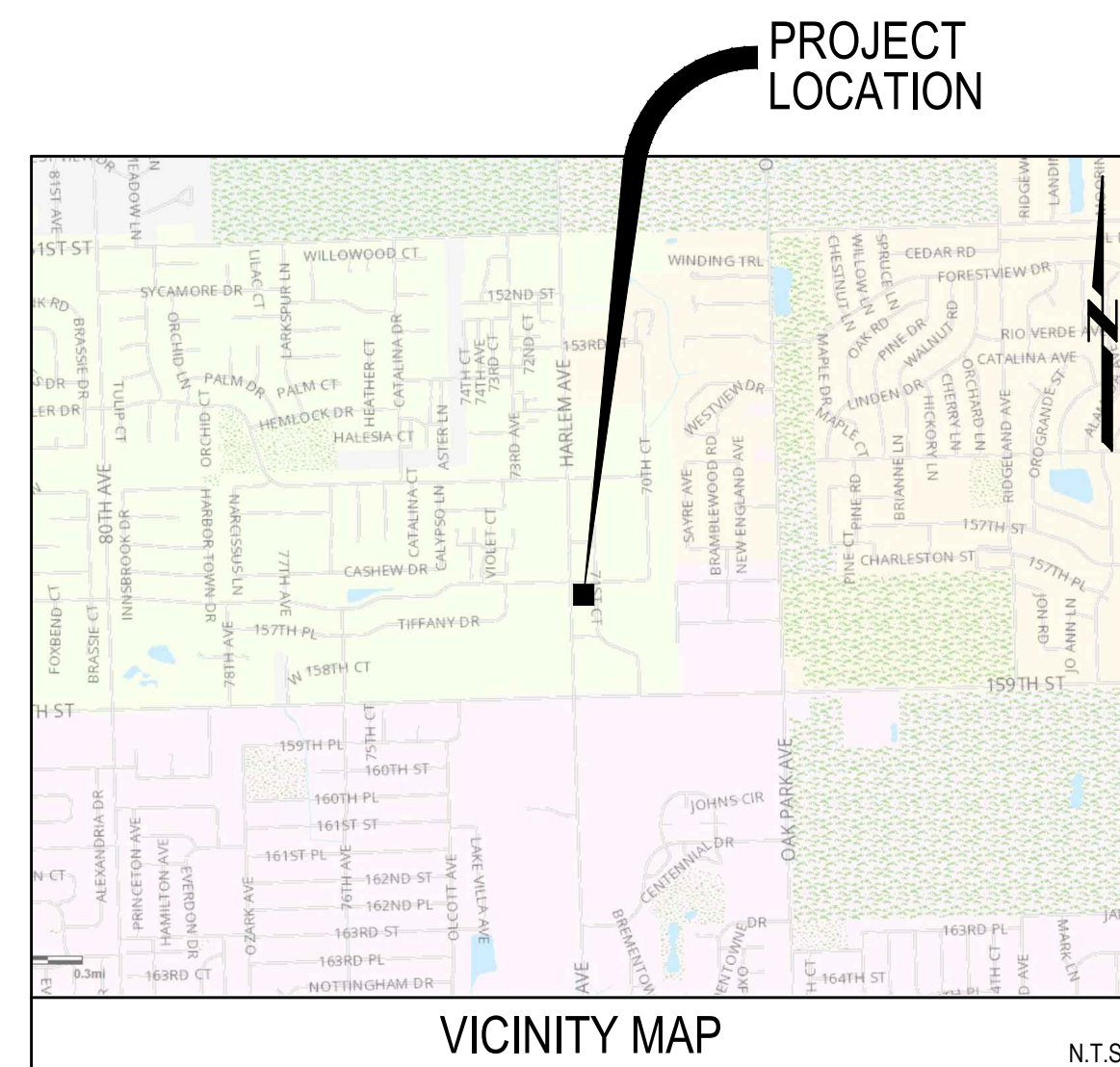
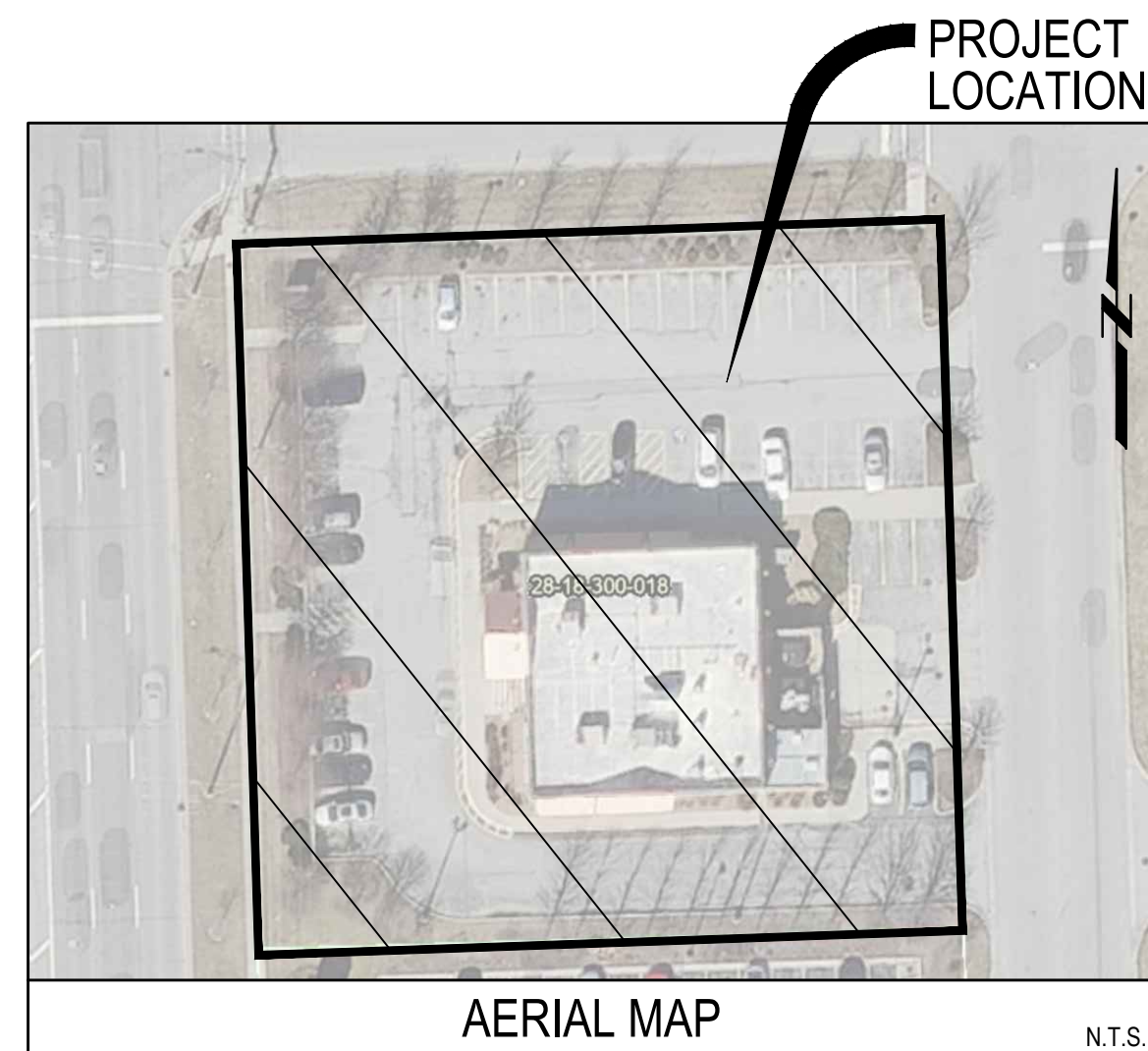


# RAINBOW CONE

15711 S. HARLEM AVE., ORLAND PARK

## FINAL ENGINEERING PLANS

LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		LIGHT STANDARD/DOUBLE LIGHT STANDARD
		WATER VALVE VAULT
		WATER VALVE BOX
		FIRE HYDRANT
		BUFFALO BOX
		SANITARY MANHOLE
		FLARED END SECTION
		STORM INLET
		STORM CATCH BASIN
		STORM MANHOLE
		CLEANOUT
		STORM SEWER PIPE
		SANITARY SEWER PIPE
		WATER MAIN PIPE
		FORCE MAIN PIPE
		STORM SEWER SERVICE
		SANITARY SEWER SERVICE
		WATER MAIN SERVICE
		SANITARY RIM ELEVATION
		SANITARY INVERT ELEVATION
		WATER GRADE RING ELEVATION
		WATER STATION LOCATION
		STORM RIM ELEVATION
		STORM INVERT ELEVATION
		PROPOSED SANITARY STRUCTURE LABEL
		PROPOSED WATER STRUCTURE LABEL
		PROPOSED STORM STRUCTURE LABEL
		PROPOSED RETAINING WALL
		CURB AND GUTTER
		DEPRESSED CURB AND GUTTER
		REVERSE CURB AND GUTTER
		SIDEWALK
		SWALE FLOW ARROW
		DRAINAGE ARROW
		OVERLAND FLOW
		1 FOOT CONTOURS
		ACCESSIBLE CURB RAMP



INDEX OF DRAWINGS	
SHEET NO.	DRAWING TITLE
C1.0	COVER SHEET
C2.0	EXISTING CONDITIONS AND SOIL EROSION & SEDIMENT CONTROL PLAN
C2.1	SITE DEMO PLAN
C3.0	SITE DIMENSIONAL PLAN
C4.0	SITE UTILITY & GRADING PLAN
C5.0	CONSTRUCTION DETAILS
C6.0	GENERAL NOTES & SPECIFICATIONS
L1.0	EXISTING LANDSCAPE AND TREE MITIGATION
L2.0	LANDSCAPE PLAN AND TABLE

ABBREVIATIONS			
ADJ	ADJUST	E	ELECTRIC
AGG	AGGREGATE GRAVEL	E-E	EDGE TO EDGE
B.A.M.	BIT. AGG. MIXTURE	ELEV.	ELEVATION
B-B	BACK TO BACK	EP	EDGE OF PAVEMENT
B/P	BOTTOM OF PIPE	EX	EXISTING
B/WALL	GROUND AT BOTTOM OF WALL	F.E.	FIELD ENTRANCE
B.B.	BUFFALO BOX	FF	FACE TO FACE
BIT.	BITUMINOUS CONCRETE	FF	FINISHED FLOOR
BM	BENCHMARK	FES	FLARED END SECTION
B.O.	BY OTHERS	FH	FIRE HYDRANT
C.E.	COMMERCIAL ENTRANCE	FL	FLOW LINE
CB	CATCH BASIN	FM	FORCE MAIN
CL	CENTERLINE	G	GROUND
CLID	CLOSED LID	GAS	GAS
CMP	CORRUGATED METAL PIPE	GU	GUTTER ELEVATION
CNTRL	CONTROL	GW	GUY WIRE
C.O.	CLEAN OUT	H.C.	HANDICAP
CONC.	CONCRETE	HDWL	HEADWALL
CY	CUBIC YARD	HH	HANDHOLE
D	DITCH	HWL	HIGH WATER LEVEL
DIA.	DIAMETER	INL	INLET
DIP	DUCTILE IRON PIPE	INV.	INVERT
DWM	DUCTILE IRON WATER MAIN	IP	IRON PIPE
DT	DRAIN TILE	MAX.	MAXIMUM
D.S.	DOWN SPOUT	MB	MAILBOX
		MH	STORM MANHOLE
		MIN.	MINIMUM
		NWL	NORMAL WATER LEVEL
		OLID	OPEN LID
		P.E.	PRIVATE ENTRANCE
		PERF.	PERFORATED
		PC	POINT OF CURVE
		P.C.C.	PORTLAND CEMENT CONCRETE
		PCC	POINT OF COMPOUND CURVE
		PGL	PROFILE GRADE LINE
		PI	POINT OF INTERSECTION
		PL	PROPERTY LINE
		PP	POWER POLE
		PROP.	PROPOSED
		PT	POINT OF TANGENCY
		PVC	POLYVINYL CHLORIDE PIPE
		P.V.C.	POINT OF VERTICAL CURVE
		PVI	POINT OF VERTICAL INTERSECTION
		PVT	POINT OF VERTICAL TANGENCY
		P	PAVEMENT
		R	RADIUS
		R.O.W.	RIGHT-OF-WAY
		RCP	REINFORCED CONCRETE PIPE
		REM	REMOVAL
		RR	RAILROAD
		RT	RIGHT
		SAN	SANITARY SEWER
		SF	SQUARE FOOT
		SHLD.	SHOULDER
		SL	STREET LIGHT
		SMH	SANITARY MANHOLE
		ST	STORM SEWER
		STA.	STATION
		STD	STANDARD
		SW	SIDEWALK
		SY	SQUARE YARDS
		TBR	TO BE REMOVED
		T	TELEPHONE
		T.A	TYPE A
		TIC	TOP OF CURB
		TIF	TOP OF FOUNDATION
		TIP	TOP OF PIPE
		TW	TOP OF WALK
		TWALL	TOP OF WALL
		TEMP	TEMPORARY
		TRANS	TRANSFORMER
		V.B.	VALVE BOX
		V.V.	VALVE VAULT
		WL	WATER LEVEL
		WM	WATER MAIN

**Call Before You Dig**  
  
 CONTACT JULIE AT 811  
 OR 800-892-0123  
 48 HOURS (2 working days) BEFORE YOU DIG

NOTE:  
 THE LOCATION, ELEVATION, SIZE, AND TYPES OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, ELEVATION, SIZE AND TYPES OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REVISIONS

SUSTAINABLE DESIGN | SUSTAINABLE LIVING

**Wolf Pack CONSULTING, LLC**  
 Civil Engineering  
 Land Planning  
 Land Surveying  
 Project Entitlements  
 Stormwater Management  
 418 South Cass Avenue, Westmont, IL 60559  
 Office: (630) 964-3117 • wolfpackcdg.com



COVER SHEET  
 RAINBOW CONE  
 15711 S. HARLEM AVE., ORLAND PARK

PROJ. MGR.: PJW  
 PROJ. ENG.: KM  
 DRAWN BY: KM  
 DATE: 09-16-22  
 SCALE: N.T.S.

SHEET NO.  
**C1.0**

PROJ. NUMBER:

10-12-22 REVISIONS PER VILLAGE REVIEW





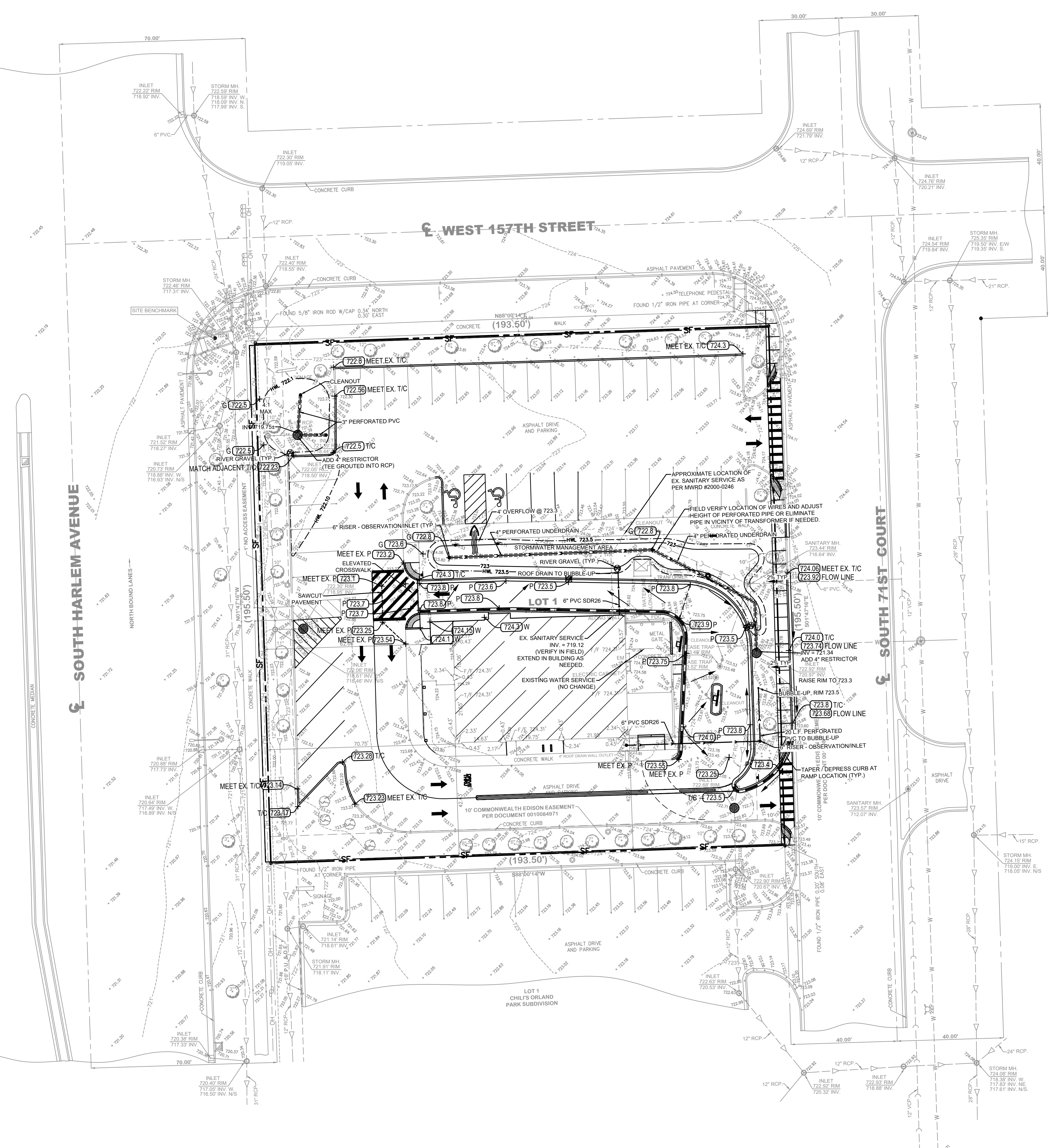
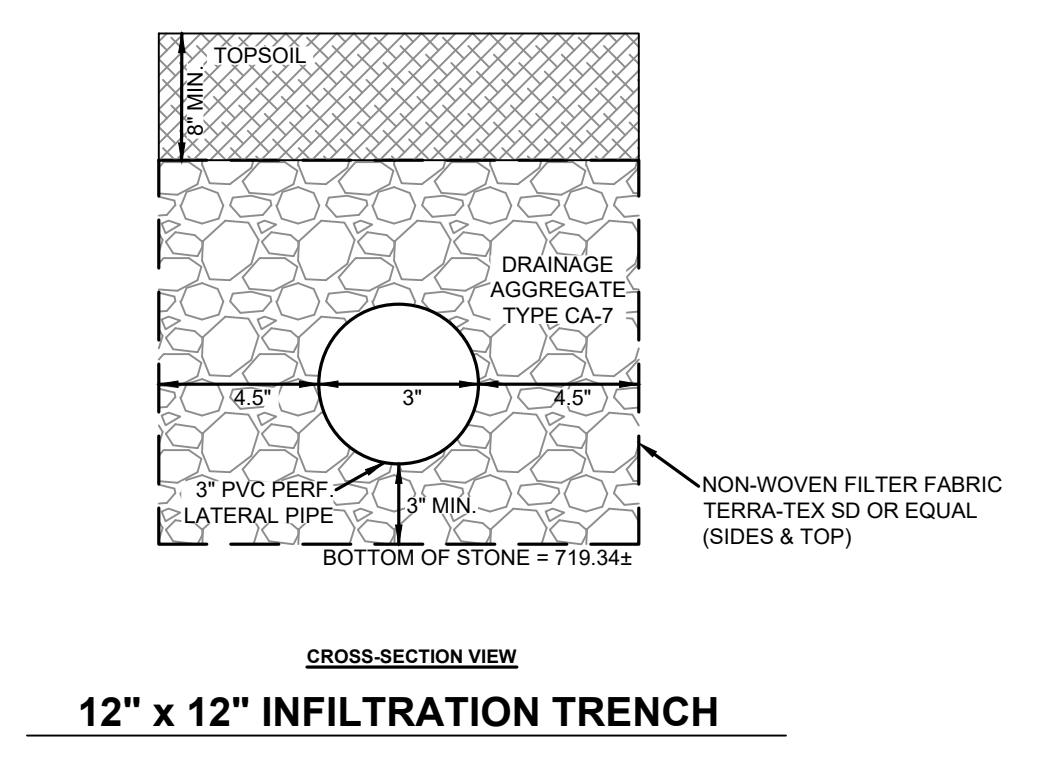


















GENERAL REQUIREMENTS:

- 1. ALL WORK SHALL BE IN CONFORMANCE WITH THE APPLICABLE SECTIONS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (HEREIN AFTER REFERRED TO AS STANDARD SPECIFICATIONS) ADOPTED APRIL 1, 2016 AND SUPPLEMENTAL SPECIFICATIONS. WITHIN THE STANDARD SPECIFICATIONS, ARTICLES 105.01, 105.09, 105.10, 105.11, 105.12, 105.13 AND SECTION 109 SHALL NOT BE INCORPORATED INTO THIS CONTRACT.
2. SCOPE OF WORK: THE PROPOSED IMPROVEMENTS CONSIST OF SUPPLYING ALL THE NECESSARY LABOR, MATERIAL AND EQUIPMENT TO SATISFACTORILY CONSTRUCT AND INSTALL ALL IMPROVEMENTS ACCORDING TO THE PLANS.
3. CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO LOCATE AND PROTECT ALL UNDERGROUND FACILITIES/UTILITIES DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS AND CONTACT THE OWNER. ANY DAMAGE TO ANY UTILITIES SHALL BE PROMPTLY REPORTED TO THE OWNER. REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE UNDERGROUND UTILITIES SHOWN HEREIN ARE APPROXIMATE AND BASED ON THE ACTUAL LOCATION OF SURFACE STRUCTURES AND PLANS PROVIDED BY THE OWNER. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVE GROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS.
4. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED HAZARD WARNING LIGHTS, DELINEATOR FENCE, AND OTHER ASSOCIATED FACILITIES AS REQUIRED FOR OPEN TRENCHES, EXCAVATIONS, TEMPORARY STOCK PILES, AND PARKED CONSTRUCTION EQUIPMENT THAT MAY POSE A POTENTIAL HAZARD AS PART OF THE DAILY OPERATIONS AT THIS SITE. CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY.
5. CONTRACTOR SHALL CONTINUOUSLY COMPARE ALL LINES, GRADES, AND OTHER INFORMATION APPEARING ON THE PLANS WITH THE ACTUAL LINES, GRADES, AND SITE CONDITIONS. ANY DISCREPANCIES THAT MAY AFFECT THE PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS SHALL BE IMMEDIATELY REPORTED TO THE OWNER AND ENGINEER IN WRITING FOR DISPOSITION BEFORE CONTRACTOR PROCEEDS WITH THE WORK. CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR THE WORK COMPLETED PRIOR TO THE REPORT TO THE OWNER AND ENGINEER, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CORRECTION OF THE WORK PRIOR TO THE REPORT TO THE OWNER AND ENGINEER.
6. CONTRACTOR PARKING AND LAYDOWN AREAS SHALL BE COORDINATED WITH THE OWNER.
7. PRIOR TO PERFORMING ANY WORK IN OR ON THE RIGHT OF WAY OF ANY CITY OR STATE ROADWAY, THE CONTRACTOR SHALL NOTIFY THE CITY / STATE TRAFFIC ENGINEER'S OFFICE. THE CONTRACTOR SHALL ERECT WARNING SIGNS AND BARRICADES TO PROTECT THE TRAVELING PUBLIC AND HIS WORKERS. THE SIGNING AND BARRICADING SHALL CONFORM TO THE APPROPRIATE APPLICATIONS OUTLINED IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OR AS OTHERWISE DIRECTED BY THE CITY / STATE TRAFFIC ENGINEER. IF PERMITS ARE REQUIRED TO CONDUCT THE WORK, THE CONTRACTOR SHALL SECURE THE PERMITS AND SUPPLY THEM TO THE OWNER AT NO ADDITIONAL COST. ALL FULL WIDTH LANE CLOSURES, PARTIAL LANE CLOSURES, AND CONSTRUCTION ADJACENT TO PAVEMENT SHALL BE IDENTIFIED, SIGNED, AND BARRICADES ERECTED IN CONFORMANCE WITH THE APPLICABLE ARTICLES OF SECTION 701 OF THE STANDARD SPECIFICATIONS AND THE MUNICIPALITY'S REQUIREMENTS. ALL TRAFFIC PROTECTION, BOTH ONSITE AND OFFSITE, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
8. CONTRACTOR SHALL REMOVE EARTHEN MATERIALS, EXISTING SURFACES, AND STRUCTURES AS REQUIRED. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OFF-SITE AND SHALL BE INCIDENTAL TO THE CONTRACT.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, UNLESS NOTED. THIS WILL INCLUDE BUT NOT BE LIMITED TO MUNICIPAL BUILDING PERMIT. THE OWNER WILL SECURE THE N.P.D.E.S. PERMIT. THE CONTRACTOR SHALL PROVIDE ANY FINANCIAL SURETIES REQUIRED AS PART OF ANY PERMIT.
10. WHEN CONCRETE IS PLACED ABUTTING STRUCTURES, FOUNDATIONS OR EXISTING SIDEWALKS, A BOND BREAKER CONSISTING OF 1" P.J.F. AND ELASTOMERIC JOINT SEALANT SHALL BE USED FULL DEPTH UNLESS OTHERWISE NOTED.
11. MAXIMUM CONSTRUCTION JOINT SPACING ON CONCRETE CURB AND GUTTER OR CONCRETE GUTTER SHALL NOT EXCEED 25'.
12. SIDEWALK RAMPS FOR ADA SHALL BE IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN. DETECTABLE WARNINGS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
13. HOT-MIX ASPHALT PAVEMENT PATCHING SHALL BE IN ACCORDANCE WITH SECTION 442 OF THE STANDARD SPECIFICATIONS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING ELECTRONIC AS-BUILT DRAWINGS, FOR UTILITIES AND DETENTION AREAS, TO THE OWNER, ENGINEER, AND VILLAGE OF ORLAND PARK FOR REVIEW AND APPROVAL PRIOR TO PROJECT ACCEPTANCE.
15. CONSTRUCTION STAKING, LAYOUT, AND GRADING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR USING THE BASIC TOPOGRAPHIC SURVEY CONTROLS PROVIDED IN THE PLANS. CONTRACTOR SHALL VERIFY SURVEY CONTROLS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES IN THE SURVEY CONTROLS SHALL BE REPORTED TO THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION. AN ADDITIONAL SURVEY CONTROLS REQUIRED FOR CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
16. CONTRACTOR SHALL COORDINATE ALL UTILITY LINE CROSSINGS TO ENSURE ALL PIPES MAINTAIN MINIMUM COVER, MINIMUM CLEARANCES, AND PROPER SEPARATION. GRAVITY LINES SHALL HAVE PRECEDENCE OVER PRESSURIZED LINES.
17. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL ITEMS INCORPORATED INTO THE WORK FOR ENGINEER REVIEW AND APPROVAL A MINIMUM OF 4 WEEKS PRIOR TO ORDERING.
18. REFERENCES TO "INSPECTION" OR "INSPECTOR" IN THE SPECIFICATIONS SHALL NOT CREATE, IMPOSE, OR GIVE RISE TO ANY DUTY OWED BY THE OWNER OR ENGINEER TO THE CONTRACTOR, ANY SUBCONTRACTOR, OR ANY SUPPLIER. ALL IMPROVEMENTS SHALL BE SUBJECT TO INSPECTION BY A DULY AUTHORIZED AND QUALIFIED OWNER'S REPRESENTATIVE BOTH DURING THE COURSE OF CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETE. THE INSPECTOR SHALL HAVE AUTHORITY OVER MATERIALS OF CONSTRUCTION, METHODS OF CONSTRUCTION AND WORKSMANSHIP TO ENSURE COMPLIANCE WITH WORKING DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE FOR REASONABLE TESTS AND PROOF OF QUALITY OF MATERIALS AS REQUESTED BY THE INSPECTOR. UPON DUE CAUSE, WHICH SHALL INCLUDE WEATHER CONDITIONS, WORKSMANSHIP OR NON-ADHERANCE TO THE APPROVED PLANS AND SPECIFICATIONS, THE INSPECTOR SHALL HAVE THE AUTHORITY TO STOP CONSTRUCTION.
19. WHERE SECTION, SUB-SECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR HAS WITNESSED OR REFERENCED THEIR LOCATION.
20. ALL TRENCH BACKFILL SHALL BE IMPORTED GRANULAR MATERIAL UNLESS EXISTING GRANULAR MATERIALS ARE SPECIFICALLY APPROVED BY THE OWNER'S REPRESENTATIVE.
21. ALL AGGREGATE BASE COURSE SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY.
22. ALL AGGREGATE BASE AREAS TO BE PAVED (PAVEMENT, SIDEWALK, CURB, OR STRUCTURES) SHALL BE PROOF-ROLLED WITH SEVERAL PASSES OF A FULLY LOADED DUMP TRUCK. CONTRACTOR SHALL NOTIFY THE VILLAGE OF ORLAND PARK AND OWNER AND/OR ENGINEER 24 HOURS PRIOR TO PROOF ROLL AND SHALL MAKE ALL CORRECTIONS TO PROVIDE A SATISFACTORY SUBGRADE.
23. ANY UNCONTROLLED CRACKING THAT OCCURS IN CONCRETE PAVEMENT, SIDEWALK, CURB, OR CURB AND GUTTER PRIOR TO FINAL ACCEPTANCE SHALL BE ROUTED OR SAWED AND SEALED ACCORDING TO THE STANDARD SPECIFICATIONS.
24. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES PRIOR TO ANY WORK IN AND AROUND UTILITY-OWNED INFRASTRUCTURE AND MAKE THEM AWARE OF WORK TO BE PERFORMED.
25. ALL SIDEWALKS SHALL BE 5 INCHES IN THICKNESS AND REINFORCED WITH 6" x 6" WIRE MESH AND 5 FEET IN WIDTH. ALL SIDEWALKS SHALL BE CONSTRUCTED WITH A MIN. CROSS SLOPE OF 1% AND A MAX. CROSS SLOPE OF 2%. SIDEWALK THICKNESS SHALL BE INCREASED TO A MINIMUM 6" AT DRIVEWAYS OR AS REQUIRED BY THE MUNICIPALITY. ALL SIDEWALKS AT CURB DEPRESSIONS SHALL INCLUDE A DETECTABLE WARNING BY THE MUNICIPALITY. ALL SIDEWALKS AT CURB DEPRESSIONS SHALL INCLUDE A DETECTABLE WARNING BY THE VISION IMPAIRED CONSISTING OF TRUNCATED DOMES. THE WARNING AREA SHALL BEGIN SIX (6) INCHES FROM THE BACK OF CURB AND CONTINUE FOR TWO (2) FEET IN THE DIRECTION OF PEDESTRIAN TRAVEL FOR THE ENTIRE WIDTH OF THE WALKING SURFACE. DETECTABLE WARNINGS SHALL BE EAST JORDAN DWS ADOBE RED. SEE VILLAGE LDC SECTION 6-406.A FOR MORE INFORMATION.

- 26. ANY SIDEWALKS, FENCES, AND OTHER ITEMS NOT SHOWN TO BE REMOVED, BUT DAMAGED DURING CONSTRUCTION, SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
27. CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCY A MINIMUM OF 48 HOURS PRIOR TO CONNECTING TO OR INSTALLING ANY PUBLIC SEWER OR WATER MAINS.
28. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE PROJECT SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, THE CONTRACTOR MUST IMMEDIATELY PROVIDE THE INFORMATION TO THE ENGINEER BEFORE DOING ANY WORK. OTHERWISE, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK EFFECTED BY OMISSIONS OR DISCREPANCIES. IF THE CONTRACTOR FAILS TO SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL.

EXISTING TOPOGRAPHY:

- 1. ALL UTILITIES SHOWN ARE APPROXIMATE ONLY AND ARE DERIVED FROM EXISTING UTILITY MARKINGS, OLD SITE PLANS, UTILITY COMPANY MAPS, PRIVATE LOCATOR AND OBSERVED EVIDENCE.
2. ALL PIPE SIZES REFERENCED HEREON ARE SHOWN ACCORDING TO UTILITY COMPANY MAPS, OLD SITE PLANS AND OBSERVED EVIDENCE. ALL PIPE SIZES AND INVERTS SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION.
3. PRIOR TO ANY EXCAVATION CONTRACTORS SHALL CALL THE TOLL FREE J.U.L.I.E. TELEPHONE NUMBER 1-800-892-0123. ALLOW 48 HOURS FOR LOCATIONS OTHER THAN EMERGENCY ASSISTANCE.

SITE DEMOLITION:

- 1. EXISTING UTILITIES TO REMAIN, WHICH ARE DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION, SHALL BE REPAIRED AND/OR REPLACED WITHOUT ADDITIONAL COMPENSATION. CONFLICTS WITH PROPOSED CONSTRUCTION AND UTILITIES TO REMAIN ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONSTRUCTION MANAGER FOR COORDINATION WITH THE OWNER'S REPRESENTATIVE, ENGINEER, AND UTILITY COMPANY.
2. NO DEMOLITION OR CONSTRUCTION ACTIVITIES SHALL TAKE PLACE WITHIN PUBLIC RIGHT-OF-WAY UNTIL ALL PERMITS ARE SECURED.
3. ALL PAVEMENT TO BE REMOVED SHALL BE SAWCUT FULL DEPTH.
4. CONTRACTOR SHALL EMPLOY ALL MEASURES NECESSARY DURING DEMOLITION TO CONTROL EROSION AND INSURE THAT SEDIMENT DOES NOT LEAVE THE SITE. TRACKING OF DIRT ONTO PUBLIC STREETS AND EXISTING PARKING LOT SHALL BE CLEANED IMMEDIATELY, AND ALL SEDIMENT AND EROSION CONTROL ITEMS SHALL BE INSTALLED PRIOR TO CLEARING AND DEMOLITION WORK. THE VILLAGE MAY REQUEST CLEANING OF THE SITE OR ADJACENT ROADWAYS AT THEIR DISCRETION.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING SITE CONDITIONS AND BECOMING FAMILIAR WITH ALL CONSTRUCTION DOCUMENTS.
6. ITEMS INDICATED TO BE REMOVED SHALL BE COMPLETELY REMOVED UNLESS INDICATED OTHERWISE.
7. ITEMS INDICATED TO BE SALVAGED SHALL BE CAREFULLY REMOVED AND STORED IN A LOCATION DESIGNATED BY THE OWNER.
8. ALL TREES AND BRUSH INDICATED TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ROOT BALLS.
9. UNLESS OTHERWISE IDENTIFIED AND/OR NOTED ON THE DEMOLITION PLAN, CONTRACTOR SHALL FULLY DEMOLISH, REMOVE, AND LAWFULLY DISPOSE OF ALL EXISTING BUILDINGS, IMPROVEMENTS, AND RELATED APPURTENANCES AT THIS SITE AND PROPERTY. CONTRACTOR SHALL ALSO DEMOLISH, REMOVE, AND LAWFULLY DISPOSE OF EXISTING IMPROVEMENTS AND CONSTRUCTIONS IN THE PUBLIC RIGHT-OF-WAY NECESSARY TO ACCOMPLISH THE NEW PROJECT WORK DESCRIBED ELSEWHERE IN THESE BIDDING AND CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL PROCURE ALL NECESSARY PERMITS AND APPROVALS FOR SUCH DEMOLITION WORK (BOTH INSIDE THE PROPERTY LINE AND IN THE PUBLIC RIGHT-OF-WAY) PRIOR TO COMMENCING ANY DEMOLITION OPERATIONS.
10. CONTRACTOR SHALL FULLY PROTECT ALL SURROUNDING PROPERTIES FROM ANY AND ALL DAMAGE DURING DEMOLITION OPERATIONS; AND SHALL BE FULLY RESPONSIBLE FOR REPAIRING (TO A CONDITION ACCEPTABLE TO THE OWNER AND ARCHITECT) ANY AND ALL DAMAGE THAT DOES OCCUR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROLS AND RELATED APPURTENANCES THAT ARE REQUIRED BY ANY APPLICABLE CODES AND ORDINANCES, DURING ALL DEMOLITION OPERATIONS.
12. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SAFETY AND SECURITY OF THE PROJECT SITE AND ITS SURROUNDINGS DURING DEMOLITION OPERATIONS.
13. ALL DEMOLISHED EXISTING MATERIALS, SYSTEMS, AND CONSTRUCTIONS SHALL BE DISPOSED OF IN A LAWFUL MANNER, AND WRITTEN RECORDS OF THE FINAL DESTINATION FOR THESE MATERIALS, SYSTEMS, AND CONSTRUCTIONS (INCLUDING ANY IDENTIFIED HAZARDOUS ITEMS) SHALL BE PROVIDED TO THE OWNER AND ENGINEER. ADDITIONALLY, SOME EXISTING MATERIALS AND SYSTEMS MAY NEED TO BE RECYCLED AND/OR OTHERWISE SALVAGED IN ORDER TO MEET THE SUSTAINABILITY AND LEED REQUIREMENTS OF THIS PROJECT. SEE OTHER PORTIONS OF THESE BIDDING AND CONSTRUCTION DOCUMENTS FOR SUCH REQUIREMENTS.
14. EXISTING SITE SHALL BE CLEANED ON A DAILY BASIS THROUGHOUT THE DURATION OF DEMOLITIONS OPERATIONS; AND NO DEBRIS OR PRODUCTS OF DEMOLITION SHALL BE ALLOWED TO ACCUMULATE OUTSIDE THE BOUNDARIES OF THE SITE.
15. CONTRACTOR SHALL FULLY COORDINATE ALL PROJECT DEMOLITION OPERATIONS, INCLUDING THE REMOVAL AND LAWFUL DISPOSAL OF ALL IDENTIFIED HAZARDOUS MATERIALS AND SYSTEMS.
16. CONTRACTOR MUST ORGANIZE A PRE-CONSTRUCTION MEETING WITH THE VILLAGE OF ORLAND PARK ENGINEERING DEPARTMENT PRIOR TO SITE DISTURBANCE. CONTRACTOR SHALL SUBMIT A COMPLETE WRITTEN PLAN AND SCHEDULE FOR ALL PROPOSED DEMOLITION WORK TO VILLAGE, OWNER AND ARCHITECT FOR REVIEW AND COMMENT, PRIOR TO BEGINNING ANY SUCH OPERATIONS. DURING THE COURSE OF THIS DEMOLITION WORK, IF ANY ARTIFACTS OR OTHER UNUSUAL ITEMS ARE DISCOVERED, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IMMEDIATELY, BEFORE PROCEEDING ANY FURTHER. ANY EXPENSES RESULTING FROM THE FAILURE TO PROVIDE SUCH IMMEDIATE NOTIFICATION SHALL BE BORNE BY THE CONTRACTOR.

SITE LAYOUT:

- 1. JOINTS IN SIDEWALK SHALL BE TOOLED AT 5' MAX. INTERVALS, UNLESS INDICATED OTHERWISE.
2. NORTHING-EASTING COORDINATES AND DIMENSIONS FOR CURB AND GUTTER ARE TO FACE OF CURB.
3. CONTRACTOR SHALL COORDINATE ALL WORK WITHIN PUBLIC RIGHT-OF-WAY WITH THE APPROPRIATE PUBLIC AGENCY. NOTIFICATION SHALL OCCUR A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN PUBLIC RIGHT-OF-WAY. ALL PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
4. P.C. CONCRETE PAVEMENT AND SIDEWALKS SHALL BE CLASS PV AND CLASS SI, RESPECTIVELY, IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING SITE CONDITIONS AND BECOMING FAMILIAR WITH ALL CONSTRUCTION DOCUMENTS.
6. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND DOOR LOCATIONS.

CONTRACTOR SHALL COORDINATE EQUIPMENT PADS WITH EQUIPMENT MANUFACTURERS.

SITE GRADING AND EROSION CONTROL:

- 1. ALL SUBGRADE EXCAVATION AND COMPACTION SHALL BE COMPLETED IN ACCORDANCE WITH THE "SOILS REPORT" PREPARED BY \_\_\_\_\_, DATED \_\_\_\_\_.
2. ENGINEERED STRUCTURAL FILLS SHALL BE INCLUDED IN OVERALL SITE DEVELOPMENT TO PROVIDE ADEQUATE STRUCTURAL SUPPORT FOR THE FLOOR SLABS ON GRADE AND ADJOINING PAVEMENT AREAS. REFER TO THE GEOTECHNICAL REPORT FOR APPROVED FILL MATERIALS.
3. WHERE FIRM FOUNDATION MATERIAL IS NOT ENCOUNTERED AT THE GRADE ESTABLISHED, DUE TO UNSUITABLE SOIL, ALL SUCH UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH APPROVED COMPACTED GRANULAR MATERIAL.
4. TOPSOIL SHALL BE STRIPPED IN ALL STRUCTURAL FILL AREAS BEFORE PLACEMENT OF FILL MATERIAL AND SHALL BE STOCKPILED IN AREAS DESIGNATED BY THE OWNER OR PER PLAN.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM EARTHWORK CALCULATIONS BASED ON THE PROVIDED PLANS AND TO LAWFULLY DISPOSE OF AND REMOVE ANY EXCESS MATERIAL FROM THE PROJECT SITE, OR TO PROVIDE ANY NECESSARY FILL MATERIAL THAT MAY BE REQUIRED TO MEET THE FINAL PLAN GRADES. THE DISPOSAL OR PROVIDING OF MATERIAL SHALL BE INCIDENTAL TO THE CONTRACT.
6. ALL VEGETATIVE AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "ILLINOIS URBAN MANUAL."
7. THE OWNER/ENGINEER SHALL PROVIDE THE SOIL EROSION AND SEDIMENT CONTROL PLANS INCLUDED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTATION OF THE STORMWATER POLLUTION PREVENTION PLAN BOOKLET AND ASSOCIATED DOCUMENTS IN ACCORDANCE WITH THE "GENERAL NPDES PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITE ACTIVITIES," AND A COPY SHALL BE KEPT ONSITE AT ALL TIMES.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE INSTALLATION, ALL INSPECTIONS, AND MAINTENANCE OF ALL EROSION CONTROL FACILITIES REQUIRED BY THE GENERAL NPDES PERMIT UNTIL FINAL STABILIZATION OF ALL AREAS DISTURBED BY CONSTRUCTION OCCURS. MAINTENANCE AND REPLACEMENT OF EROSION CONTROL ITEMS SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.
9. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY MUST BE SEED, SODDED, BLANKETED OR OTHERWISE PROTECTED WITHIN SEVEN (7) DAYS OF FINAL DISTURBANCE. ALL AREAS DISTURBED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THIS PROJECT WHICH ARE LOCATED OUTSIDE OF THE PROPOSED SEEDING LIMITS SHALL BE GRADED TO DRAIN, FERTILIZED, SEED, MULCHED AND WATERED. THE COST ASSOCIATED WITH THE PLACEMENT OF ADDITIONAL FERTILIZER, SEED, MULCH AND WATERING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A MINIMUM OF 70% VEGETATIVE COVERAGE IS REQUIRED PRIOR TO ACCEPTANCE. SEE LANDSCAPE PLANS FOR ADDITIONAL REQUIREMENTS.
10. ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN ARE THE MINIMUM MEASURES REQUIRED. UNFORESEEN CHANGES IN SCOPE, SCHEDULE OR CONSTRUCTION METHODS MAY RESULT IN CHANGES OR ADDITIONS TO THIS PLAN AND THE SWPPP. ANY CHANGES OR ADDITIONS NECESSARY TO MAINTAIN COMPLIANCE WITH THE NPDES PERMIT SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE VILLAGE OR ORLAND PARK.
11. SHOULD PROJECT SCHEDULING PROHIBIT THE ABILITY TO SEED DISTURBED EARTH UPON COMPLETION OF GRADING, CONTRACTOR SHALL EMPLOY ALTERNATE SOURCE CONTROLS IN ADDITION TO THOSE ON THIS PLAN, INCIDENTAL TO THE CONTRACT.
12. DUST CONTROL MUST BE PROVIDED AS NEEDED, BY WATERING OR OTHER MEANS.
13. ALL AREAS WITH THE EXCEPTION OF PAVEMENT SHALL BE FINISHED IN ACCORDANCE WITH THE LANDSCAPE PLANS INCLUDED IN THE PLAN SET.
14. CONTRACTOR SHALL INSTALL INLET FILTER PROTECTION BASKETS INSIDE ALL EXISTING AND PROPOSED MANHOLES AND INLET FRAMES.
15. CONTRACTOR IS REQUIRED TO PROVIDE AND USE A CONCRETE WASHOUT AREA FOR RINSING CONCRETE TRUCKS.
16. CONTRACTOR IS REQUIRED TO PROVIDE AND USE A TEMPORARY CONSTRUCTION ENTRANCE FOR ALL CONSTRUCTION TRAFFIC PER PLAN.
17. CONTRACTOR SHALL PROVIDE AND USE A WHEEL WASH SYSTEM TO ENSURE THAT ALL CONSTRUCTION TRAFFIC ENTERING AND EXITING THE SITE MAINTAIN CLEAN TIRES. ANY SEDIMENT TRACKED ONTO ADJACENT ROADWAYS OR PAVED AREAS SHALL BE REMOVED BY THE CONTRACTOR BY THE END OF THE SAME WORK DAY.
18. ALL ELEVATIONS SHOWN ARE TO FINISHED PAVEMENT UNLESS SPECIFIED OTHERWISE.
19. ALL SLOPES GREATER THAN OR EQUAL TO 4:1 SHALL BE STABILIZED WITH NAG S75BN OR EQUIVALENT.
20. CONTRACTOR SHALL PROVIDE A MINIMUM OF 6" TOPSOIL IN ALL ISLANDS, LANDSCAPE AREAS, AND OPEN SPACES.

SITE UTILITIES:

- 1. THIS CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
A. "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", CURRENT EDITION.
B. ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION"
C. VILLAGE OF ORLAND PARK OFFICE OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS
2. ALL UTILITY TRENCHES UNDER OR WITHIN 2' OF EXISTING OR PROPOSED PAVEMENT OR BUILDING SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH IDOT SPECIFICATIONS. CONTROLLED LOW-STRENGTH MATERIAL (CLSM) SHALL BE USED TO BACKFILL TRENCHES WITHIN PUBLIC RIGHT OF WAY. THE CLSM SHALL EXTEND 2 FT PAST THE PROPOSED PAVEMENT, CURB, OR SIDEWALK.
3. OPEN CUT TRENCHES SHALL BE SHEETED AND BRACED AS REQUIRED BY THE GOVERNING STATE, FEDERAL LAWS AND MUNICIPAL ORDINANCES, AND AS MAY BE NECESSARY TO PROTECT LIFE, PROPERTY OR THE WORK.
4. CONTRACTOR SHALL AT ALL TIMES DURING CONSTRUCTION PROVIDE AND MAINTAIN SUFFICIENT MEANS AND DEVICES TO REMOVE AND PROPERLY DISPOSE OF ALL WATER ENTERING THE EXCAVATIONS. WATER SHALL BE FILTERED AND DISCHARGED IN ACCORDANCE WITH THE NPDES REQUIREMENTS.
5. ALL PIPE SHALL BE INSTALLED ON A BEDDING OF APPROVED, COMPACTED GRANULAR MATERIAL UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE BEDDING MATERIAL SHALL BE INSTALLED PER STANDARD SPECIFICATIONS AND PROVIDED PLAN DETAILS.
6. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN ALL WATER MAINS AND SEWERS. IF SEPARATION IS NOT POSSIBLE, WATER MAIN ENCASEMENT SHALL BE REQUIRED OR THE SEWER SHALL BE CONSTRUCTED OF WATER MAIN QUALITY PIPE.
7. WATER MAINS SHALL CROSS ABOVE SEWERS WITH A MINIMUM VERTICAL SEPARATION OF 18 INCHES WHILE STILL MAINTAINING THE REQUIRED DEPTH OF COVER. IF PROPER SEPARATION IS NOT POSSIBLE, OR IF THE WATER MAIN MUST BE ROUTED UNDER THE SEWER, WATER MAIN ENCASEMENT SHALL BE REQUIRED OR THE SEWER SHALL BE CONSTRUCTED OF WATER MAIN QUALITY PIPE.
8. ALL SANITARY SEWERS SHALL BE TESTED FOR EXFILTRATION OF AIR UNDER PRESSURE, INFILTRATION OF WATER, AND/OR EXFILTRATION OF WATER AS PER STANDARD SPECIFICATIONS. ALL SANITARY SEWERS SHALL BE DEFLECTION TESTED NO SOONER THAN 30 DAYS AFTER INSTALLATION. ALL MANHOLES SHALL BE TESTED FOR WATERTIGHTNESS BY EITHER ASTM C 969 OR ASTM C 1244.
9. STORM SEWER SHALL BE IN CONFORMANCE WITH THE VILLAGE OF ORLAND PARK LAND DEVELOPMENT CODE SECTION 6-409.F.
A. SEWER PIPE:
a. SUMP PUMP SERVICE CONNECTION AND STORM SEWER EXTENSION (4" AND 6") - ABS SEWER PIPE OR PVC SEWER PIPE ASTM D2751, SDR35, OR ASTM D3034, SDR35, OR FLEXIBLE PLASTIC DRAIN PIPE.
b. CONCRETE SEWER PIPE (10" DIAMETER AND SMALLER), MINIMUM CLASS 3, ASTM C14.
c. REINFORCED CONCRETE PIPE (12" DIAMETER AND LARGER), CIRCULAR REINFORCEMENT, MINIMUM CLASS 3, WALL B, ASTM C76.
d. HIGH DENSITY POLYETHYLENE (HDPE) PIPE (12" DIAMETER TO 60" DIAMETER), ASTM D3350, ASTM F2648"
e. HDPE PIPE - ASTM F2648, ASTM F477, FITTINGS PER ASTM F2306.
f. REINFORCED CONCRETE ARCH CULVERT PIPE - DOUBLE LINE REINFORCEMENT, MINIMUM CLASS 3, ASTM C506.
g. REINFORCED CONCRETE ELLIPTICAL CULVERT PIPE - MINIMUM CLASS HE-III OR VE-III, ASTM C507.
h. PVC UNDERDRAIN PIPE (4", 6", AND 8") - ASTM D2729, SDR35. (AMD. ORD. 5653 - 11/17/21)
B. SEWER PIPE JOINTS:
a. ABS PIPE - ASTM C443.
b. PVC PIPE - ASTM D3212, PUSH ON TYPE, EXCEPT UNDERDRAIN PIPE WHICH SHALL HAVE SOLVENT WELDED JOINTS.
c. REINFORCED CONCRETE PIPE - ASTM C443. (1" RING)
d. REINFORCED ARCH OR ELLIPTICAL PIPE - ASTM C877.

- C. CASING PIPES FOR AUGERED SLEEVES. STEEL PIPE - ASTM A120, 3/8" MINIMUM THICKNESS.
D. MANHOLES AND CATCH BASINS. (EXHIBIT NOS. ST5-01 AND ST5-02).
b. PRECAST REINFORCED CONCRETE - ASTM C478 AND ASTM C443.
c. SIZE: FOR SEWER 18" DIAMETER OR LESS, MANHOLE SHALL HAVE A 48" INSIDE DIAMETER. FOR SEWER 21" TO 36" DIAMETER, MANHOLE SHALL HAVE A 60" INSIDE DIAMETER. FOR SEWER GREATER THAN 36" DIAMETER, MANHOLE SHALL HAVE AN OFFSET RISER PIPE OF 48" INSIDE DIAMETER.
d. ADJUSTMENT: NO MORE THAN TWO (2) PRECAST CONCRETE ADJUSTING RINGS WITH SIX (6) INCH MAXIMUM HEIGHT ADJUSTMENT SHALL BE ALLOWED.
e. PIPE AND FRAME SEALS: ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER TIGHT PIPE TO MANHOLE SLEEVES OR SEALS. EXTERNAL FLEXIBLE WATER TIGHT SLEEVES SHALL ALSO EXTEND FROM THE MANHOLE CONE TO THE MANHOLE FRAME.
f. BOTTOM SECTIONS: ALL BOTTOM SECTIONS SHALL BE MONOLITHICALLY PRECAST INCLUDING BASES AND INVERT FLOWLINES.
E. INLETS. (EXHIBIT NO. ST5 05).
a. PRECAST REINFORCED CONCRETE ASTM C478 AND ASTM C443.
b. SIZE: INLETS SHALL HAVE 24" INSIDE DIAMETER AND A MAXIMUM DEPTH OF FOUR (4) FEET.
c. ADJUSTMENT: NO MORE THAN TWO (2) PRECAST CONCRETE ADJUSTING RINGS WITH SIX (6) INCH MAXIMUM HEIGHT ADJUSTMENT SHALL BE ALLOWED.
d. ONLY ONE (1) PIPE CONNECTION IS ALLOWED AND IT SHALL BE PRECAST WITH RESILIENT RUBBER WATER TIGHT PIPE TO MANHOLE SLEEVES OR SEALS.
e. BOTTOM SECTIONS: ALL BOTTOM SECTIONS SHALL BE MONOLITHICALLY PRECAST INCLUDING BASES AND INVERT FLOWLINES.
F. CASTINGS.
a. MANHOLE FRAME AND COVER EAST JORDAN IRON WORKS, INC. #102223, 1020A HD.
b. MANHOLE STEPS EAST JORDAN IRON WORKS, INC. #8518.
c. SIX (6) INCH CURB AND CATCH BASIN INLET EAST JORDAN IRON WORKS, INC. #105123 AND 1020M1 GRATE.
d. THREE (3) INCH INLET AND CATCH BASIN INLET EAST JORDAN IRON WORKS, INC. #75252 FRAME AND 7525M GRATE.
e. YARD INLET EAST JORDAN IRON WORKS, INC. #6527 GRATE.
g. CRUSHED GRANULAR BEDDING. (EXHIBIT NO. ST5.11). CRUSHED GRAVEL OR CRUSHED STONE COURSE AGGREGATE ASTM C33, SIZE NO. 67.
H. HEADWALLS AND PRECAST END SECTIONS (EXHIBIT NOS. ST5 08, ST5 09). ALL PIPES SHALL TERMINATE AT REINFORCED CONCRETE HEADWALLS OR PRECAST END SECTIONS.

- 10. SANITARY SEWER SHALL BE IN CONFORMANCE WITH THE FOLLOWING:
A. PIPE AND FITTING MATERIAL - POLYVINYL CHLORIDE (PVC) SDR 26, ASTM D 3034, TYPE PSM
B. GASKETS - FLEXIBLE ELASTOMERIC, ASTM F 477, ASTM D 3139
C. JOINTS - ASTM D 3212
D. BEDDING - CLASS II, ASTM 2321
11. ALL CLEANOUT RIMS SHALL BE CONSTRUCTED FLUSH WITH THE FINISHED GROUND SURFACE.
12. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF SANITARY SEWER SERVICES WITH THE DEPARTMENT OF PUBLIC WORKS.
13. CONTRACTOR SHALL COORDINATE WATER MAIN, FIRE AND DOMESTIC WATER SERVICES WITH THE DEPARTMENT OF PUBLIC WORKS.
14. GENERAL CONTRACTOR SHALL COORDINATE ALL UTILITY LINES THAT ENTER THE BUILDING. IN GENERAL, PLUMBING PLANS SHOW ALL INTERIOR BUILDING PIPING AND PIPING UP TO 5-FEET OUTSIDE THE BUILDING. CIVIL PLANS SHOW SITE PIPING BEGINNING FROM 5- FEET OUTSIDE THE BUILDING. GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY CONNECTIONS.
15. CONTRACTOR SHALL COORDINATE ALL UTILITY LINE CROSSINGS TO ENSURE ALL PIPES MAINTAIN MINIMUM COVER, MINIMUM CLEARANCES, AND PROPER SEPARATION. GRAVITY LINES SHALL HAVE PRECEDENCE OVER PRESSURIZED LINES.
16. ALL TRENCH BACKFILL SHALL BE IMPORTED GRANULAR MATERIAL UNLESS EXISTING GRANULAR MATERIALS ARE SPECIFICALLY APPROVED BY THE OWNER'S REPRESENTATIVE.
17. ALL MANHOLES AND INLET CASTINGS LOCATED WITHIN BITUMINOUS ASPHALT PAVEMENT SHALL BE CONSTRUCTED WITH A CONCRETE APRON AT THE SURFACE.
18. FOR ALL WATERMAIN CONSTRUCTION:
A. WATER MAIN AND SERVICES TO BE INSTALLED WITH A MINIMUM OF 5'-6" OF COVER FROM FINISHED GRADE TO TOP OF WATER PIPE.
B. TWO COMPLETE PIPE LENGTHS OF RESTRAINED JOINT PIPE SHALL BE CONSTRUCTED ON THE BRANCH LEG OF ALL TEES AND BOTH SIDES OF ALL 90 DEGREE BENDS.
C. ONE COMPLETE PIPE LENGTH OF RESTRAINED JOINT PIPE SHALL BE CONSTRUCTED ON BOTH SIDES OF ALL 11-1/4 AND 22-1/2 DEGREE BENDS.
D. ALL BENDS, TEES, PLUGS, VALVES AND HYDRANTS SHALL BE RESTRAINED JOINT.
E. ALL WATERMAIN PIPE 4" AND LARGER SHALL BE POLY WRAPPED DUCTILE IRON PIPE SPECIAL CLASS 52, 250 PSI RATING, WITH SINGLE GASKET JOINTS. CEMENT LINING SHALL BE PROVIDED FOR ALL PIPE.
F. ALL PRESSURE SERVICE PIPE LESS THAN 4" SHALL BE COPPER PIPE, TYPE K OR PVC SDR 9 WITH A RESURE RATING OF 200 PSI.

INDEMNIFICATION:

- 1. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER, THE VILLAGE OF ORLAND PARK, AND WOLFPACK CONSULTING, LLC FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE CONTRACTOR'S WORK. IN ANY AND ALL CLAIMS AGAINST THE OWNER OR WOLFPACK CONSULTING, LLC BY ANY EMPLOYEE OF THE CONTRACTOR, OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY THE CONTRACTOR, OR ANYONE FOR WHOSE ACTS THE CONTRACTOR MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR UNDER WORKER'S COMPENSATIONS ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

INSURANCE REQUIREMENTS

- 1. THE CONTRACTOR SHALL PURCHASE AND MAINTAIN COMPREHENSIVE GENERAL LIABILITY AND OTHER INSURANCE SET FORTH BELOW WHICH WILL PROVIDE PROTECTION FROM CLAIMS WHICH MAY ARISE OUT OF OR RESULTING FROM THE PERFORMANCE OF WORK BY ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY THE CONTRACTOR OR BY ANYONE FOR WHOSE ACTS THE CONTRACTOR MAY BE LIABLE.
A. COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE COVERING ALL AUTOMOBILES, TRUCKS, TRAILERS AND ANY OTHER MOTORIZED EQUIPMENT OWNED OR LEASED BY THE CONTRACTOR.
B. WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE IN ANY AMOUNT NOT LESS THAN STATUTORY LIMITS REQUIRED BY LAW.
C. COMPREHENSIVE GENERAL LIABILITY INSURANCE INCLUDING COVERAGE IN THE AMOUNT OF \$500,000 PER ACCIDENT FOR PROPERTY DAMAGE AND \$1,000,000 PER PERSON AND \$3,000,000 AGGREGATE PER ACCIDENT FOR BODILY INJURY, SICKNESS OR DISEASE, OR DEATH OF ANY PERSON.
2. CERTIFICATE OF INSURANCE
A. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL HE HAS FILED WITH THE MUNICIPALITY AND ITS INSPECTOR A CERTIFICATE OF INSURANCE SHOWING COMPLETE COVERAGE OF ALL INSURANCE REQUIRED, SIGNED BY THE INSURANCE COMPANIES OR THEIR AUTHORIZED AGENTS. EACH CERTIFICATE SHALL PROVIDE THAT COVERAGE SHALL NOT BE TERMINATED OR REDUCED WITHOUT 30 DAYS ADVANCE WRITTEN NOTICE TO THE MUNICIPALITY AND ITS INSPECTOR. THE CONTRACTOR SHALL NAME THE OWNER, THE VILLAGE OF ORLAND PARK AND WOLFPACK CONSULTING, LLC AS ADDITIONAL INSURED ON THE COMPREHENSIVE GENERAL LIABILITY AND AUTOMOBILE LIABILITY POLICIES.

CONSTRUCTION MEANS, METHODS, SAFETY

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS, INCLUDING OSHA STANDARDS AND WITH ANY OTHER APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR TO PROTECT THEM FROM DAMAGE, INJURY OR LOSS. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT AND SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND UPSURVISING ALL SAFETY PRECAUTIONS AND PROGRAMS UTILIZED BY THE CONTRACTOR AND HIS SUB-CONTRACTORS IN THE PERFORMANCE OF THEIR WORK AND SHALL TAKE ANY OTHER ACTIONS NECESSARY TO PROTECT THE LIFE AND HEALTH OF EMPLOYEES ON THE JOB AND THE SAFETY OF THE PUBLIC AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES, EQUIPMENT, AND FOR SAFETY PRECAUTIONS OR PROGRAMS, UNLESS SUCH MEANS AND EQUIPMENT ARE SPECIFIED IN THESE CONTRACT DOCUMENTS, UTILIZED IN THE PERFORMANCE OF WORK ON THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH SECTION 108.06 LABOR, METHODS, AND EQUIPMENT OF THE "STANDARD SPECIFICATIONS."

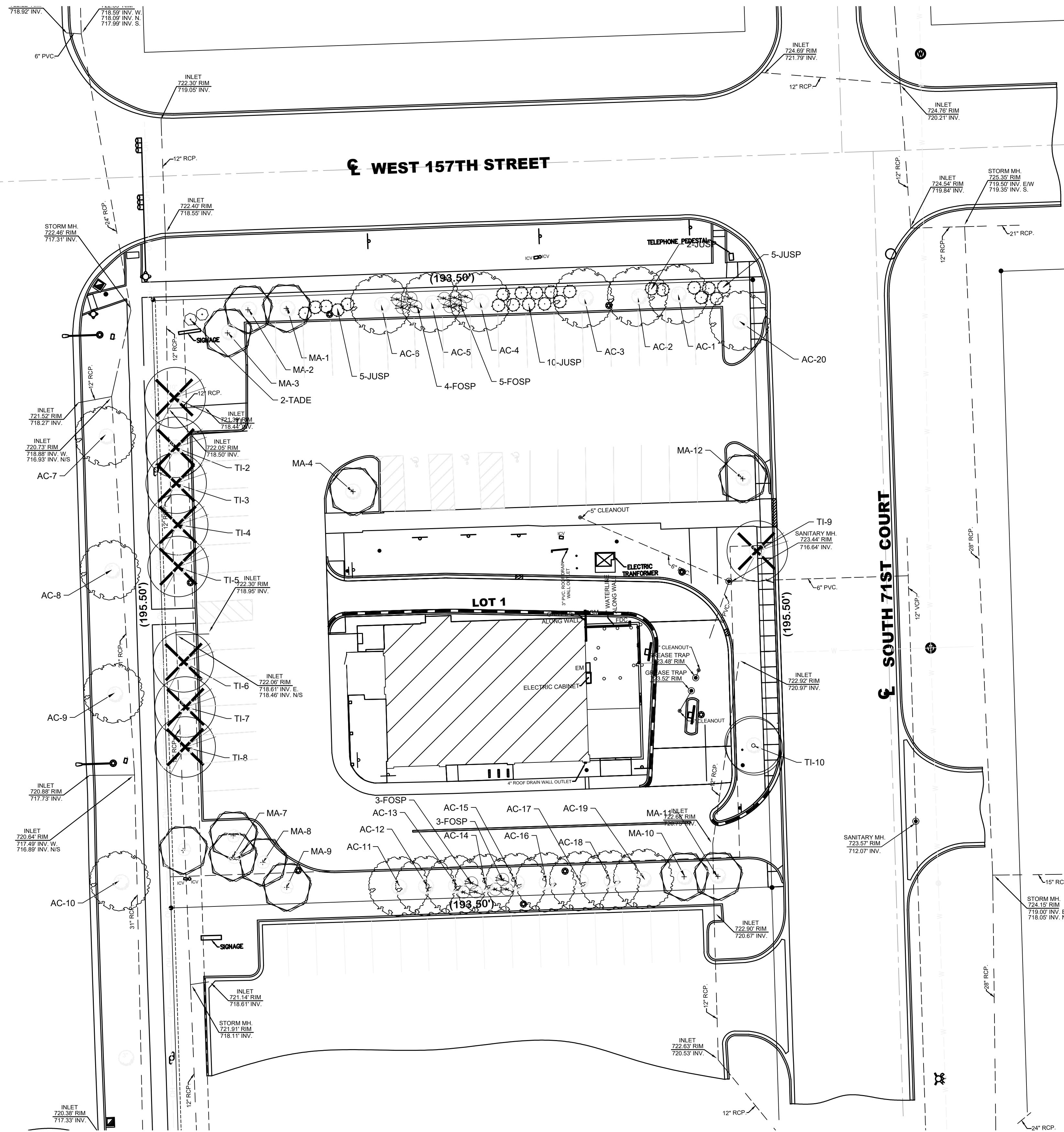
Vertical banner on the right side containing project name 'ORLAND PARK RAINBOW CONE', specifications 'GENERAL NOTES & SPECIFICATIONS', 'SUSTAINABLE DESIGN | SUSTAINABLE LIVING', 'Wolf Pack CONSULTING, LLC' logo and contact information, and revision table with 'REVISIONS' column and 'REVISED PER VILLAGE REVIEW'.



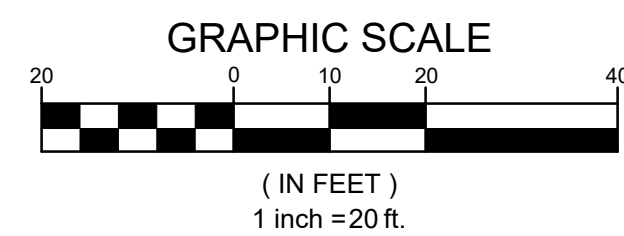
☒ SOUTH HARLEM AVENUE

☒ WEST 157TH STREET

☒ SOUTH 71ST COURT



**X** = TREE TO BE REMOVED



**EXISTING PLANT SCHEDULE (TO REMAIN)**

SHADE TREES						
KEY	QTY	SIZE	SPECIES	COMMON	CONDITION*	NOTES
AC-1	1	8"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-2	1	8"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-3	1	9"	<i>Acer x freemanii</i>	Freeman Maple	4	
AC-4	1	8"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-5	1	8"	<i>Acer x freemanii</i>	Freeman Maple	4	
AC-6	1	8"	<i>Acer x freemanii</i>	Freeman Maple	4	
AC-7	1	3"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-8	1	3"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-9	1	3"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-10	1	3"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-11	1	8"	<i>Acer x freemanii</i>	Freeman Maple	4	
AC-12	1	6"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-13	1	6"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-14	1	7"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-15	1	7"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-16	1	7"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-17	1	7"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-18	1	8"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-19	1	7"	<i>Acer x freemanii</i>	Freeman Maple	5	
AC-20	1	9"	<i>Acer x freemanii</i>	Freeman Maple	5	
TI-10	1	10"	<i>Tilia cordata</i>	Littleleaf Linden	4	

ORNAMENTAL TREES						
KEY	QTY	SIZE	SPECIES	COMMON	CONDITION*	NOTES
MA-1	1	12"	<i>Malus spp.</i>	Crabapple	5	
MA-2	1	9"	<i>Malus spp.</i>	Crabapple	5	
MA-3	1	9"	<i>Malus spp.</i>	Crabapple	4	
MA-4	1	7"	<i>Malus spp.</i>	Crabapple	4	
MA-5	1	3"	<i>Malus spp.</i>	Crabapple	4	MULTISTEM FORM
MA-6	1	3"	<i>Malus spp.</i>	Crabapple	3	MULTISTEM FORM
MA-7	1	3"	<i>Malus spp.</i>	Crabapple	4	MULTISTEM FORM
MA-8	1	3"	<i>Malus spp.</i>	Crabapple	4	MULTISTEM FORM
MA-9	1	3"	<i>Malus spp.</i>	Crabapple	4	MULTISTEM FORM
MA-10	1	10"	<i>Malus spp.</i>	Crabapple	4	
MA-11	1	12"	<i>Malus spp.</i>	Crabapple	4	
MA-12	1	8"	<i>Malus spp.</i>	Crabapple	4	

DECIDUOUS SHRUBS						
KEY	QTY	SIZE	SPECIES	COMMON	CONDITION*	NOTES
FOSP	15	36" HT	<i>Forsythia sp.</i>	Forsythia	3 - 4	

EVERGREEN SHRUBS						
KEY	QTY	SIZE	SPECIES	COMMON	CONDITION*	NOTES
JUSP	20	24-30" ht	<i>Juniperus sp.</i>	Juniper	3 - 5	
TADE	2	24" ht.	<i>Taxus densiformis</i>	Dense Yew	4	

\*CONDITION KEY  
5 = EXCELLENT; 4 = GOOD; 3 = FAIR; 2 = POOR; 1 = CRITICAL

**TREES TO BE REMOVED (TREE MITIGATION)**

SHADE TREES						
KEY	QTY	SIZE	SPECIES	COMMON	CONDITION*	MITIGATION
TI-1	1	10"	<i>Tilia cordata</i>	Littleleaf Linden	3	1 TREE
TI-2	1	9"	<i>Tilia cordata</i>	Littleleaf Linden	2	1 TREE
TI-3	1	10"	<i>Tilia cordata</i>	Littleleaf Linden	2	1 TREE
TI-4	1	9"	<i>Tilia cordata</i>	Littleleaf Linden	2	1 TREE
TI-5	1	10"	<i>Tilia cordata</i>	Littleleaf Linden	3	1 TREE
TI-6	1	11"	<i>Tilia cordata</i>	Littleleaf Linden	2	1 TREE
TI-7	1	9"	<i>Tilia cordata</i>	Littleleaf Linden	3	1 TREE
TI-8	1	10"	<i>Tilia cordata</i>	Littleleaf Linden	2	1 TREE
TI-9	1	7"	<i>Tilia cordata</i>	Littleleaf Linden	3	1 TREE

**TOTAL MITIGATION TREES 9 TREES**

REVISIONS	
6/14/22	REVISED PER VILLAGE REVIEW
7/20/22	REVISED PER VILLAGE REVIEW

**SUSTAINABLE DESIGN | SUSTAINABLE LIVING**

**Wolf Pack CONSULTING, LLC**

Civil Engineering  
Land Planning  
Land Surveying  
Project Entitlements  
Stormwater Management

418 South Cass Avenue, Westmont, IL 60659  
Office: (630) 964-3117 • wolfpackdg.com

EXISTING LANDSCAPE AND TREE MITIGATION

RAINBOW CONE

15711 S HARLEM AVE, ORLAND PARK

PROJ. MGR.:	PJW
PROJ. ENG.:	KM
DRAWN BY:	MD
DATE:	04-19-22
SCALE:	1"=20'
<b>SHEET NO. L1.0</b>	
PROJ. NUMBER:	



SOUTH HARLEM AVENUE

WEST 157TH STREET

SOUTH 71ST COURT

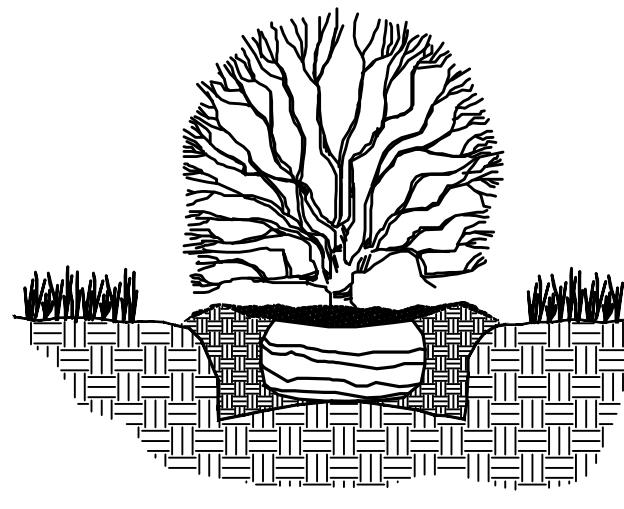
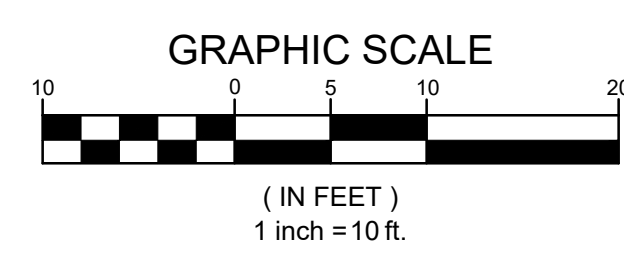
ADJUST RAIN GARDEN PLANTINGS AS REQUIRED BY GRADING AND ENGINEERING

SEE SHEET L1.0 FOR EXISTING LANDSCAPE TO REMAIN

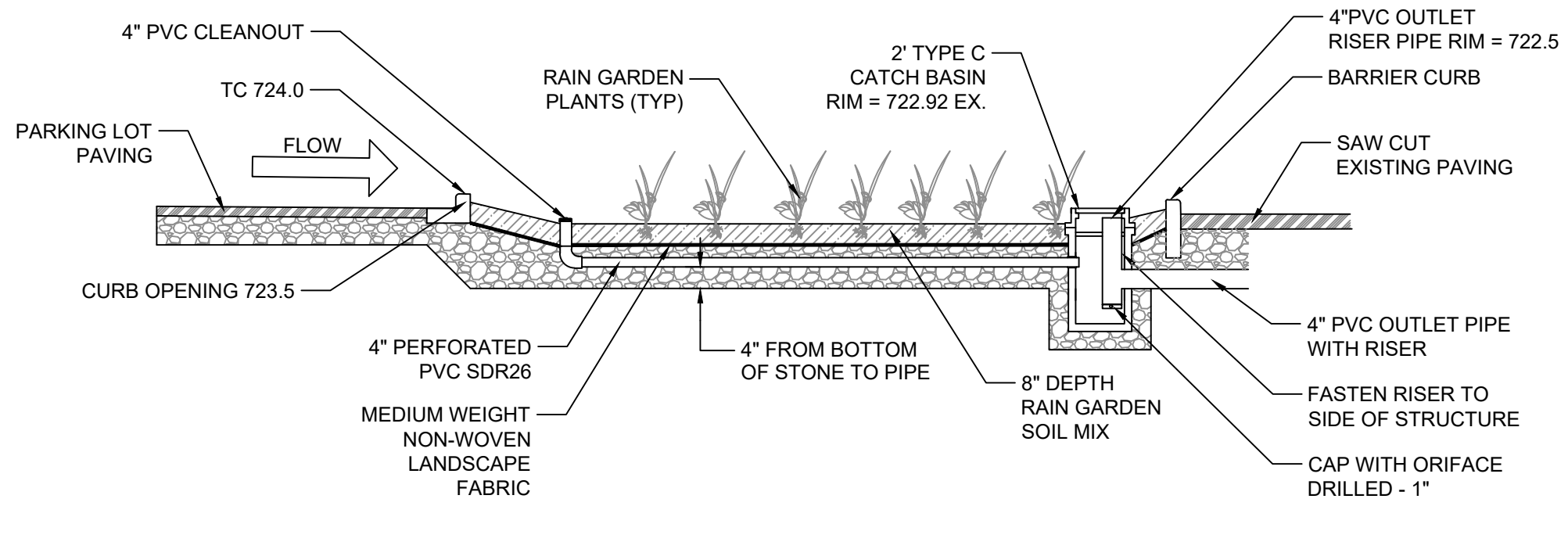
SEE SHEET L1.0 FOR EXISTING LANDSCAPE TO REMAIN

SEE SHEET L1.0 FOR EXISTING LANDSCAPE TO REMAIN

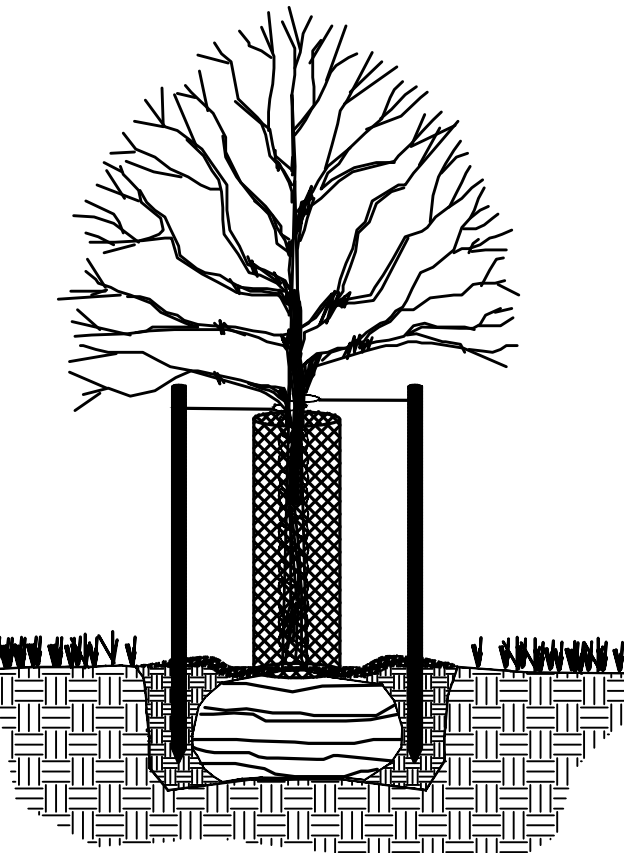
SEE SHEET L1.0 FOR EXISTING LANDSCAPE TO REMAIN



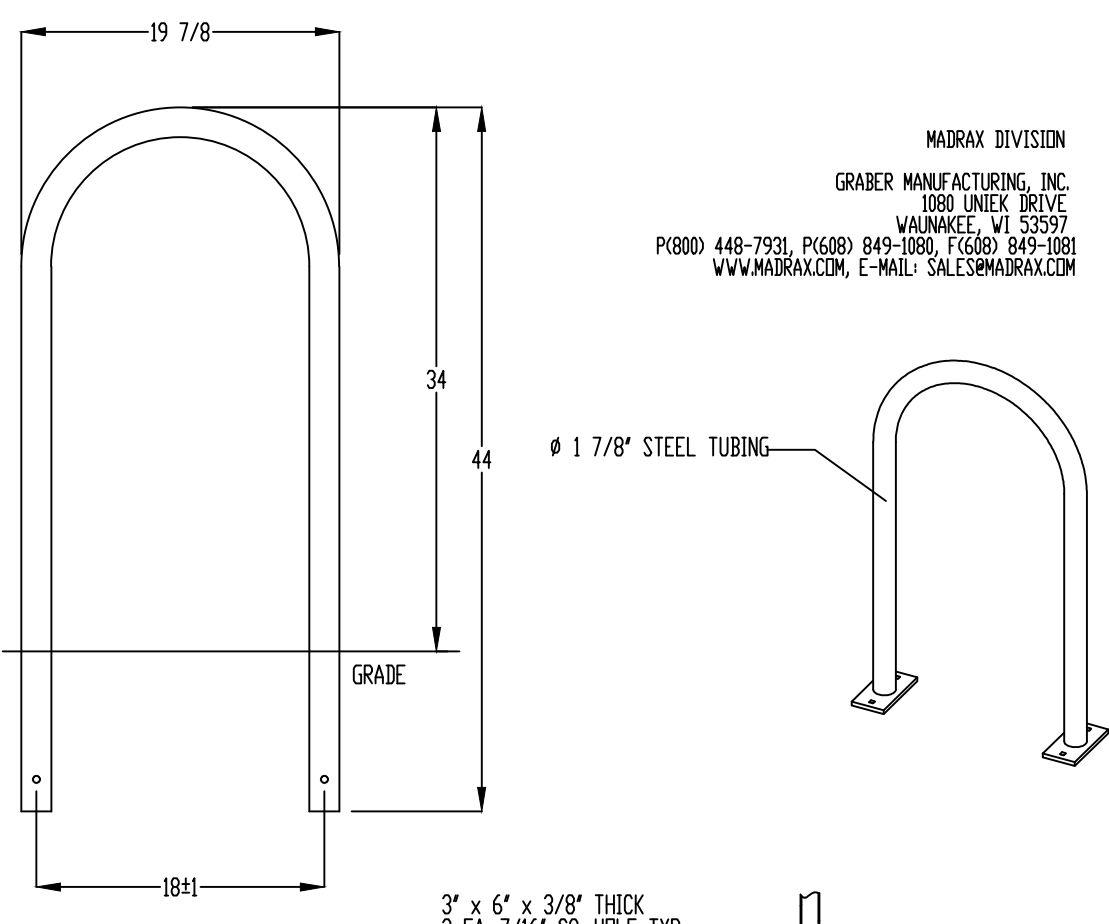
SHRUB PLANTING  
NO SCALE



RAIN GARDEN TYPICAL SECTION  
NO SCALE



DECIDUOUS TREE PLANTING  
NO SCALE



BIKE RACK  
NO SCALE

Key	QTY	Scientific Name	Common Name	Height	Container
<b>SHADE TREES</b>					
CEOC	5	<i>Celtis occidentalis</i>	Hackberry	2.5" cal	B&B
GLTR	2	<i>Gleditsia triacanthos var. inermis</i> 'Skycole'	Skyline Honeylocust	2.5" cal	B&B
GYDI	2	<i>Gymnocladus dioica</i>	Kentucky Coffeetree	2.5" cal	B&B
QUBI	4	<i>Quercus bicolor</i>	Swamp White Oak	2.5" cal	B&B
TADI	4	<i>Taxodium distichum</i>	Baldcypress	2.5" cal	B&B
<b>ORNAMENTAL TREES</b>					
AMLA	4	<i>Amelanchier laevis</i> 'Cumulus'	Cumulus Serviceberry	2.5" cal	B&B
<b>DECIDUOUS SHRUBS</b>					
ARME	8	<i>Aronia melanocarpa var. 'Eleta'</i>	Black Chokeberry	24" ht.	#5 container
COSE	5	<i>Cornus sericea</i> 'Isanti'	Isanti Redtwig Dogwood	24" ht.	#3 container
COAC	19	<i>Cotoneaster acutifolius</i>	Peking Cotoneaster	24" ht.	#3 container
FOSO	14	<i>Forsythia x 'Mindor'</i>	Show Off Forsythia	24" ht.	#3 container
SPNF	24	<i>Spiraea japonica</i> 'Neon Flash'	Neon Flash Spirea	24" ht.	#5 container
STIN	19	<i>Stephanandra incisa</i> 'Crispa'	Cutleaf Stephanandra	24" ht.	#5 container
<b>EVERGREEN SHRUBS</b>					
BUGV	17	<i>Buxus x 'Green Velvet'</i>	Green Velvet Boxwood	18" w	B&B
JUBC	28	<i>Juniperus horizontalis</i> 'Blue Chip'	Blue Chip Juniper	18" w	#5 container
<b>GRASSES AND SEDGES</b>					
CAAR	18	<i>Calamagrostis arundinacea var brachytricha</i>	Korean Feather Reed Grass		#1 container
CAPE	12	<i>Carex pensylvanica</i>	Oak Sedge		#1 container
CAVU	17	<i>Carex vulpinoidea</i>	Brown Fox Sedge		#1 container
CHLA	25	<i>Chasmanthium latifolium</i>	Northern Sea Oats		#1 container
DECE	15	<i>Deschampsia cespitosa</i>	Tufted Hair Grass		#1 container
FEGL	15	<i>Festuca glauca</i> 'Elijah Blue'	Elijah Blue Fescue		#1 container
PEAL	28	<i>Pennisetum alopecuroides</i> 'Hameln'	Dwarf Fountain Grass		#1 container
SPHE	14	<i>Sporobolus heterolepis</i>	Prairie Dropseed		#1 container
<b>PERENNIALS</b>					
ANSY	16	<i>Anemone sylvestris</i>	Snowdrop Anemone		#1 container
GEGE	10	<i>Geranium 'Gerwat'</i>	Rozanne Geranium		#1 container
IRVE	12	<i>Ins versicolor</i>	Harlequin Blue Flag		#1 container
LAMA	70	<i>Lamium maculatum</i> 'White Nancy'	White Nancy Deadnettle	3" plug	10 tray
LISP	53	<i>Liriope spicata</i>	Creeping Lilyturf		#1 container
RUHU	30	<i>Ruellia humilis</i>	Wild Petunia		#1 container
SEAF	36	<i>Sedum spectabile</i> 'Autumn Fire'	Autumn Fire Stonecrop		#1 container
VEHP	12	<i>Veronica spicata</i> 'Glory'	Glory Speedwell		#1 container
TURF					
SOD	3,298 SF	Black Beauty Tall Fescue Sod	Black Beauty Tall Fescue Sod	n/a	n/a
<b>NOTES</b>					
1 All plant material shall comply with the American Standards for Nursery Stock, ANSI Z60.1-2014.					
2 Plant material shall be guaranteed for a period of one year from the time of acceptance. Any plant material replaced as part of guarantee shall be guaranteed for a period of one year from date of replacement. Contractor shall notify Owner of any maintenance deficiencies which may impact viability of warranted plant material.					
3 Contractor is responsible for staking and guying trees as necessary to maintain upright position.					

LANDSCAPE CODE SUMMARY

LOCATION	LENGTH/AREA	PLANT MATERIAL REQUIRED	PLANT MATERIAL PROVIDED
<b>LANDSCAPE PARKWAYS (6-305.D.2)</b>			
S. HARLEM AVE	195.5 LF	4.9 Trees	4 Trees to Remain
W. 157TH ST	193.5 LF	4.8 Trees	4 Shade Trees
S. 71ST CT	195.5 LF	4.9 Trees	0 Shade Trees - site does not provide space
<b>LANDSCAPE CORRIDORS (6-305.D.3)</b>			
S. HARLEM AVE	195.5 LF	3.9 Shade Trees 3.9 Ornamental or Evergreen trees	8 Shade Trees to Remain 1 Orn Tree to Remain
W. 157TH ST	193.5 LF	1.9 Ornamental or Evergreen trees	6 Shade Trees to Remain 3 Orn Tree to Remain
S. 71ST CT	195.5 LF	1.9 Ornamental or Evergreen trees	3 Orn/ Small Shade Trees Proposed
<b>LANDSCAPE BUFFERYARDS (6-305.D.4)</b>			
SOUTH	193.5 LF	5.8 Shade Trees 1.9 Ornamental or Evergreen 30.9 Shrubs	9 Shade Trees to Remain 6 Orn Trees to Remain 6 Shrubs to Remain 22 New Shrubs
<b>FOUNDATION AND INTERIOR LANDSCAPE (6-305.D.5)</b>			
BUILDING FACE	221.5 LF	2.2 Ornamental Trees 35.4 Shrubs	see plans and summary
INTERIOR LOT	37,829 SF	3.8 Trees	see plans and summary

PARKING LOT ISLAND (6-305.D.6a2)

NUMBER OF PARKING SPACES	40
REQUIRED ISLANDS	4
PROVIDED ISLANDS	4
REQUIRED PARKING ISLAND TREES	4
PROVIDED PARKING ISLAND TREES	3
	Island at northwest corner planted as rain garden in lieu of island tree.

TREE MITIGATION (6-305.F.3)

MITIGATION TREES REQUIRED (SEE SHEET L1.0)	9
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SUMMARY

CATEGORY	REQUIRED	TO REMAIN	ADDITIONAL PROVIDED	TOTAL PROVIDED
SHADE TREES	44.9	21	17	38
ORNAMENTAL TREES/EVERGREENS	11.8	12	4	16
SHRUBS/ORN. GRASSES	66.3	0	278	278

REVISIONS

DATE	DESCRIPTION
6/14/22	REVISED PER VILLAGE REVIEW
7/20/22	REVISED PER VILLAGE REVIEW
7/29/22	REVISED PER VILLAGE REVIEW
10/12/22	REVISED PER VILLAGE REVIEW

SUSTAINABLE DESIGN | SUSTAINABLE LIVING

Civil Engineering  
Land Planning  
Land Surveying  
Project Entitlements  
Stormwater Management

**Wolf Pack CONSULTING, LLC**

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LANDSCAPE PLAN AND TABLE

RAINBOW CONE

15711 S HARLEM AVE, ORLAND PARK

PROJ. MGR.: PJW  
PROJ. ENG.: KM  
DRAWN BY: MD  
DATE: 04-19-22  
SCALE: 1"=20'  
SHEET NO. L2.0  
PROJ. NUMBER: