

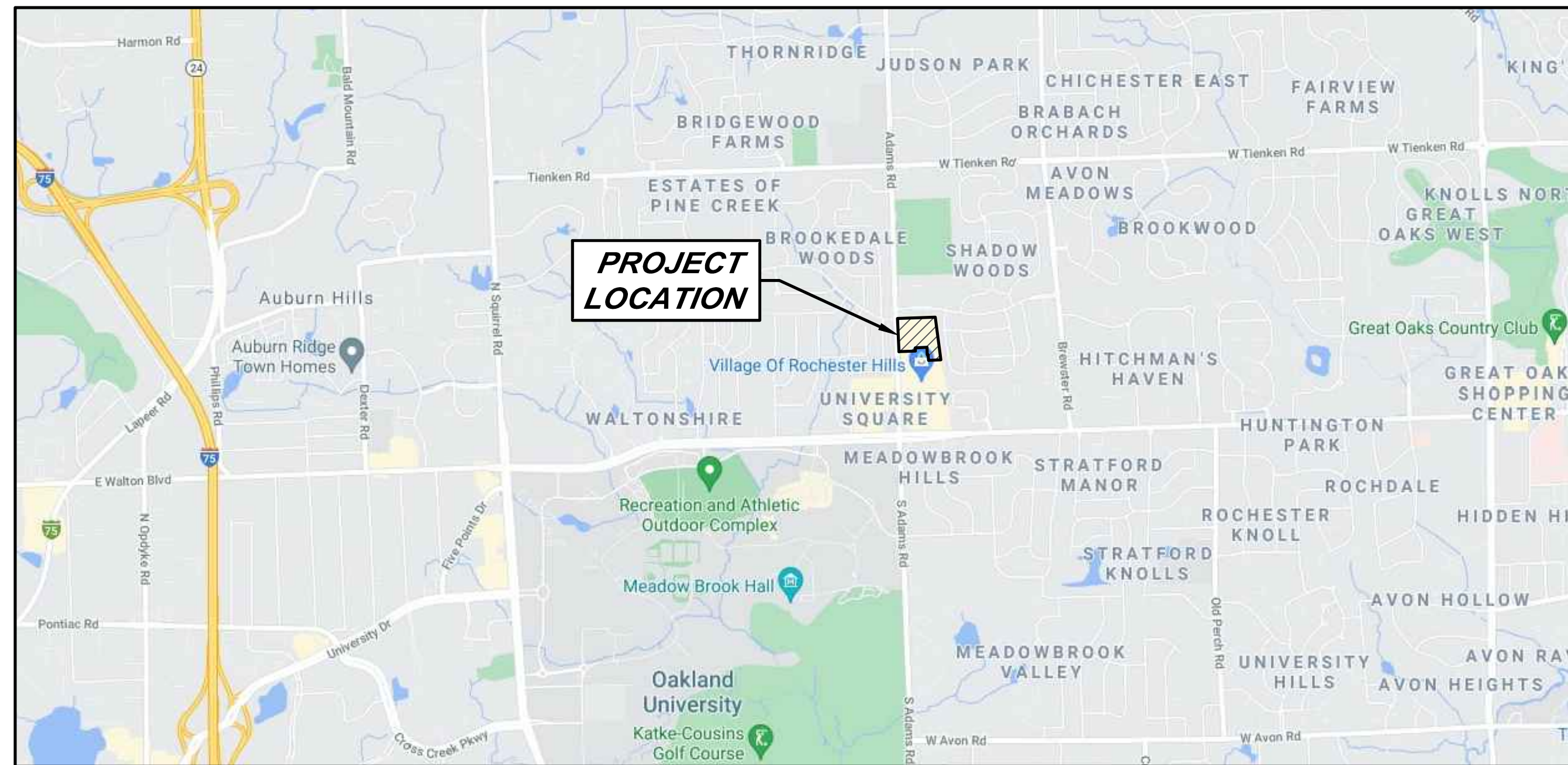
Site Plan Review		
Reviewed for compliance to the City Ordinance, Building and Fire Codes		
Department	Reviewer	Approved
Planning	Kristen Kapelanski 248-841-2772 KapelanskiK@RochesterHills.org	Yes
Building	Mark Artinian 248-841-2446 ArtinianM@RochesterHills.org	Yes w/ conditions
Engineering	Jason Boughton 248-841-2490 BoughtonJ@RochesterHills.org	Yes
Traffic	Keith Depp 248-841-2503 DeppK@RochesterHills.org	Yes w/ conditions
Nat. Resources	Gerry Pink 248-841-2550 PinkG@RochesterHills.org	Yes
Fire	Lt. Josh Boyce 248-841-2713 BoyceJ@RochesterHills.org	Yes
<p align="center">City of Rochester Hills Planning & Economic Development</p> <p align="center">Conditions and mark-ups noted throughout the plan set must be addressed prior to final approval.</p>		

STARBUCKS SITE IMPROVEMENTS

ROBERT B. AIKENS AND ASSOCIATES
 350 N. OLD WOODWARD
 SUITE 300
 BIRMINGHAM, MI 48009
 TELE: 248-283-2387
 CONTACT: JAMES FIELDER
 EMAIL: fielder@rbaikens.com



AREA MAP
NOT TO SCALE

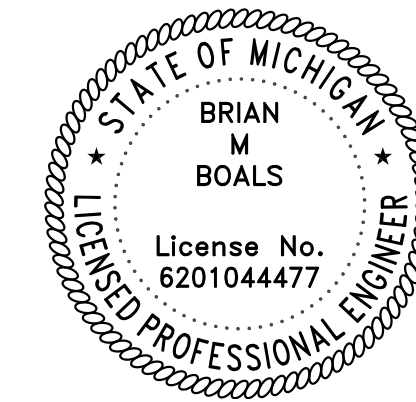


LOCATION MAP
SCALE: 1" = 2000'

PLAN INDEX		
FILE NO.	DESCRIPTION	NO.
D-5828-1	TITLE SHEET	C1
D-5828-2	NOTES	C2
D-5828-3	DEMOLITION PLAN	C3
D-5828-4	PAVING PLAN	C4
D-5828-5	SITE PLAN	C5
D-5828-6	GRADING PLAN	C6
D-5828-7	UTILITY PLAN	C7
D-5828-8 & 9	SITE DETAILS	C8 & C9
D-5828-10	FIRE PROTECTION PLAN	C10
D-5828-11	SITE LIGHTING PLAN	C11
D-5828-12	LANDSCAPE PLAN	L1
BY OTHERS	TOPOGRAPHIC SURVEY	
BY CITY	STANDARD SANITARY SEWER DETAILS	
BY CITY	STANDARD STORM SEWER DETAILS	
BY CITY	STANDARD WATER MAIN DETAILS	

Topo not submitted with this revision. Please resubmit with topographic survey.

SECTION 8, T.3N.-R.11E.,
CITY OF ROCHESTER HILLS,
OAKLAND COUNTY, MICHIGAN



Brian M. Boals

**PRELIMINARY ONLY
NOT FOR CONSTRUCTION**

Revise to #21-040 throughout

CAR	REVISOR	REVISIONS	DATE
		REVISED PER CITY REVIEW COMMENTS	2-3-22

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ROBERT B. AIKENS AND ASSOCIATES
 350 N. OLD WOODWARD, SUITE 300
 BIRMINGHAM, MI 48009

**TITLE SHEET
SITE IMPROVEMENTS
STARBUCKS
CITY OF ROCHESTER HILLS**

Spicer group SAGINAW OFFICE
 230 S. Washington Ave.
 Saginaw, MI 48607 Tel.
 989-754-4717 Fax.
 989-754-4440
 www.SpicerGroup.com

DE. BY: CAR	CH. BY: BMB	PROJECT NO. 130328SG2021
DR. BY: CAR	APP. BY: DSD	
STDS.	SHEET 1 OF 12	C
DATE: DECEMBER 2021	FILE NO. D-5828-1	1
SCALE: N/A		

CITY FILE #21-141 SECTION 8

The applicant needs to submit a Land Improvement Permit (LIP) application with engineer's estimate, fee and construction plans to proceed with the construction plan review process.

GENERAL NOTES

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS. UNLESS AUTHORIZED BY THE OWNER.

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO START OF CONSTRUCTION, CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY.

ALL EXCAVATED MATERIAL NOT TO BE REUSED OR DISPOSED OF ON SITE SHALL BE REMOVED FROM SITE. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING MATERIALS ACCORDING TO LOCAL AND STATE REQUIREMENTS.

UNDERGROUND UTILITIES/MISS DIG FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.

ALL CONSTRUCTION UNDER EXISTING UTILITIES, INCLUDING HOUSE SERVICES, SHALL BE COMPLETELY BACKFILLED WITH SAND, IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED, PER THE SPECIFICATIONS OF THE INDIVIDUAL UTILITY COMPANY CLAIMING OWNERSHIP OF THE UTILITY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODABLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED/MULCH OR MULCH BLANKET AS DIRECTED BY THE ENGINEER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

ALL CATCHBASINS AND SEDIMENTATION TRAP/BASIN SHALL BE CLEANED OUT UPON COMPLETION OF THE PROJECT.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR UTILITY BEING INSTALLED.

ALL RIPRAP SHALL BE MDOT PLAIN RIPRAP TYPE MATERIAL, UNLESS OTHERWISE NOTED.

CONTRACTORS SHALL FINISH GRADE, SEED, FERTILIZE, AND MULCH DAILY ON ALL DISTURBED AREAS.

CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

PROPERTY OWNERS PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

ADJUSTING MONUMENT BOXES ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT. IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES, AS REQUIRED.

TRAFFIC THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES. SIGNAGE MUST BE IN ACCORDANCE WITH THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL BE COORDINATED WITH THE ENGINEER AND GOVERNING ROAD AGENCY. PERMITS MAY BE REQUIRED.

PERMITS PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE APPROPRIATE AGENCIES.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE AGENCIES.

CONCRETE AND ACCESSORIES ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 301, ACI 350 AND MDOT STANDARD SPECIFICATION FOR CONSTRUCTION (LATEST EDITION). CONCRETE PLACED IN COLD WEATHER SHALL CONFORM TO ACI-306R. CONCRETE PLACED IN HOT WEATHER SHALL CONFORM TO ACI-305R.

CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.

CONCRETE SHALL HAVE A SLUMP RANGE OF 2"-4".

CONCRETE SUBJECT TO FREEZE/THAW CYCLES SHALL HAVE A AIR CONTENT OF 5%-7% BY VOLUME PER ASTM C260.

FINE AGGREGATE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C33.

CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN TO OWNER FOR REVIEW AND APPROVAL.

NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107 AND BE PREMIXED AND CONSIST OF COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, CEMENT, WATER REDUCING AGENT AND PLASTICIZING AGENTS CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTHS OF 2,400 PSI IN 48 HOURS AND 7,000 PSI IN 58 DAYS.

WATERSTOP SHALL BE CONTINUOUS 1"x3/4" STRIPS CONTAINING 75% BENTONITE (WATERSTOP-RX-101 OR APPROVED EQUAL). INSTALL PER MANUFACTURERS INSTRUCTIONS.

CONCRETE REINFORCING STEEL SHALL CONFORM TO ASTM A615 AND HAVE A YIELD STRENGTH OF 60 ksi. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW AND APPROVAL.

EPOXY FOR ANCHOR BOLTS AND REINFORCING STEEL SHALL BE HILTI-HY-200 EPOXY INJECTABLE MORTAR. INSTALL PER MANUFACTURERS INSTRUCTIONS.

THREADED ANCHOR RODS SHALL BE HILTI HAS-R ANCHOR RODS (PICK TYPE FOR PROJECT = HAS-E CARBON STEEL ZINC COATED, HAS-B HIGH STRENGTH STEEL, HAS-R 304 STAINLESS STEEL, HAS-R 316 STAINLESS STEEL)

PLYWOOD FORMWORK SHALL BE CONSTRUCTED OF 5-PLY DOUGLAS FIR, SOUND SHEETS WITH CLEAN, TRUE EDGES. STEEL FORMS SHALL BE SMOOTH, TRUE AND UNDAMAGED. ALL FORMWORK SHALL BE STIFFENED OR BRACED TO SUPPORT THE WEIGHT OF THE CONCRETE WITH MINIMUM DEFLECTION. DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.

PROVIDE 3/4" CHAMFER STRIPS ON EXTERNAL CORNERS OF VISUALLY EXPOSED CONCRETE CORNERS.

HOT POURED JOINT SEALANT SHALL CONFORM WITH ASTM D-3405.

GENERAL NOTES CONT.

SITE WORK ELECTRIC SERVICE TO BUILDING AND PARKING LOT LIGHTS SHALL BE UNDERGROUND. ALL UTILITY COMPANY SERVICE LINES AND PAD LOCATIONS ARE SHOWN FOR REFERENCE ONLY. EXACT LOCATIONS TO BE COORDINATED WITH UTILITY COMPANY.

ALL TRENCHED CONSTRUCTION UNDER EXISTING, PROPOSED AND FUTURE GRAVEL, PAVED SURFACES OR UTILITIES SHALL BE COMPLETELY BACKFILLED WITH CLASS II SAND OR OTHER APPROVED GRANULAR MATERIAL IN 12" LAYERS AND COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT.

UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING OR OTHERWISE. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL UNLESS NOTED OTHERWISE.

CONTRACTOR IS RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE PATTERN TO ENSURE NO PONDING OF WATER ON ADJACENT EXISTING AND PROPOSED PAVED SURFACES.

DIMENSIONS SHOWN ARE GIVEN TO THE BACK OF CURBS AND FACE OF BUILDINGS UNLESS NOTED OTHERWISE.

WHERE A DISCREPANCY OCCURS BETWEEN PROPOSED WORK AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR CLARIFICATION.

PAVEMENT / SIDEWALK CONTRACTOR SHALL SAWCUT PAVEMENT AND CURB & GUTTER FOR A CLEAN EDGE TO INSTALL PROPOSED PAVEMENT AND CURB & GUTTER.

HMA PAVEMENT AND OR CONCRETE SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN RAIN IS FORECAST OR THREATENING.

SIDEWALK SHALL BE CONSTRUCTED WITH A CROSS SLOPE SLOPED TOWARD THE STREET OR PARKING AREAS. SLOPES NOT TO EXCEED 2% UNLESS NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS OR PAVEMENT.

IN GRASS AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGH THAN THE ADJACENT GROUND SURFACE, UNLESS NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS OR PAVEMENT.

THE CONTRACTOR SHALL PROTECT FRESH HMA OR CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC OR VANDALISM. DAMAGED HMA OR CONCRETE SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

PAVEMENT MARKINGS AND SIGNS ALL PERMANENT PAVEMENT MARKINGS, SHAPES, AND DIMENSIONS SHALL CONFORM WITH MDOT PAVEMENT MARKING TYPICALS PAVE-900 SERIES.

STORM SEWER PIPE MATERIALS SHALL BE AS FOLLOWS:
 • 12" DIAMETER AND ABOVE - CONCRETE PIPE, C-76, CL IV, ASTM C-443.
 • LESS THAN 12" DIAMETER - PVC PIPE SDR35.

ALL MANHOLE RIMS IN ROADWAYS AND DRIVES SHALL BE ADJUSTED PRIOR TO FINAL PAVING TO BE FLUSH WITH FINISHED GRADE.

GRADING AROUND MANHOLES/CATCHBASINS, FLARED END SECTIONS, AND OTHER INLETS SHALL BE SMOOTH AND SHAPED TO PROVIDE POSITIVE DRAINAGE INTO THE INLETS.

ALL MANHOLE TO PLASTIC PIPE CONNECTIONS SHALL BE MADE WITH KOR-N-SEAL BOOT.

ALL FLARED END SECTIONS TO HAVE FACTORY SUPPLIED ANIMAL GUARD.

DRAINAGE STRUCTURE IN PROPOSED CURB - OFFSETS AND ELEVATIONS SHOWN ARE TO THE BACK AND TOP OF CURB. ALIGN THE STRUCTURE WITH THE BACK OF THE CASTING AND THE TOP OF THE CASTING FLUSH WITH THE PROPOSED BACK AND TOP OF CURB.

DRAINAGE STRUCTURES IN OUTLAWN AREA AND PAVED AREA - OFFSET SHOWN IS TO CENTER OF STRUCTURE. RIM ELEVATIONS FOR DOME COVERS AND FLAT COVERS ARE TO THE TOP OF THE CASTING FRAME.

SANITARY SEWER ALL SANITARY SEWER SHALL BE PVC, SDR23.5, TYPE PSM PLASTIC, CONFORMING TO ANSI/ASTM D3034 WITH RUBBER GASKET JOINTS, UNLESS SPECIFIED OTHERWISE.

ALL SEWER JOINTS SHALL CONFORM TO A.S.T.M. C-425.

ALL SEWER PIPE SHALL CONFORM TO A.S.T.M. C-700.

INFILTRATION SHALL NOT EXCEED 100 GAL./INCH DIA./MILE/DAY.

WATER MAIN WATER MAIN PIPE SHALL CONFORM TO THE MUNICIPALITY'S STANDARDS AND SHALL BE DUCTILE IRON, CLASS 52, CEMENT LINED.

WATER SERVICE PIPE FROM 3/4" TO 2-1/2" SHALL BE SEAMLESS, TYPE-K COPPER.

WATER MAIN SHALL HAVE A MINIMUM COVER OF 5'-6" UNLESS OTHERWISE SPECIFIED.

THE CONTRACTOR SHALL SECURE ALL MECHANICAL JOINT FITTINGS WITH RETAINERS GLANDS IN ADDITION TO THRUST BLOCKING. RETAINER GLANDS SHALL BE MEGA-LUG AS MANUFACTURED BY EBAA IRON OR APPROVED EQUAL.

WRAP ALL FITTINGS, VALVES, HYDRANTS, AND ALL D.I. PIPE IN 8 MIL POLYETHYLENE SHEET PER AWWA C105.

THE CONCRETE USED FOR BLOCKING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.

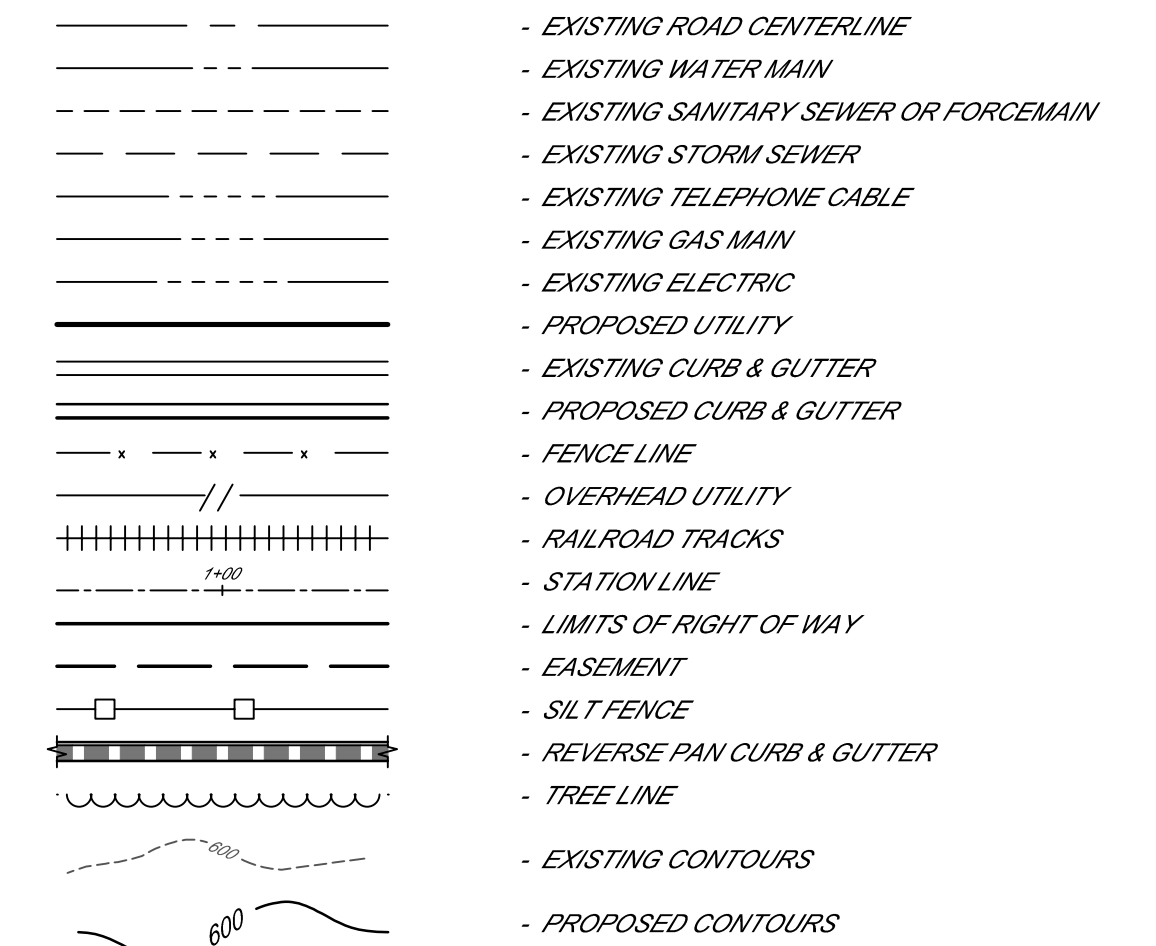
ALL FITTINGS SHALL BE MECHANICAL JOINT. ALL HYDRANTS AND VALVES SHALL CONFORM TO THE MUNICIPALITY'S STANDARDS.

ALL BURIED FERROUS PARTS SHALL RECEIVE A 10 MIL (DRY MILL THICKNESS) COATING OF COAL TAR EPOXY.

ABBREVIATIONS

- BC = BACK OF CURB
- BM = BENCH MARK
- OC = CENTER TO CENTER
- CB = CATCH BASIN
- CL = CENTERLINE
- CJ = CONSTRUCTION JOINT
- CMP = CORRUGATED METAL PIPE
- CSP = CORRUGATED STEEL PIPE
- CONC = CONCRETE
- DI = DUCTILE IRON PIPE
- EF = EACH FACE
- ELEC = ELECTRIC
- EL OR ELEV = ELEVATION
- EOM = EDGE OF METAL
- EOP = EDGE OF PAVEMENT
- EQ/SP = EQUALLY SPACED
- ESMT = EASEMENT
- EW = EACH WAY
- EX OR EXIST = EXISTING
- FF = FINISH FLOOR
- FL = FLOW LINE
- FS = FINISH SURFACE
- FG = FINISH GROUND
- GALV = GALVANIZED
- G = GUTTER
- HDG = HOT DIP GALVANIZED
- HDPE = HIGH DENSITY POLYETHYLENE
- HP = HIGH POINT
- HMA = HOT MIX ASPHALT
- HYD = HYDRANT
- INV = INVERT
- LP = LOW POINT
- OC = ON CENTER
- OH = OVERHEAD
- MH = MANHOLE
- MIN = MINIMUM
- MON = MONUMENT
- NFL = NOT FIELD LOCATED
- NTS = NOT TO SCALE
- PROP = PROPOSED
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- ROW = RIGHT OF WAY
- SAN = SANITARY
- SB = SOIL BORING
- SS = STAINLESS STEEL
- STA = STATION
- STM = STORM
- SWR = SEWER
- TIB = TOP AND BOTTOM
- TC = TOP OF CURB
- TOB = TOP OF BANK
- TOS = TOE OF SLOPE
- TELE = TELEPHONE
- TRW = TOP OF RETAINING WALL
- TW = TOP OF WALK
- UNO = UNLESS NOTED OTHERWISE
- WM = WATER MAIN
- WS = WATER SURFACE ELEVATION

LINE TYPE LEGEND



SYMBOL LEGEND EXISTING SYMBOLS

- - MANHOLE
- ⊗ - CATCH BASIN
- ⊗ - CURB CATCH BASIN
- ⊗ - FIRE HYDRANT
- ⊗ - GAS VALVE
- ⊗ - WATER VALVE
- ⊗ - TELEPHONE PEDESTAL
- ⊗ - POWER POLE
- ⊗ - TELEPHONE POLE
- ⊗ - POWER AND TELEPHONE POLE
- ⊗ - LIGHT POLE
- ⊗ - GUY ANCHOR AND POLE
- ⊗ - MAIL BOX
- ⊗ - WATER METER
- ⊗ - TELEPHONE MANHOLE
- ⊗ - ELECTRIC MANHOLE
- ⊗ - MONITORING WELL
- ⊗ - HAND HOLE
- ⊗ - TRANSFORMER
- ⊗ - ELECTRICAL PEDESTAL
- ⊗ - BARRIER FREE PARKING
- ⊗ - SPRINKLER
- ⊗ - RAILROAD SIGNAL
- ⊗ - ANTENNA
- ⊗ - SATELLITE DISH
- ⊗ - AIR CONDITIONING UNIT
- ⊗ - SOIL BORING
- ⊗ - BENCH MARK
- ⊗ - FOUND SURVEY CORNER
- ⊗ - SET 1/2" IRON ROD
- ⊗ - 1/4 SECTION CORNER
- ⊗ - BREAK IN LINE
- ⊗ - EXISTING SIGN-1 POST
- ⊗ - EXISTING SIGN-2 POST
- ⊗ - STUMP
- ⊗ - WETLANDS
- ⊗ - PINE
- ⊗ - BUSH
- ⊗ - TREE

BENCHMARKS

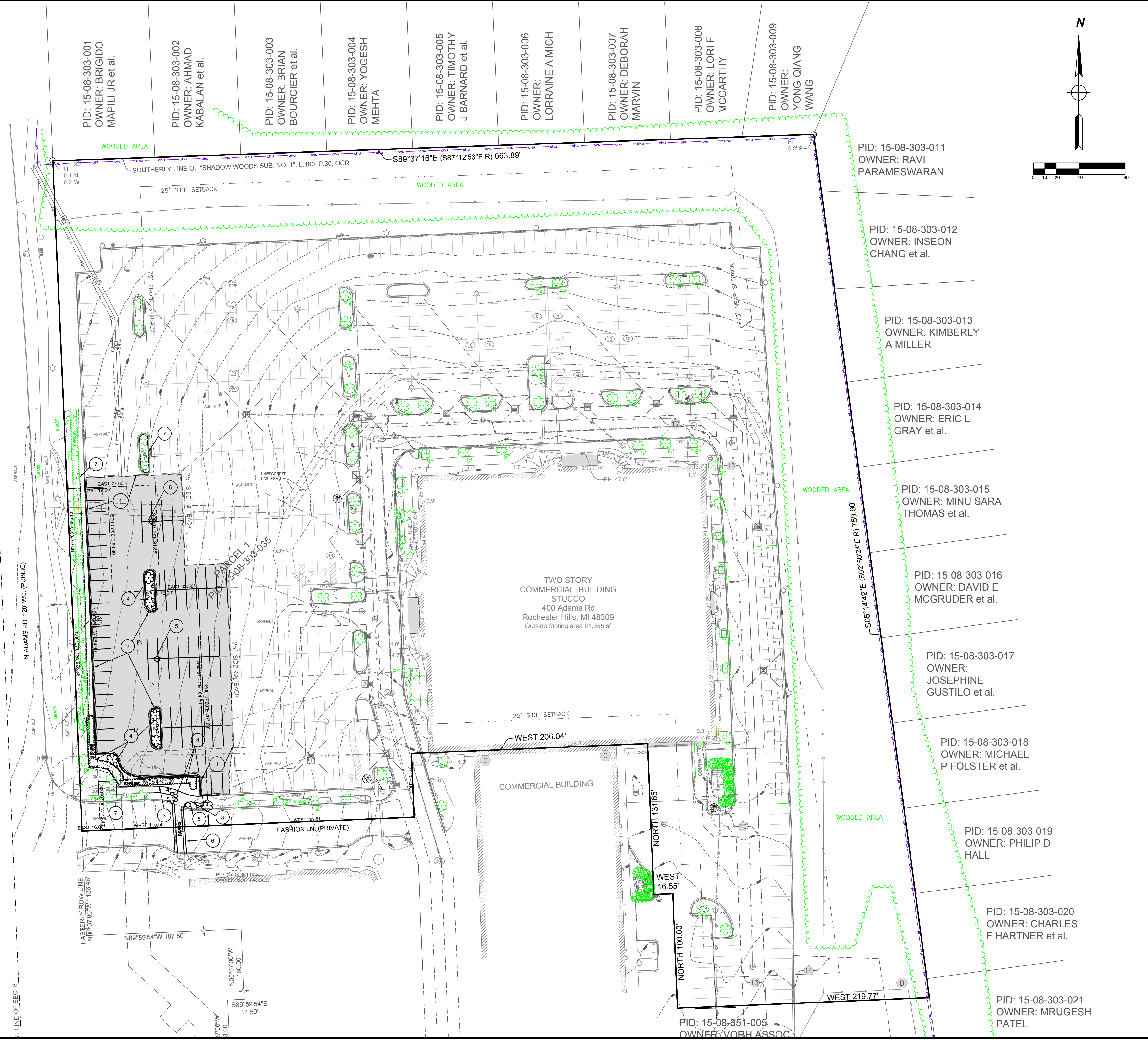
- Datum NAVD 88
- ⊗ Top of PK nail in East face of 10" Tree east of Adams Rd. Elev= 975.11'
- ⊗ Top of Hydrant located NW of Bldg #400 Elev= 964.92'
- ⊗ Top of Hydrant located SW of Bldg #400 Elev= 961.45'

PROPOSED SYMBOLS

- - MANHOLE
- ⊗ - CATCHBASIN
- ⊗ - FIRE HYDRANT
- ⊗ - WATER VALVE
- ⊗ - BARRIER FREE PARKING
- ⊗ - LIGHT POLES
- ⊗ - DRAINAGE FLOW
- ⊗ - SPOT ELEVATION LABELS
- ⊗ G = GUTTER
- ⊗ TW = WALK
- ⊗ TC = TOP OF CURB
- ⊗ FS = FINISH SURFACE

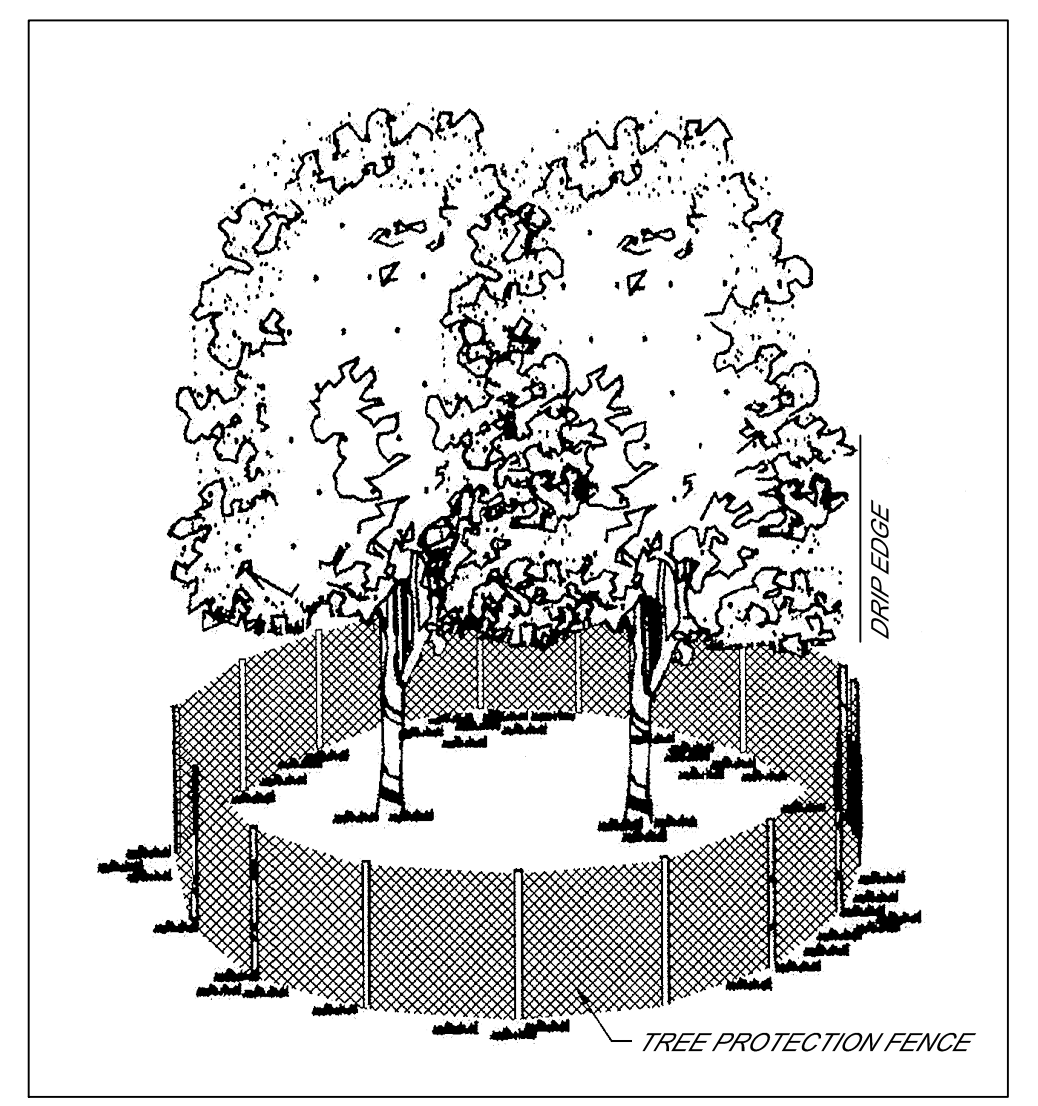
ACAD FILE: PG. F.B. RET. PLOTTING SCALE:

CAR	REVISED PER CITY REVIEW COMMENTS	2-3-22
BY	MARK REVISIONS	DATE
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ROBERT B. AIKENS AND ASSOCIATES 350 N. OLD WOODWARD, SUITE 300 BIRMINGHAM, MI 48009		
NOTES SITE IMPROVEMENTS STARBUCKS CITY OF ROCHESTER HILLS		
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com
DE. BY: CAR	CH. BY: BMB	PROJECT NO. 130328SG2021
DR. BY: CAR	APP. BY: DSB	
STDS.	SHEET 2 OF 12	C
DATE DECEMBER, 2021	FILE NO. D-5828- 2	2
SCALE N/A		



- DEMOLITION NOTES**
1. PROTECT TREES, PLANT GROWTH, AND FEATURES DESIGNATED TO REMAIN, AS FINAL LANDSCAPING.
 2. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE THE TAGGING OF SPECIFIC TREES/SHRUBS TO BE PRESERVED PRIOR TO BEGINNING DEMOLITION.
 3. REMOVE TREES AND SHRUBS WITHIN LIMITS OF CONSTRUCTION AS NOTED. REMOVE STUMPS, MAIN ROOT BALL, ROOT SYSTEM TO A DEPTH OF 12 INCHES AND SURFACE ROCK.
 4. CLEAR AREAS REQUIRED FOR ACCESS TO SITE AND EXECUTION OF WORK.
 5. REMOVE NOTED WALLS, FOUNDATIONS, PAVING, CURBS, AND SIDEWALKS.
 6. SAWCUT ALL PAVEMENT, CURBS AND WALKS NOTED FOR REMOVAL FOR A CLEAN EDGE.
 7. REMOVE ALL CLEARED ITEMS FROM SITE AND PROPERLY DISPOSE OF.
 8. CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDING ALL DISTURBED AREAS.
 9. EXISTING IRRIGATION TO REMAIN IN PLACE SHALL BE PROTECTED, CONTRACTOR RESPONSIBLE FOR REPAIRING ANY DAMAGED IRRIGATION CAUSED DURING CONSTRUCTION.

- DEMOLITION ITEMS**
- 1 REMOVE ASPHALT PAVEMENT. SEE PAVING PLAN FOR LAYOUT.
 - 2 REMOVE CURB.
 - 3 SAWCUT AND REMOVE CONCRETE WALK TO NEAREST EXPANSION JOINT.
 - 4 REMOVE /RELOCATE EXISTING TREE/SHRUB. SEE LANDSCAPE PLAN FOR NEW LOCATION.
 - 5 REMOVE /RELOCATE LIGHT POLE. PULL WIRES, REMOVE CONDUITS. SEE SITE PLAN FOR NEW LOCATION.
 - 6 REMOVE DECORATIVE WALK.
 - 7 TREE PROTECTION.



EXISTING TREES SHOWN ON THIS PLAN WHICH ARE TO REMAIN SHALL BE PROTECTED.
TREE PROTECTION SHALL BE A MINIMUM 4' CHAIN LINK FENCE OR ORANGE SAFETY FENCE MOUNTED ON VERTICAL POSTS DRIVEN 2 FEET INTO THE GROUND. SEE PLAN FOR LOCATION.
REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT.
TREE PROTECTION DETAIL
NOT TO SCALE

PID: 15-08-303-001
OWNER: BRIGIDO MAPILI JR et al.

PID: 15-08-303-002
OWNER: AHMAD KABALAN et al.

PID: 15-08-303-003
OWNER: BRIAN BOURCIER et al.

PID: 15-08-303-004
OWNER: YOGESH MEHTA

PID: 15-08-303-005
OWNER: TIMOTHY J BARNARD et al.

PID: 15-08-303-006
OWNER: LORRAINE A MICH

PID: 15-08-303-007
OWNER: DEBORAH MARVIN

PID: 15-08-303-008
OWNER: LORIF MCCARTHY

PID: 15-08-303-009
OWNER: YONG-QIANG WANG

PID: 15-08-303-011
OWNER: RAVI PARAMESWARAN

PID: 15-08-303-012
OWNER: INSEON CHANG et al.

PID: 15-08-303-013
OWNER: KIMBERLY A MILLER

PID: 15-08-303-014
OWNER: ERIC L GRAY et al.

PID: 15-08-303-015
OWNER: MINU SARA THOMAS et al.

PID: 15-08-303-016
OWNER: DAVID E MCGRUDER et al.

PID: 15-08-303-017
OWNER: JOSEPHINE GUSTILO et al.

PID: 15-08-303-018
OWNER: MICHAEL P FOLSTER et al.

PID: 15-08-303-019
OWNER: PHILIP D HALL

PID: 15-08-303-020
OWNER: CHARLES F HARTNER et al.

PID: 15-08-303-021
OWNER: MRUGESH PATEL

TWO STORY COMMERCIAL BUILDING STUCCO
400 Adams Rd
Rochester Hills, MI 48309
Outside footing area 61,355 sf

COMMERCIAL BUILDING

FASHION LN. (PRIVATE)

PID: 15-08-351-005
OWNER: VORH ASSOC

DATE	REVISIONS	REVIEW COMMENTS	DATE
BY: CAR	MARK		

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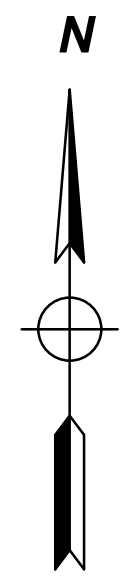
DEMOLITION PLAN
SITE IMPROVEMENTS
STARBUCKS
CITY OF ROCHESTER HILLS

Spicer Group
SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607 Tel.
989-754-4717 Fax.
989-754-4440
www.SpicerGroup.com

DE. BY: CAR	CH. BY: BMR	PROJECT NO.	
DR. BY: CAR	APP. BY: DSB	130328SG2021	
STDS.		SHEET 3 OF 12	C
DATE: DECEMBER, 2021	FILE NO.		
SCALE: 1" = 40'	D-5828-3		3

CITY FILE 921-141 SECTION 8

W 1/4 COR SEC 8,
T3N, R11E
L21656, P.101, OCR.

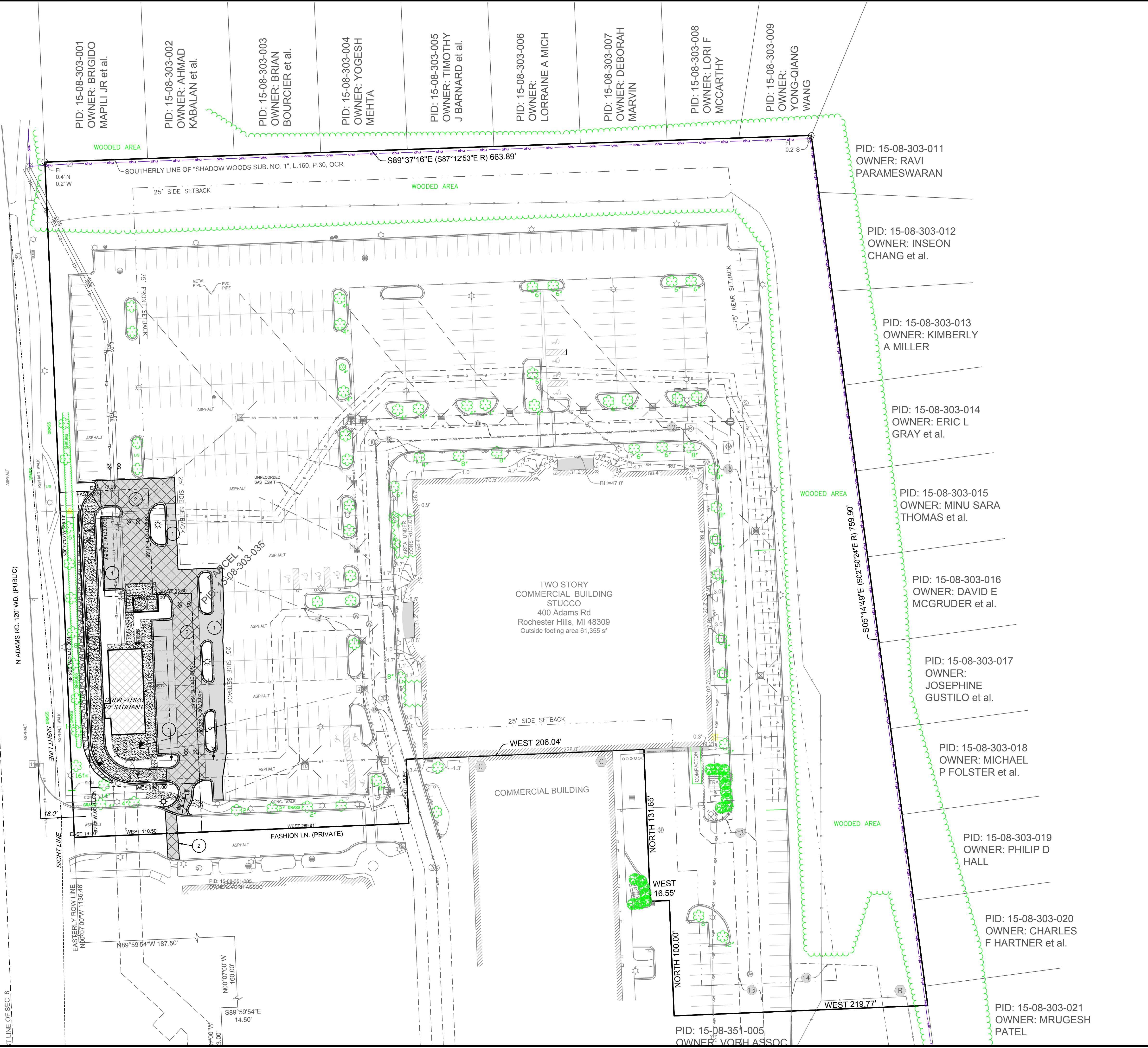


- CONSTRUCTION NOTES:**
- 1 STANDARD ASPHALT PAVEMENT. [Pattern]
 - 2 HEAVY DUTY ASPHALT PAVEMENT. [Pattern]
 - 3 CONCRETE PAVEMENT. [Pattern]

PAVING NOTES:
ALL SUB-BASE TO BE PROOFROLLED AND OBSERVED BY A QUALIFIED GEOTECHNICAL ENGINEER. ALL PROOFROLLING SHOULD BE PERFORMED WITH HEAVILY LOADED TANDEM-AXLE DUMP TRUCK OR OTHER SUITABLE RUBBER-TIRED VEHICLES.

DISCLAIMER:
PAVEMENT DETAILS AND REHABILITATION SCOPE ITEMS ON THESE PLANS HAVE BEEN PREPARED AS DIRECTED BY THE OWNER TO ACCOMMODATE CONSTRUCTION BUDGET CONSTRAINTS, AND ARE NOT BASED UPON RECOMMENDATIONS WITHIN THE GEOTECHNICAL REPORT OR PAVEMENT LIFE CYCLE ANALYSIS. AS DIRECTED, THE PROJECT PAVEMENT CONSTRUCTION SCOPE WILL BE TO COLD MILL AND REMOVE EXISTING ASPHALT SURFACE FOLLOWED CONDITIONING AGGREGATE TO LEVEL EXISTING BASE COURSE. SPECIFIC AREAS OF FULL DEPTH PAVEMENT REPLACEMENT SHALL BE AS NOTED OR DIRECTED DURING CONSTRUCTION.

NOTE:
EXISTING TOPOGRAPHY BACKGROUND IS BASED FROM INFORMATION TAKEN ON 4-6-2021 BY MICHIGAN SURVEYING, INC. JOB #21-133.

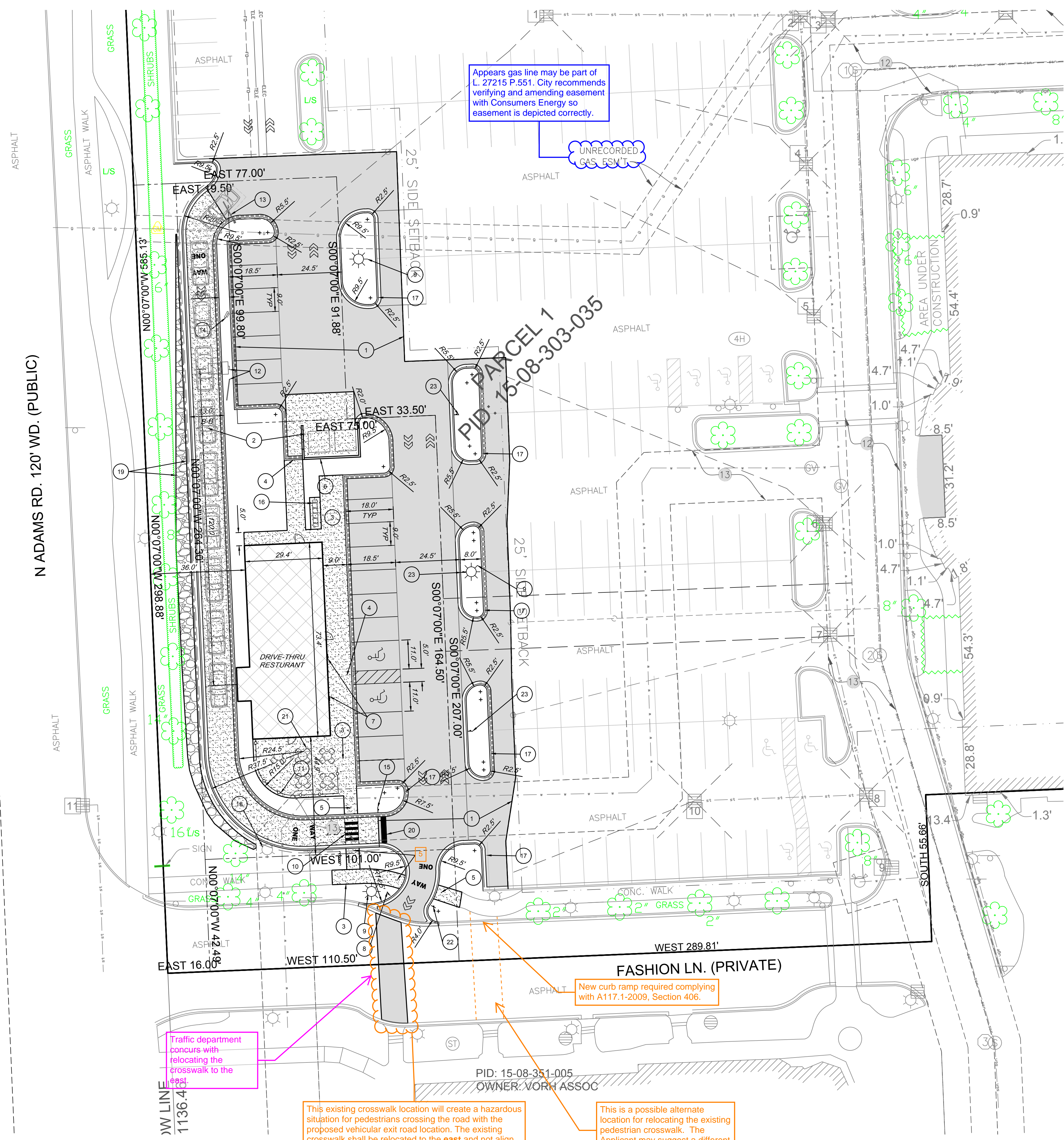


PLOTING SCALE: RET. F.B. PG. ACAD FILE:

CAR BY	MARK	REVISED PER CITY REVIEW COMMENTS	2-3-22
REVISIONS			DATE
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<p>ROBERT B. AIKENS AND ASSOCIATES 350 N. OLD WOODWARD, SUITE 300 BIRMINGHAM, MI 48009</p>			
<p>PAVING PLAN SITE IMPROVEMENTS STARBUCKS CITY OF ROCHESTER HILLS</p>			
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel. 989-754-4717 Fax. 989-754-4440 www.SpicerGroup.com</p>	
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PROJECT NO.		130328SG2021	
STDS.	SHEET 4 OF 12	C	
DATE	DECEMBER, 2021	FILE NO.	D-5828-4
SCALE	1" = 40'	4	

CITY FILE #21-141 SECTION 8

N ADAMS RD. 120' WD. (PUBLIC)



Appears gas line may be part of L. 27215 P.551. City recommends verifying and amending easement with Consumers Energy so easement is depicted correctly.

UNRECORDED GAS ESMIT

PID: 15-08-303-035

New curb ramp required complying with A117.1-2009, Section 406.

Traffic department concurs with relocating the crosswalk to the east.

This existing crosswalk location will create a hazardous situation for pedestrians crossing the road with the proposed vehicular exit road location. The existing crosswalk shall be relocated to the east and not align with the exiting one-way traffic.

This is a possible alternate location for relocating the existing pedestrian crosswalk. The Applicant may suggest a different location for the City to consider.

While the amount of parking spaces is less than the original consent judgment, it well exceeds current parking requirements which require 3.33 parking spaces per 1,000 sq. ft. of floor area.

PARCEL DATA
 0.73 ACRES
 TAX #15-08-303-035

PARKING
 TOTAL PARKING SPACES REQUIRED:
 A MINIMUM 4.25 SPACES FOR EVERY 1,000 SQUARE FEET
 4.25 x 2,225,1,000 SQUARE FEET = 9.46 = 10 SPACES MIN.
 OR
 1 SPACE FOR EVERY 2 PERSONS PERMITTED AT MAXIMUM OCCUPANCY
 70 OCCUPANTS / 2 PERSONS = 35 SPACES MAX.

BARRIER FREE PARKING SPACES PROVIDED = 2 SPACES
 REGULAR PARKING SPACES PROVIDED = 17 SPACES
 TOTAL PARKING SPACES PROVIDED = 19 SPACES
 DRIVE-THRU STAKING SPACES PROVIDED = 10 SPACES

TOTAL SHOPPING CENTER PARKING SPACES REQUIRED = 1,600 SPACES
 TOTAL SHOPPING CENTER PARKING SPACES PROVIDED = 1,574 SPACES

LANDSCAPE & LIGHTING NOTES:
 EXISTING LANDSCAPING TO REMAIN IN PLACE EXCEPT AS NOTED ON THE DEMOLITION PLAN.
 EXISTING LIGHT POLES TO REMAIN IN PLACE EXCEPT AS NOTED ON THE DEMOLITION PLAN.

- CONSTRUCTION NOTES:**
- ASPHALT PAVEMENT. SEE PAVING PLAN ASPHALT TYPES.
 - 8" THICK CONCRETE.
 - 4" THICK CONCRETE SIDEWALK PER MDOT STANDARD PLAN R-29-I.
 - SIDEWALK RAMP PER MDOT SPECIAL DETAIL R-28-J, TYPE F.
 - SIDEWALK RAMP PER MDOT SPECIAL DETAIL R-28-J, TYPE R.
 - TRASH ENCLOSURE, EXTEND 8" CONCRETE PAD 12' IN FRONT OF GATES.
 - BARRIER FREE SIGN PER MDOT STANDARD HIGHWAY SIGN R7-8, R7-BP.
 - STOP SIGN PER MDOT STANDARD HIGHWAY SIGN R1-1.
 - RELOCATED LIGHT POLE.
 - STRIPED CROSSWALK.
 - 4' HIGH DECORATIVE FENCING.
 - ORDER POINT WITH THREE PANEL MENU.
 - CLEARANCE BAR.
 - PRE-ORDER BOARD.
 - *THANK YOU/EXIT ONLY SIGN. PROVIDED BY TENANT.
 - BIKE RACK, MEETS CITY REQUIREMENTS.
 - CONCRETE CURB & GUTTER, MDOT DETAIL F4 PER MDOT STANDARD PLAN R-30-G.
 - ADJUST BASE OF LIGHT POLE FOR PROPOSED GRADE CHANGE.
 - STONE BOULDER RETAINING WALL.
 - 24" STOP BAR, WHITE.
 - OUTDOOR SEATING AREA. TABLES AND CHAIRS PROVIDED BY TENANT.
 - DO NOT ENTER SIGN PER MDOT STANDARD HIGHWAY SIGN R5-1.
 - FIRE LANE SIGN SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (FIRE PREVENTION ORDINANCE CHAPTER 58, SEC 503).

CAR BY	REVISIONS	DATE
	REVISED PER CITY REVIEW COMMENTS	2-3-22

ROBERT B. AIKENS AND ASSOCIATES
 350 N. OLD WOODWARD, SUITE 300
 BIRMINGHAM, MI 48009

**SITE PLAN
 SITE IMPROVEMENTS
 STARBUCKS
 CITY OF ROCHESTER HILLS**

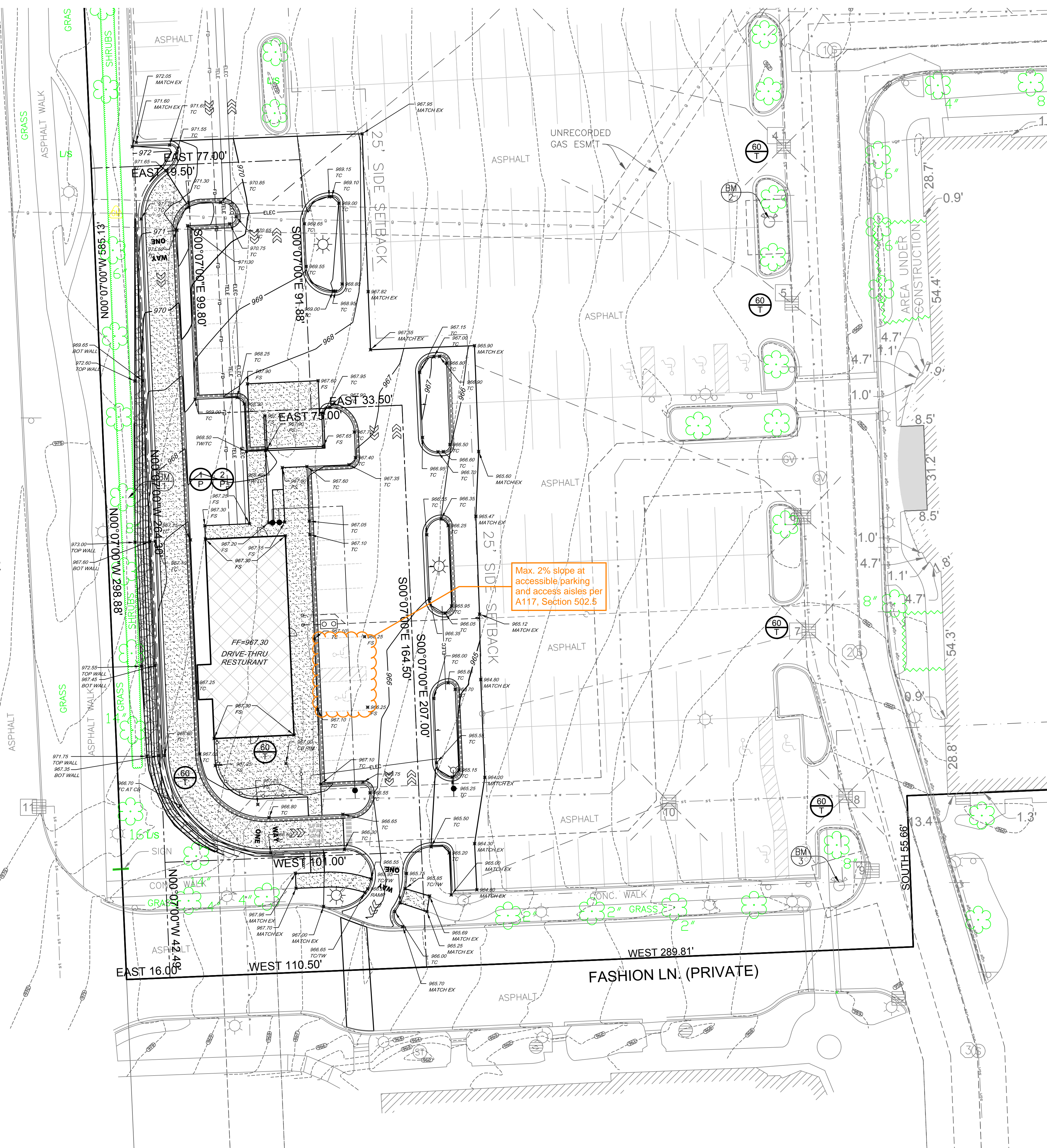
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STDS.	SHEET 5 OF 12	C
DATE DECEMBER, 2021	FILE NO. D-5828- 5	5
SCALE 1" = 20'		

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N ADAMS RD. 120' WD. (PUBLIC)

RET. F.B. PG. ACAD FILE: PLOTTING SCALE:



Max. 2% slope at accessible parking and access aisles per A117, Section 502.5

EROSION & SEDIMENT CONTROL MEASURES

KEY	SESC MEASURE	SYMBOL	WHERE USED
1	SEEDING		When bare soil is exposed, temporarily or permanently, to erode forces from wind and/or water on flat areas, mild slopes, graded waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles.
2	MULCH		On flat areas, mild slopes, graded waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles where areas are subject to ransping impact, and erode forces from wind or water.
60	STORM DRAIN INLET PROTECTION		Around the entrance to a newly constructed catch basin or an inlet that will capture runoff from an each change activity.

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL

SYMBOLGY FOR INSERTION INTO CONSTRUCTION DRAWINGS:

- = PERMANENT MEASURE
- = TEMPORARY MEASURE

Contractor shall conform to Soil Erosion and Sedimentation Control Act, Part 91 of Public Act 451 of 1994, as amended. All catch basins, on the site and adjacent to the site, shall be covered with cloth filters for Soil Erosion and Sedimentation Control.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION.
2. EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
3. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
4. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAS BEEN ACCOMPLISHED AND APPROVED BY THE AGENCY WITH JURISDICTION.
6. DEBRIS FROM THE PROJECT SHALL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME INEFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXITS.
7. IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDED AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY SPREAD UNIFORMLY AT THE RATE OF 1 - 1 1/2 TO 2 TONS PER ACRE. ANCHOR MULCH WITH DISC-TYPE MULCH ANCHORING TOOL OR OTHER MEANS AS APPROVED BY THE AGENCY WITH JURISDICTION.
8. ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
9. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED. ALL DRAIN BANKS DISTURBED BY CONSTRUCTION SHALL BE RESTORED WITHIN FIVE CALENDAR DAYS AND SOD PEGGED IN PLACE.
10. PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
11. SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO DEWATER THE GROUND IN THE COURSE OF CONSTRUCTING THE PROPOSED UTILITY, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY SOIL EROSION CONTROL DEVICE IN A MANNER THAT WILL FILTER ALL DISCHARGED WATER FROM THE DEWATERING OPERATION IN NO INSTANCE SHALL THE DEWATERING DISCHARGE BE PERMITTED TO FLOW UNFILTERED FROM THE CONSTRUCTION SITE.
12. THE CONTRACTOR SHALL CONTROL THE DUST ON THE SITE DURING THE LIFE OF THE CONTRACT. IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE COMMUNITY THIS DUST CONTROL SHALL BE ACCOMPLISHED BY THE APPLICATION OF A POSITIVE DUST PICK-UP METHOD WITH WATER ON HARD SURFACES. SUCH DUST CONTROL MATERIALS SHALL BE APPLIED AS OFTEN AS IS NECESSARY IN THE OPINION OF THE COMMUNITY TO CONTROL THE DUST.
13. SHOULD THE SOIL EROSION CONTROL REQUIREMENTS BE NEGLECTED OR NOT ADEQUATELY FOLLOWED, THE COMMUNITY MAY REQUIRE THE CONTRACTOR TO CEASE CONSTRUCTION OPERATIONS AND TO APPLY HIS ENTIRE FORCE TO MEET THE REQUIREMENTS BEFORE PROCEEDING FURTHER WITH THE PROJECT.
14. ALL WORK CONNECTED WITH SOIL EROSION AND SEDIMENTATION CONTROL EITHER TEMPORARY OR PERMANENT, AS REQUIRED BY THE SOIL EROSION CONTROL PERMIT, IS TO BE IMPLEMENTED DURING CONSTRUCTION.

SEQUENCE OF CONSTRUCTION - SESC

1. INSTALL ALL TEMPORARY SOIL EROSION CONTROL MEASURES PRIOR TO DISTURBING ANY EARTH ON THE SITE.
2. STABILIZE SLOPES STEEPER THAN 1 ON 4, CHANNELS AND SWALES WITHIN 7 DAYS OF EARTH DISTURBANCE. INSTALL PERMANENT STABILIZATION MEASURES WITHIN 5 DAYS OF FINAL GRADING.
3. DURING STORM SEWER INSTALLATION, ALL NEWLY CONSTRUCTED DRAINAGE STRUCTURES SHALL BE PROTECTED WITH A DRAINAGE STRUCTURE FILTER. THIS WORK WILL BE INCLUDED IN THE DRAINAGE STRUCTURE COST.
4. INSTALL TOPSOIL AND HYDROSEED ON DISTURBED RIGHT-OF-WAY WITHIN 5 DAYS OF COMPLETING UTILITY INSTALLATION.
5. PLACE RIPRAP WITHIN 24 HOURS OF PLACING END SECTIONS OR OTHER DRAINAGE OUTLETS.
6. CLEAN ALL ACCUMULATED SEDIMENT FROM CATCH BASINS, SEWERS AND PAVEMENT AREAS AS REQUIRED FOLLOWING COMPLETION OF CONSTRUCTION.
7. THE EXACT SCHEDULE OF SOIL EROSION AND SEDIMENTATION CONTROL EVENTS (WITH DAY AND/OR DATES OF THE VARIOUS ACTIVITIES) SHALL BE SUBMITTED TO OAKLAND COUNTY BY THE CONTRACTOR, FOR REVIEW AND APPROVAL, PRIOR TO OBTAINING A PERMIT.

NEAREST WATER BODY
5,100 FEET TO MILLER LAKE

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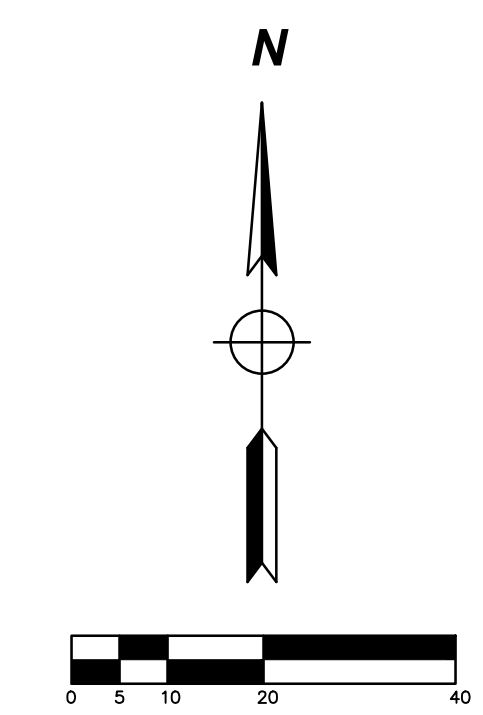
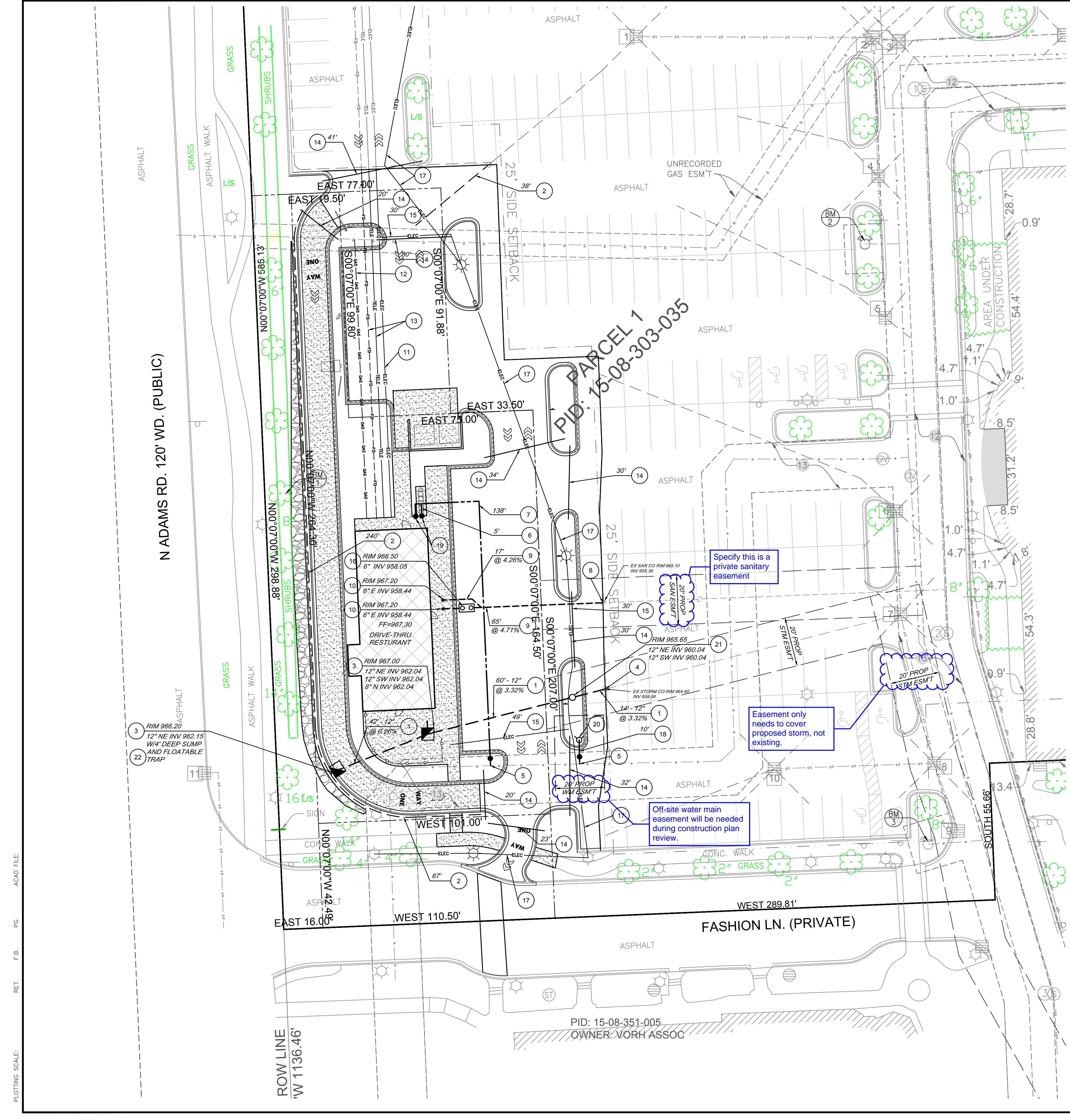
TIMING SEQUENCE

OPERATION	SCHEDULE
TEMPORARY CONTROL MEASURES	_____
STRIPPING/STOCKPILING OF SOIL	_____
ROUGH GRADING/SEDIMENTATION CONTROL	_____
STORM UTILITIES	_____
PERMANENT CONTROL MEASURE	_____
SITE CONSTRUCTION	_____
FINISH GRADING	_____
* SCHEDULE TO BE FILLED OUT BY CONTRACTOR/PERMITEE.	

SOILS INFORMATION

SYMBOL	TYPE
10B	MARLETT SANDY LOAM, 1 TO 6 PERCENT SLOPES
11B	CAPAC SANDY LOAM, 0 TO 4 PERCENT SLOPES
40A	UDORTHENTS, LOAMY NEARLY LEVEL
41B	AQUENTS, SANDY LOAMY, UNDULATING
44B	RIDDLES SANDY LOAM, 1 TO 6 PERCENT SLOPES

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SCALE: 1" = 20'	D-5828- 6	



- CONSTRUCTION NOTES**
- 1 STORM SEWER - REINFORCED CONC. PIPE (CLASS IV), TONGUE AND GROOVE PIPE W/PREMIUM WATER PROOF JOINTS USING A NEOPRENE "O" RING, ASTM C-443.
 - 2 UNDERDRAIN - 4" ADS PERFORATED CORRUGATED POLYETHYLENE TUBING (CPT) WITH ADS SOCK OR EQUAL.
 - 3 CATCH BASIN.
 - 4 CONNECT TO EXISTING STORM SEWER, REMOVE PLUG END.
 - 5 CONNECT TO EXISTING WATER MAIN, USING TAPPING SLEEVE, VALVE & BOX.
 - 6 WATER SERVICE LEAD - TYPE-K COPPER.
 - 7 FIRE SERVICE - DUCTILE IRON, CLASS 54, CEMENT LINED.
 - 8 CONNECT TO EXISTING SANITARY SEWER, REMOVE PLUG END.
 - 9 6" SANITARY LEAD - PVC, SDR23.5 TYPE PSM PLASTIC, CONFORMING TO ANSIASTM D3034 WITH RUBBER GASKET JOINTS.
 - 10 SANITARY OR STORM CLEANOUT.
 - 11 ELECTRIC SERVICE LINE, EXACT LOCATIONS TO BE COORDINATED WITH UTILITY COMPANY.
 - 12 GAS SERVICE CONNECTION TO BE COORDINATED THROUGH UTILITY COMPANY.
 - 13 TELEPHONE/COMMUNICATION LINE TO BE COORDINATED THROUGH UTILITY COMPANY.
 - 14 4" IRRIGATION SLEEVE - SDR-40, PVC, BELL END W/ RUBBER RINGS, ASTM D3034.
 - 15 2" ELECTRICAL SLEEVE - SDR-40, PVC, BELL END W/ RUBBER RINGS, ASTM D3034.
 - 16 OIL/GREASE SEPARATOR, SCHIER #GB-75 75 G.P.M. CAPACITY W/ H2O COVER, OR EQUAL.
 - 17 CONTRACTOR SHALL UTILIZE THE EXISTING FEED FOR THE PARKING LOT LIGHTS AND RUN NEW ELECTRIC LINES TO THE RELOCATED LIGHT POLES.
 - 18 WATER MAIN - DUCTILE IRON, CLASS 54, CEMENT LINED.
 - 19 WATER VALVE / WATER SHUT OFF.
 - 20 HYDRANT.
 - 21 STORM WATER PRETREATMENT DEVICE - ADS BARRICUDA MAX.
 - 22 FLOATABLE TRAP - THE ELIMINATOR BY GROUND WATER RESOURCE OR EQUAL.

- UNDERDRAIN NOTES**
- CONTRACTOR SHALL INSPECT EXISTING UNDERDRAIN FOR PROPER DRAINAGE FLOW.
- IF THE EXISTING UNDERDRAIN IS FREE FLOWING AND CAN BE USED, CONNECT PROPOSED UNDERDRAIN TO THE EXISTING.
- IF TILE IS PLUGGED, THE EXISTING TILE SHALL BE REMOVED AND REPAIRED WITH NEW UNDERDRAIN.
- SANITARY SERVICE NOTES**
- THE PROPOSED LOAD FOR THE SANITARY SERVICE IS 1,020 G.P.D.

Specify this is a private sanitary easement

Easement only needs to cover proposed storm, not existing.

Off-site water main easement will be needed during construction plan review.

Revise to example below for Drive-thru Restaurant for Sanitary Basis of Design

ON-SITE SANITARY SEWER DESIGN

APARTMENT BUILDING: 93 UNITS
 UNIT FACTOR = (0.65/UNIT) x (93 UNITS) = 55.8

GENERAL RETAIL BUILDING: 9,660 SF
 UNIT FACTOR = (0.04/1000 SF) x (9,660 SF) = 0.38

DRIVE-THRU RESTAURANT: 3,782 SF
 UNIT FACTOR = 1.00

TOTAL UNIT FACTOR = 55.8+0.38+1.00 = 57.19 = 58

THUS, (58 UNIT FACTOR)(2.44 PERSONS/UNIT FACTOR) = 142 PERSONS

SANITARY DESIGN

"AVERAGE FLOW"

142 PERSONS x 100 GPCD = 14,200 GPD = 0.0142 MGPD
 $Q = 100 \times (18 + \sqrt{P}) / (4 + \sqrt{P}) = 419.87$ GPCD
 $Q = 0.0220$ CFS

"PEAK FLOW"

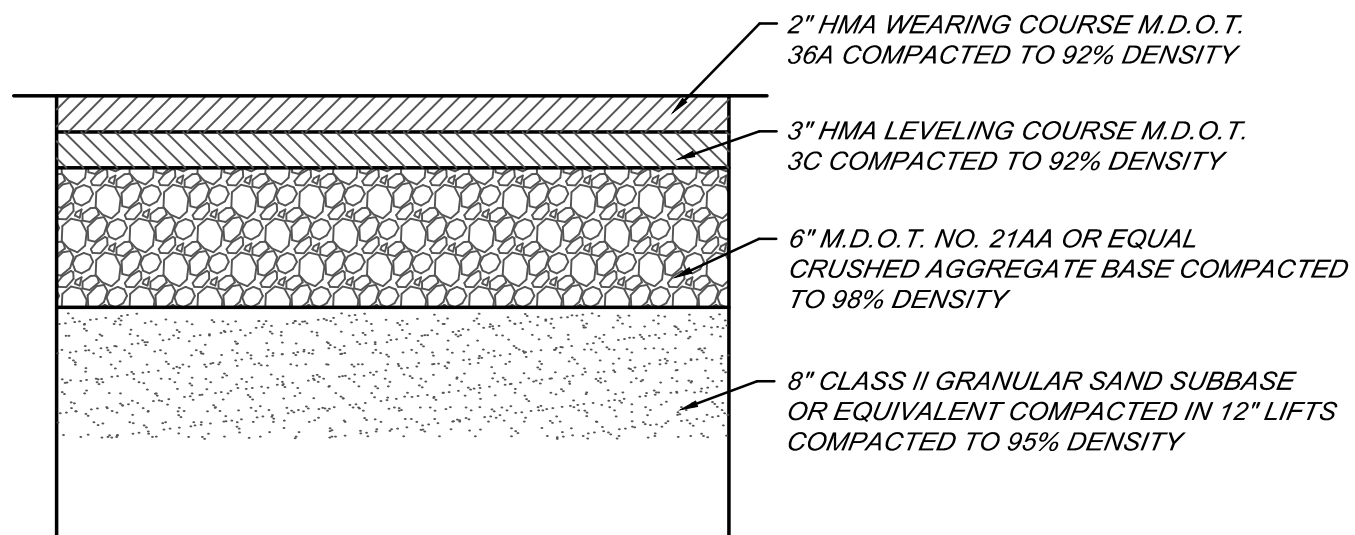
142 PERSONS / 1000 = 0.142
 $Q = 100 \times (18 + \sqrt{P}) / (4 + \sqrt{P}) = 419.87$ GPCD
 142 PERSONS x 419.87 GPCD = 59,621.54 GPD = 0.059621 MGPD
 $Q = 0.0924$ CFS (conversion)
 $Q = 0.0924$ CFS

NOTE: AN 8" TRUSS PIPE @ 0.40% (MINIMUM) CAN CARRY 0.765 CFS @ 2.19 FPS
 A 10" TRUSS PIPE @ 0.30% (MINIMUM) CAN CARRY 1.119 CFS @ 2.19 FPS

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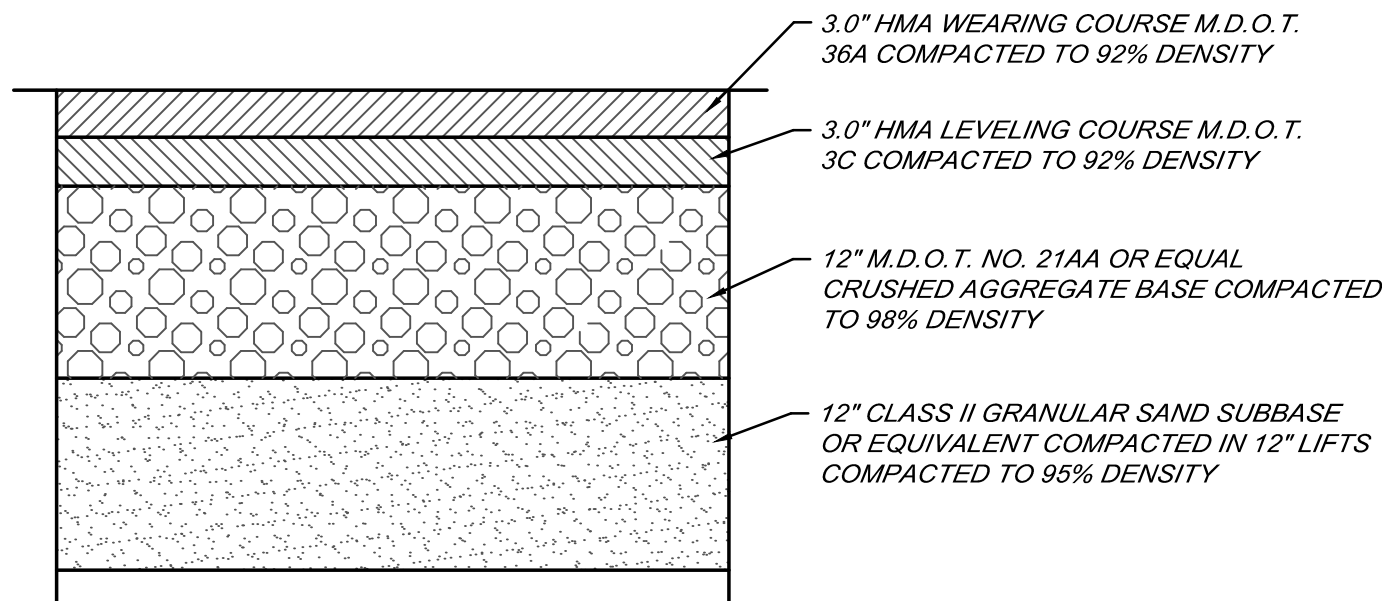
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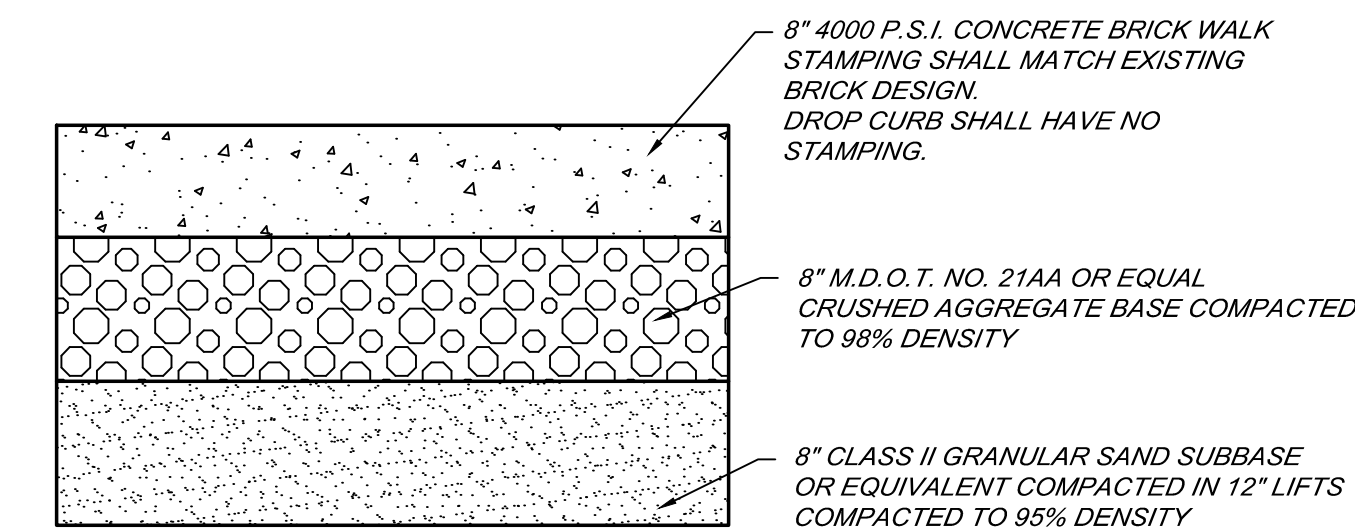
STANDARD ASPHALT PAVEMENT

NOT TO SCALE



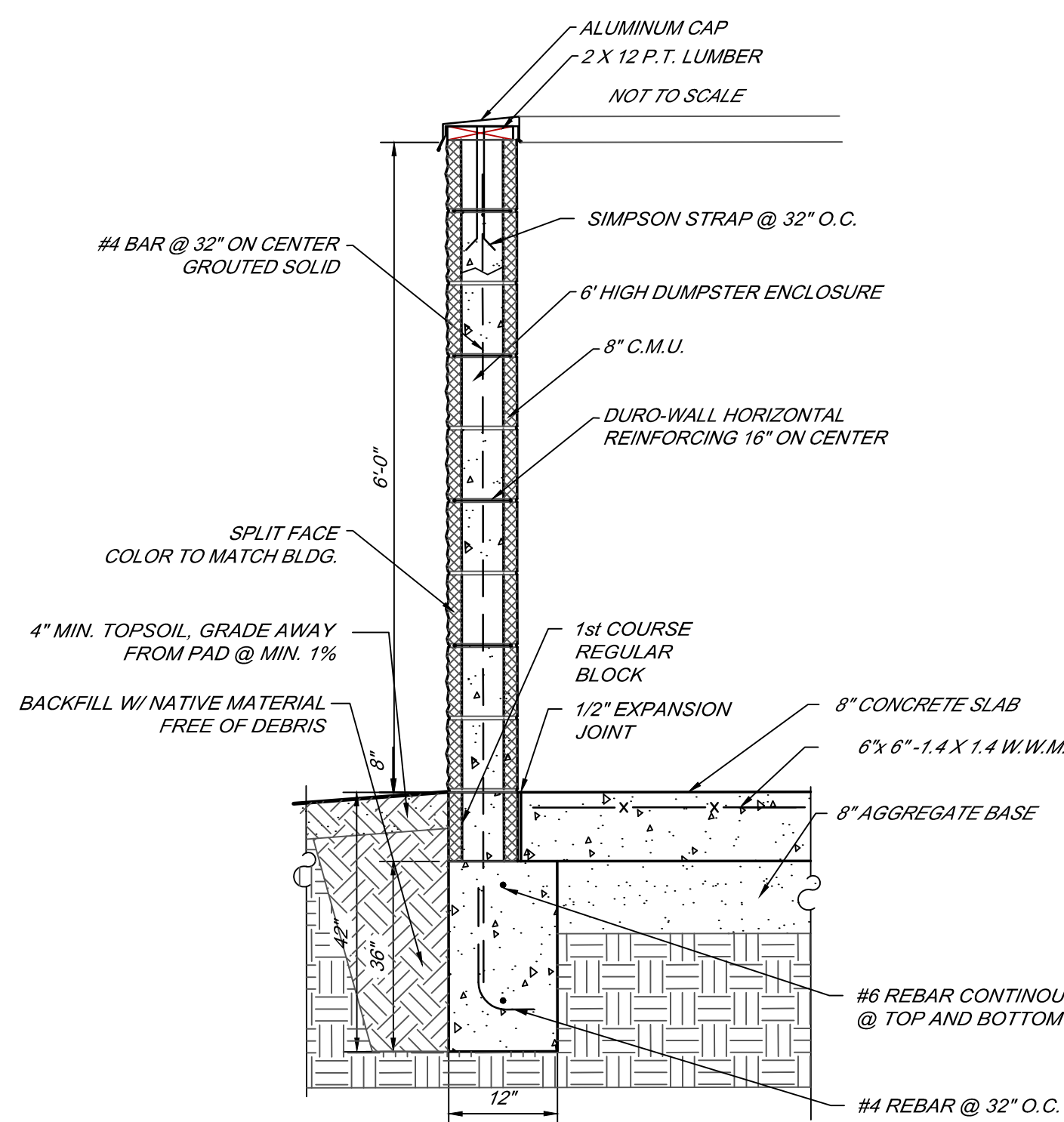
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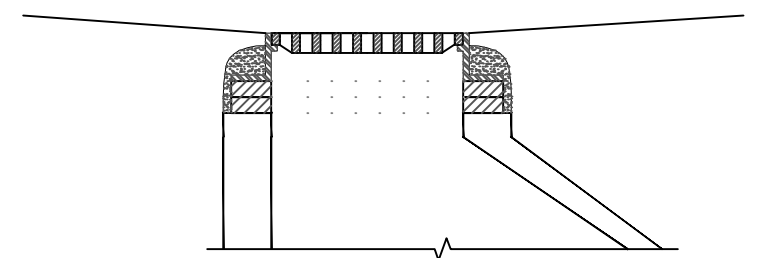


SPECIAL PAVEMENT DETAIL

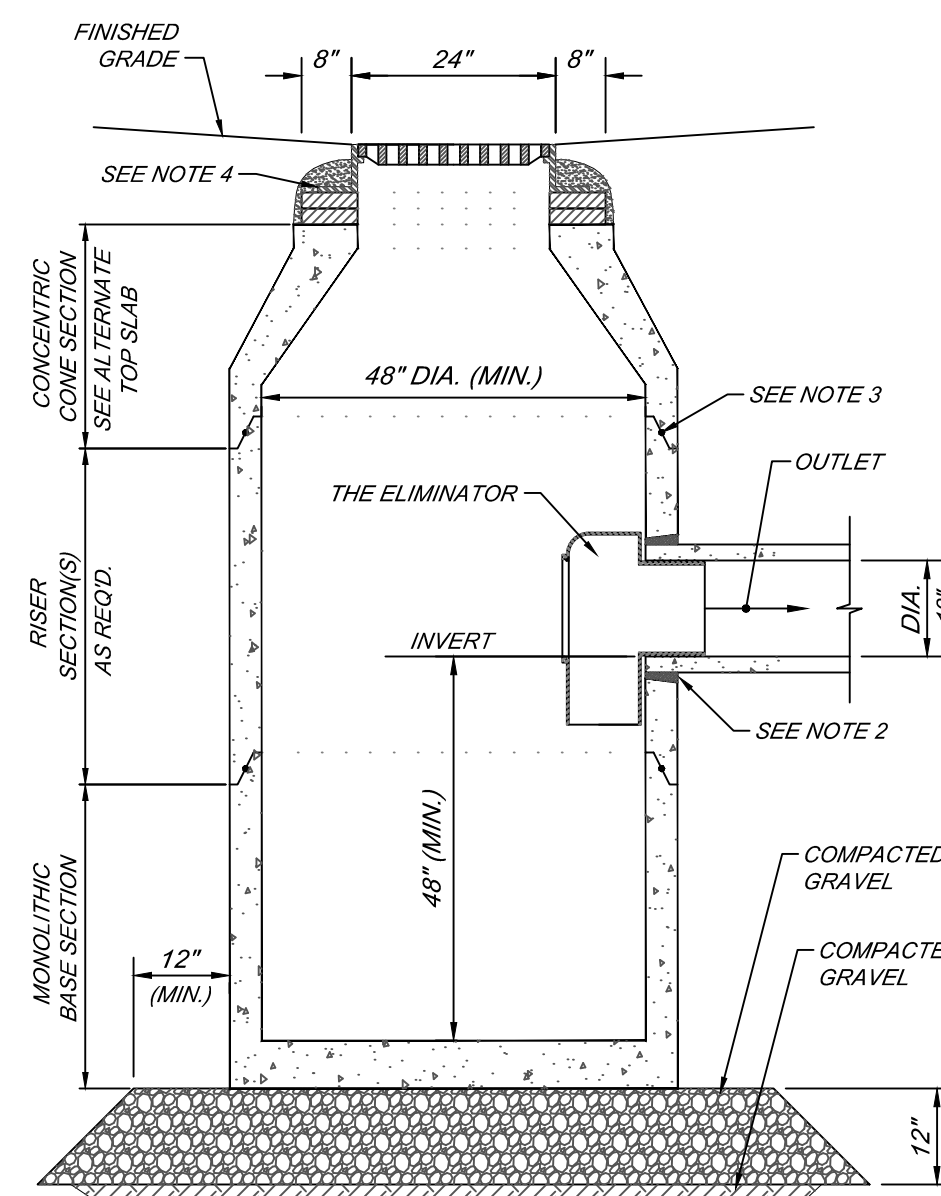
NOT TO SCALE



DUMPSTER ENCLOSURE WALL SECTION

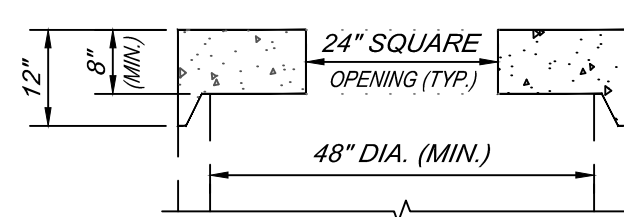


ALTERNATE ECCENTRIC CONE SECTION



CATCH BASIN (CB) WITH TRAP

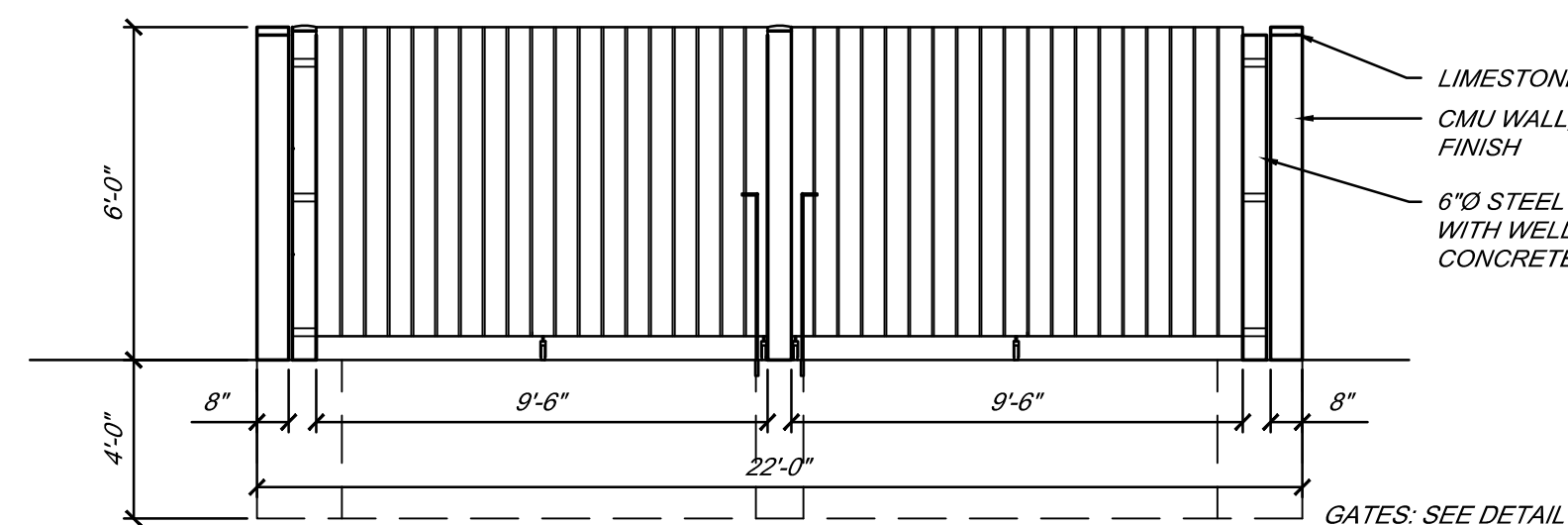
NO SCALE



ALTERNATE TOP SLAB

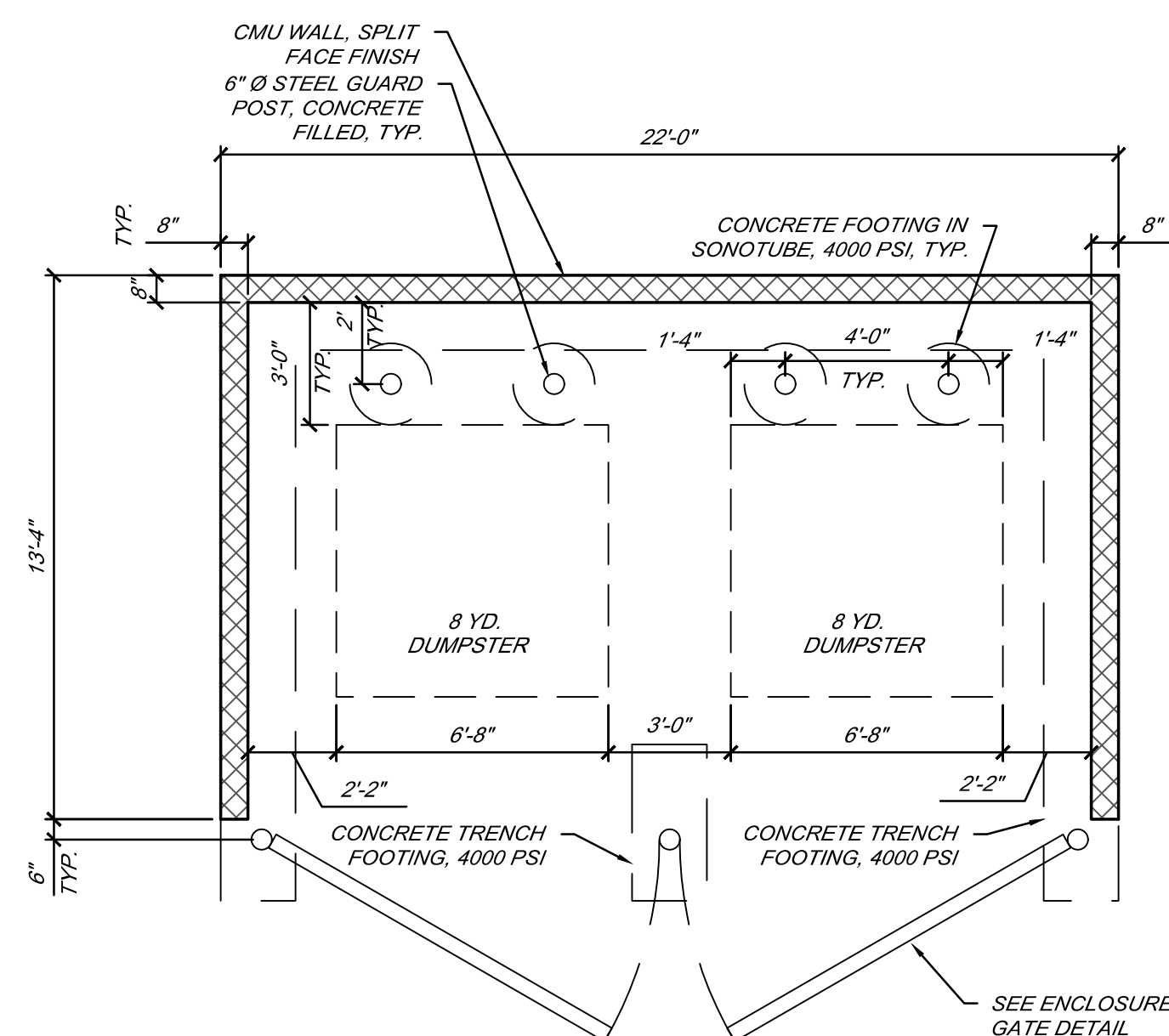
Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE "Y" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).
5. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM



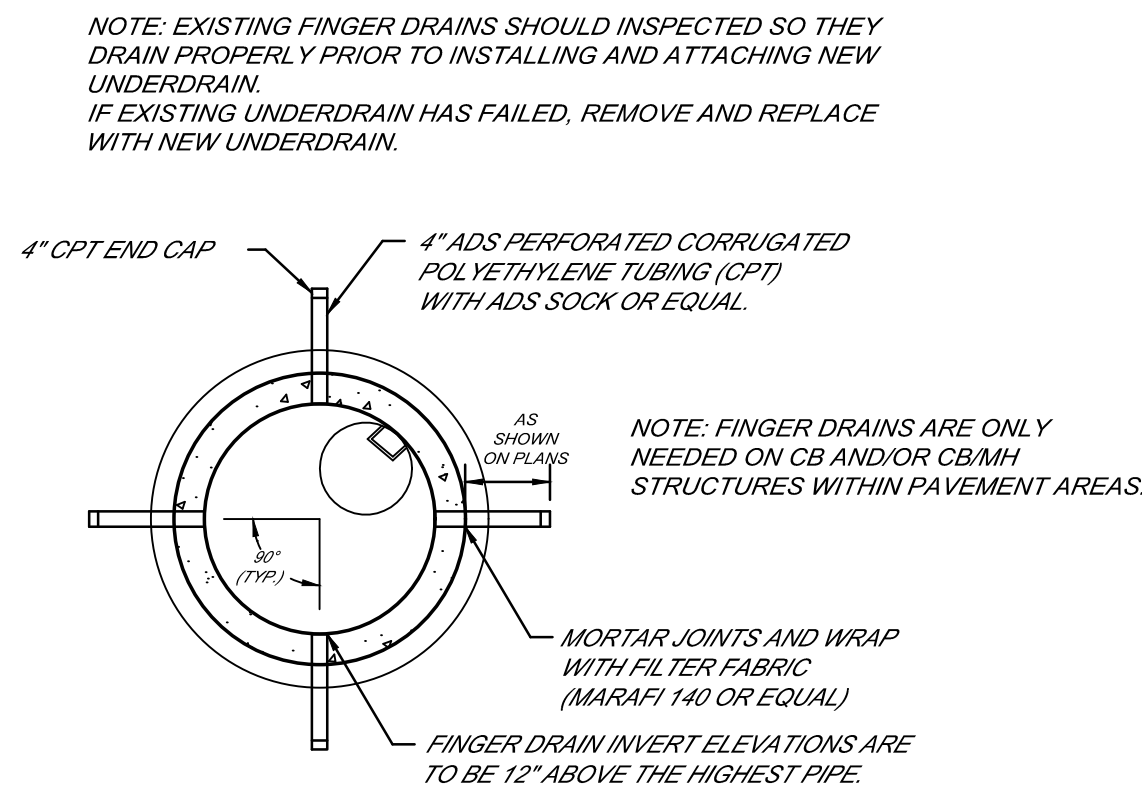
2-CONTAINER MASONRY ENCLOSURE FRONT ELEVATION

NOT TO SCALE



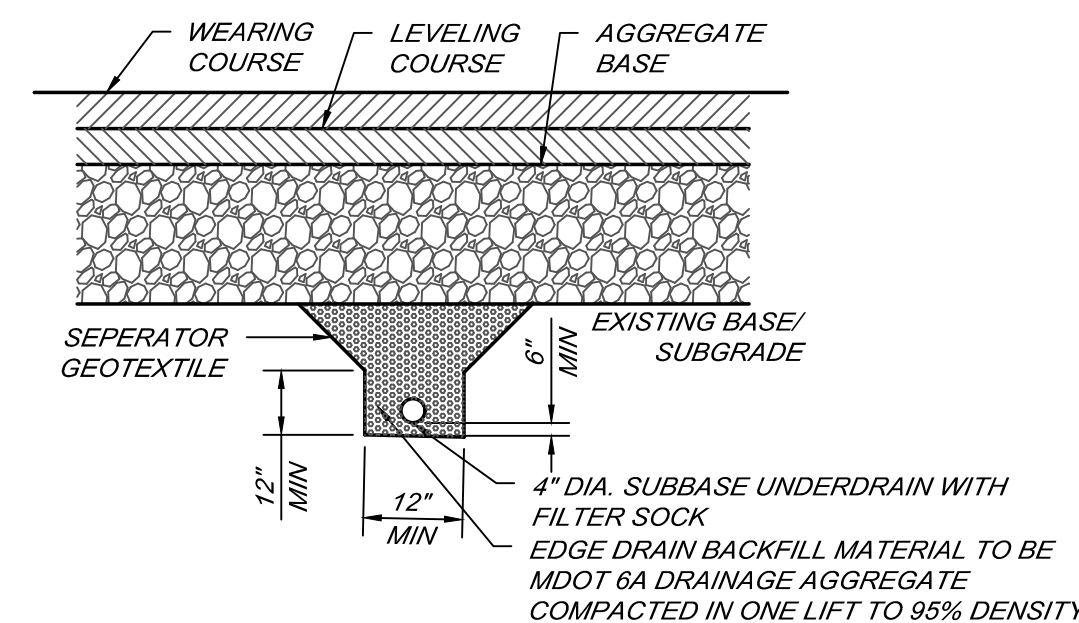
2-CONTAINER MASONRY ENCLOSURE

NOT TO SCALE



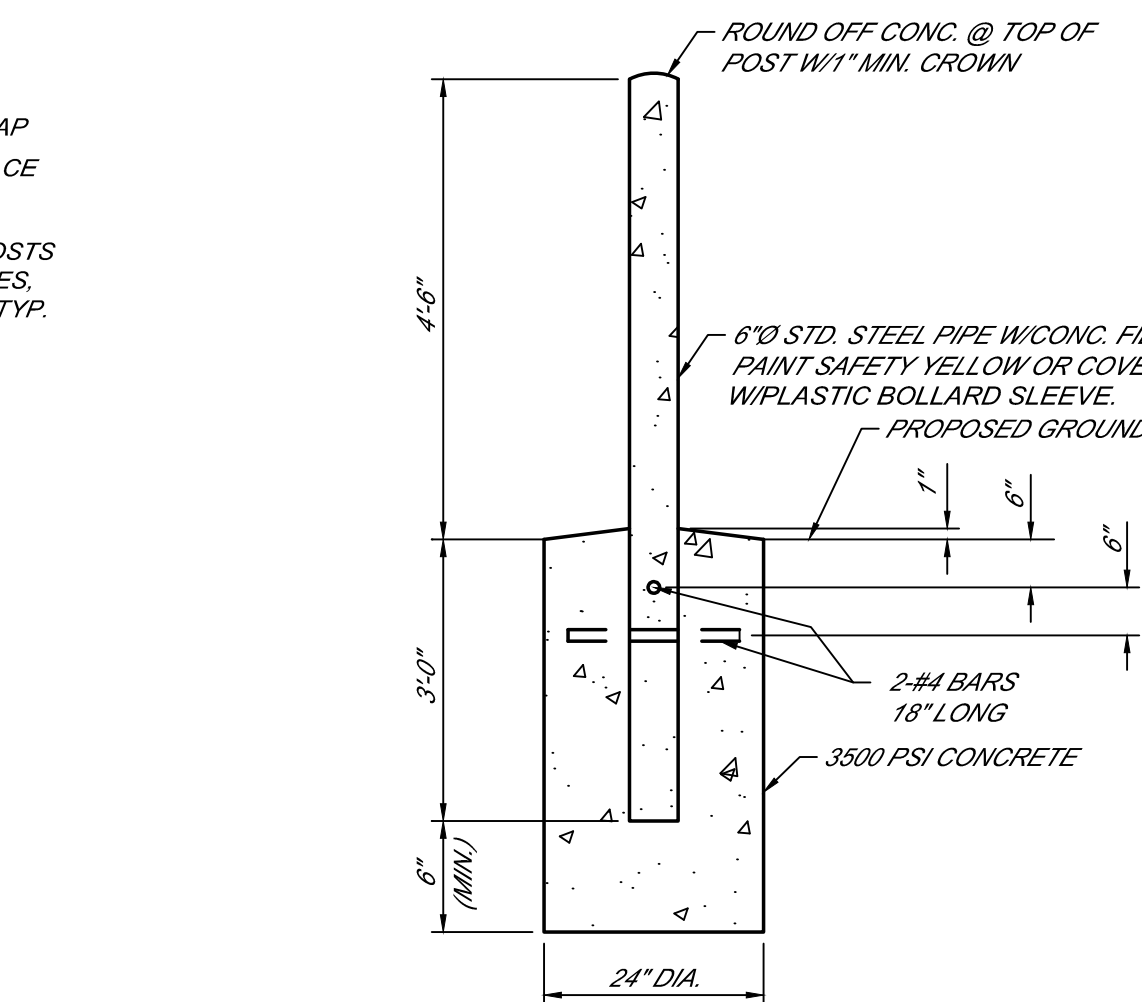
FINGER DRAIN DETAIL

NOT TO SCALE



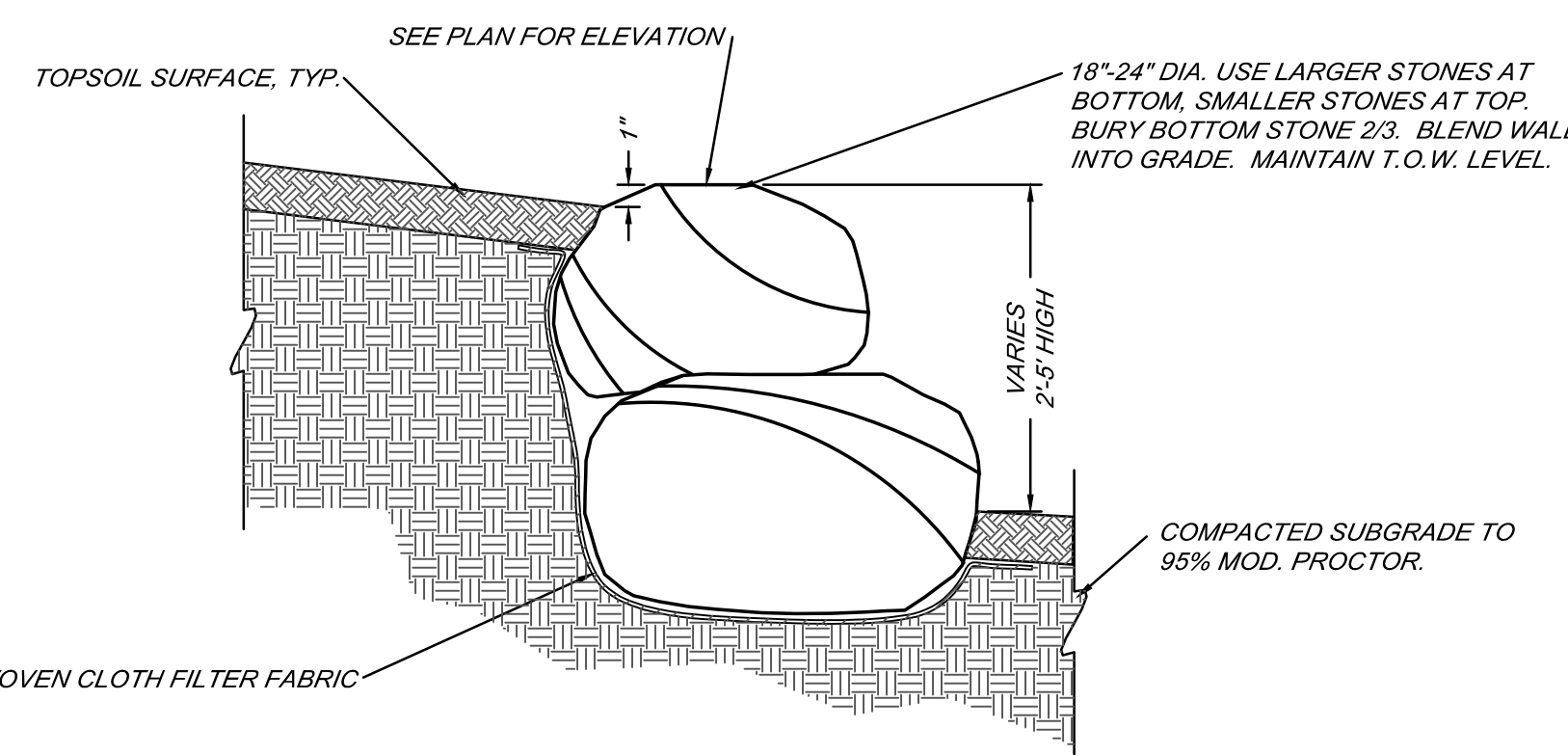
UNDERDRAIN DETAIL

NO SCALE



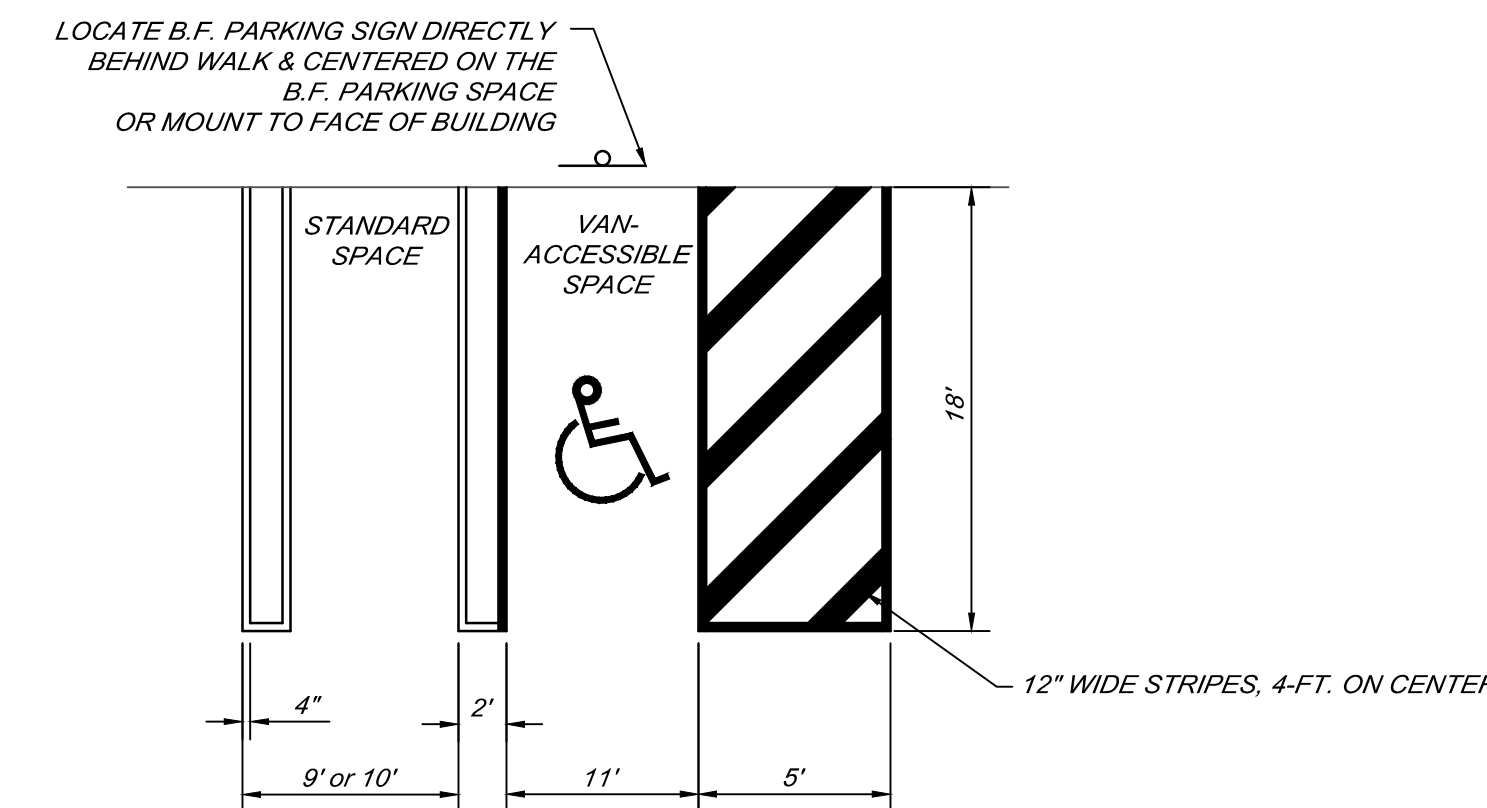
BOLLARD DETAIL

NOT TO SCALE



BOULDER RETAINING WALL SECTION DETAIL

NOT TO SCALE

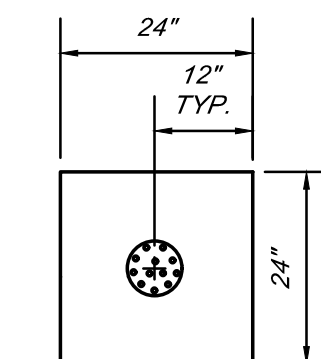


COLORS PER FEDERAL SPECIFICATION 5956:
 YELLOW 33655
 RED 31310
 WHITE 27925
 BLUE 35095

NON-SHADED LINES INDICATE YELLOW COLOR
 SHADED LINES INDICATE ADA BLUE COLOR
 LINES SHALL BE 4" WIDE (U.N.O.), WATERBORNE-TYPE PAINTED STRIPES. MATERIALS SHALL MEET MDOT SPECIFICATIONS.
 SLOPE SHALL NOT EXCEED 2% IN ANY DIRECTION WITHIN THE ACCESSIBLE PARKING SPACE OR LOADING AREA.

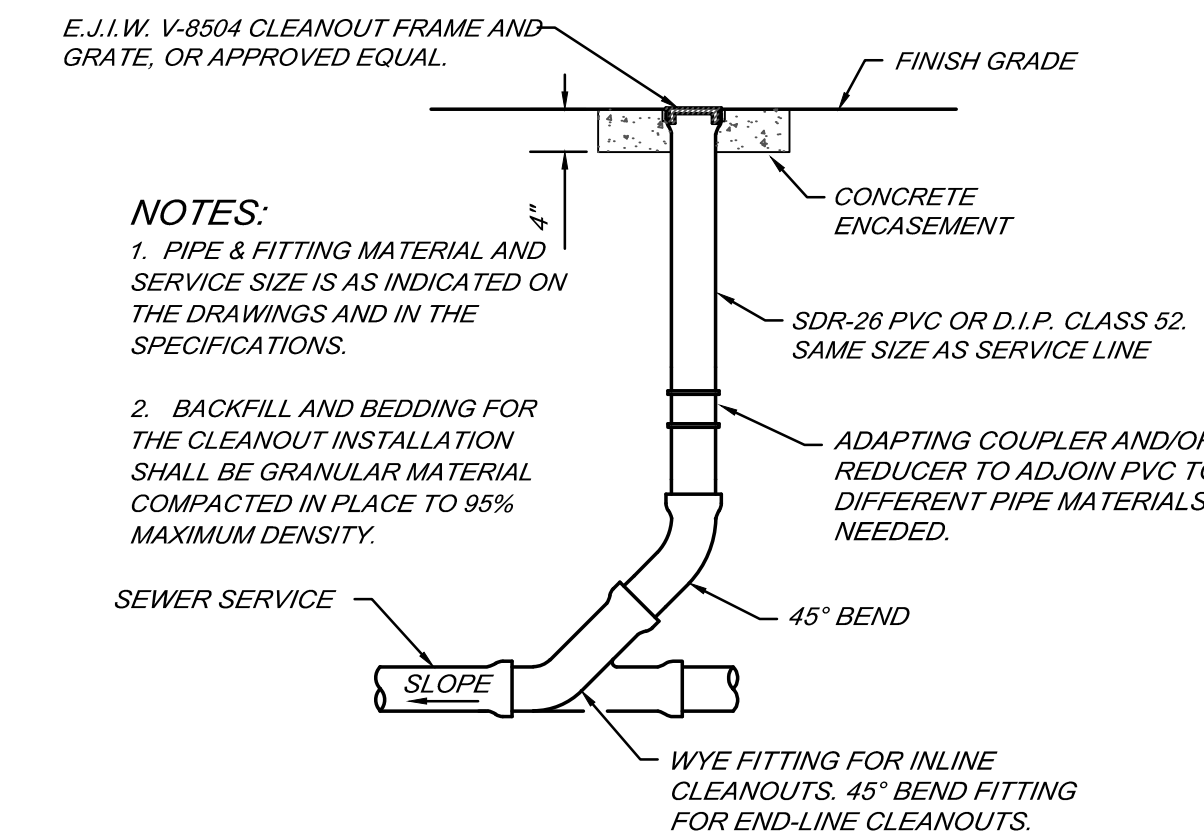
PARKING SPACES DETAIL

NOT TO SCALE



PLAN

NOT TO SCALE



- NOTES:**
1. PIPE & FITTING MATERIAL AND SERVICE SIZE IS AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
 2. BACKFILL AND BEDDING FOR THE CLEANOUT INSTALLATION SHALL BE GRANULAR MATERIAL COMPACTED IN PLACE TO 95% MAXIMUM DENSITY.

CLEANOUT DETAIL

NOT TO SCALE

CAR	REVISED PER CITY REVIEW COMMENTS	2-3-22
BY	MARK	REVISIONS
		DATE

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ROBERT B. AIKENS AND ASSOCIATES
 350 N. OLD WOODWARD, SUITE 300
 BIRMINGHAM, MI 48009

**SITE DETAILS
 SITE IMPROVEMENTS
 STARBUCKS
 CITY OF ROCHESTER HILLS**

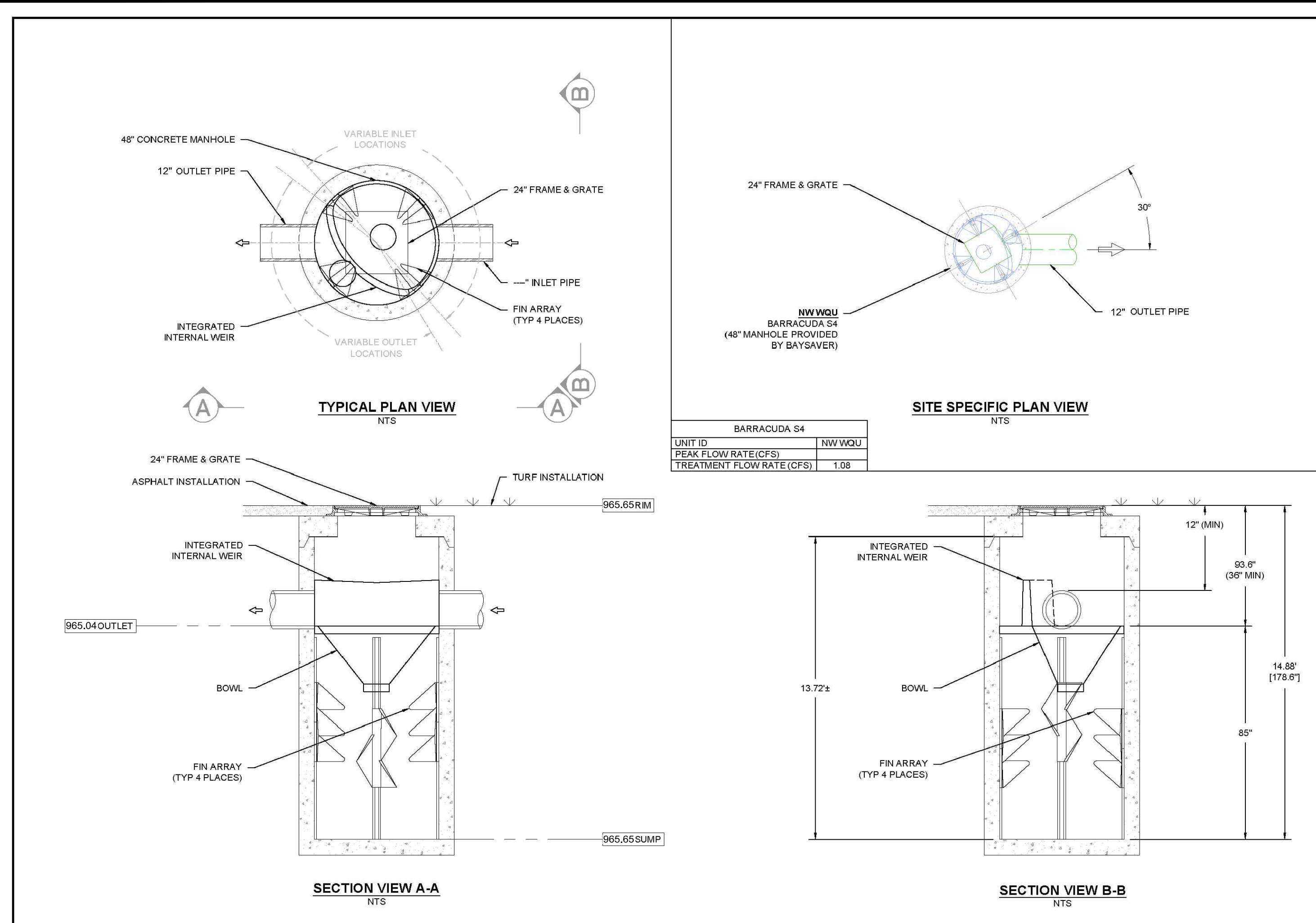
Spicer group
 SAGINAW OFFICE
 230 S. Washington Ave.
 Saginaw, MI 48607 Tel.
 989-754-4717 Fax.
 989-754-4440
 www.SpicerGroup.com

DE. BY: CAR CH. BY: BMR PROJECT NO. 130328SG2021
 DR. BY: CAR APP. BY: DSP

STDS. SHEET 8 OF 12 C
 DATE DECEMBER, 2021 FILE NO. D-5828- 8
 SCALE AS NOTED

CITY FILE #21-141 SECTION 8

ACAD FILE: PG. F.B. RET. PLOTTING SCALE:



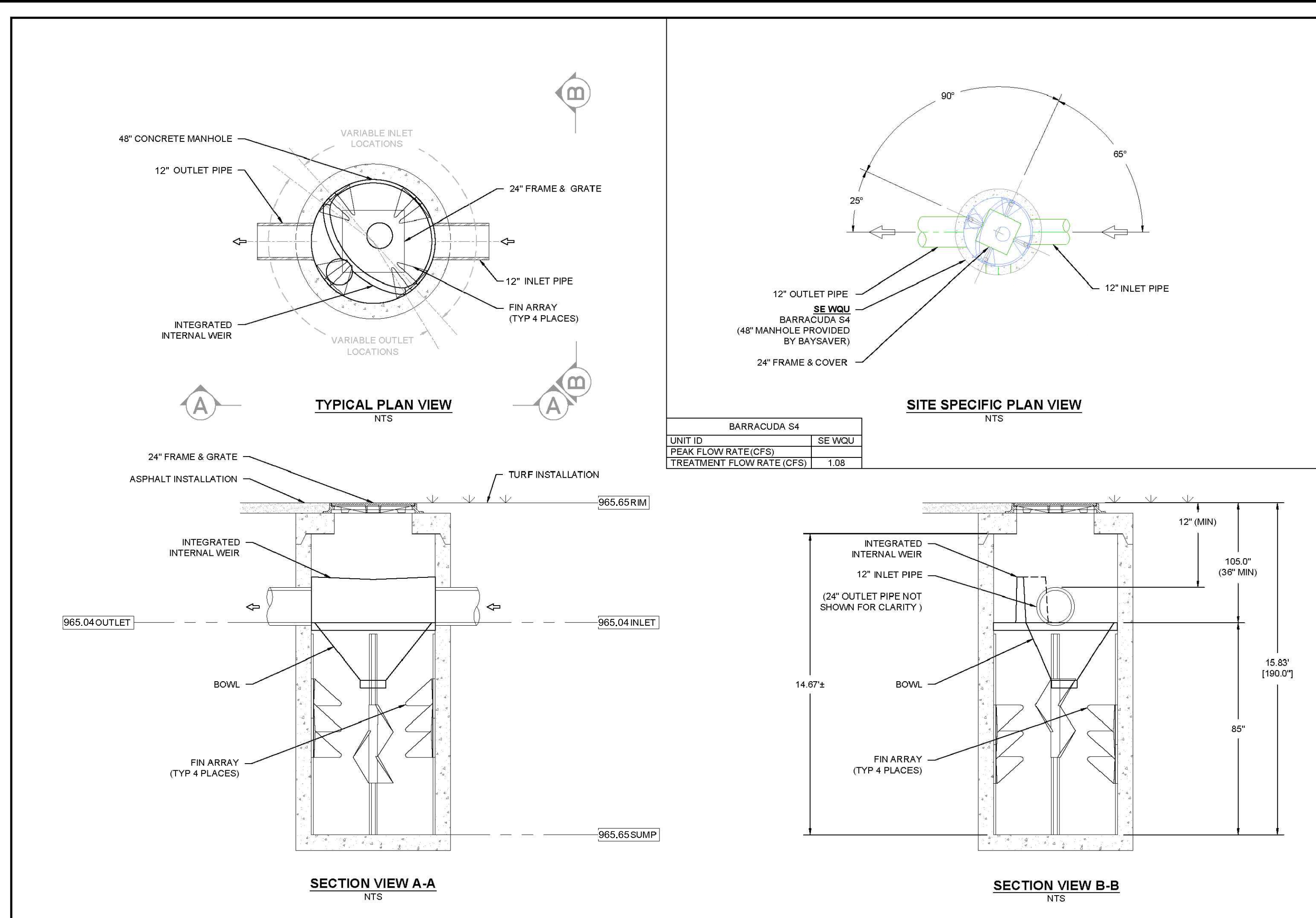
UNIT ID	NW WQU
PEAK FLOW RATE (CFS)	
TREATMENT FLOW RATE (CFS)	1.08

BARRACUDA S4

1000 Ohio Highway Drive
Hilliard, OH 43026

NOT TO SCALE

4 SHEET OF 9



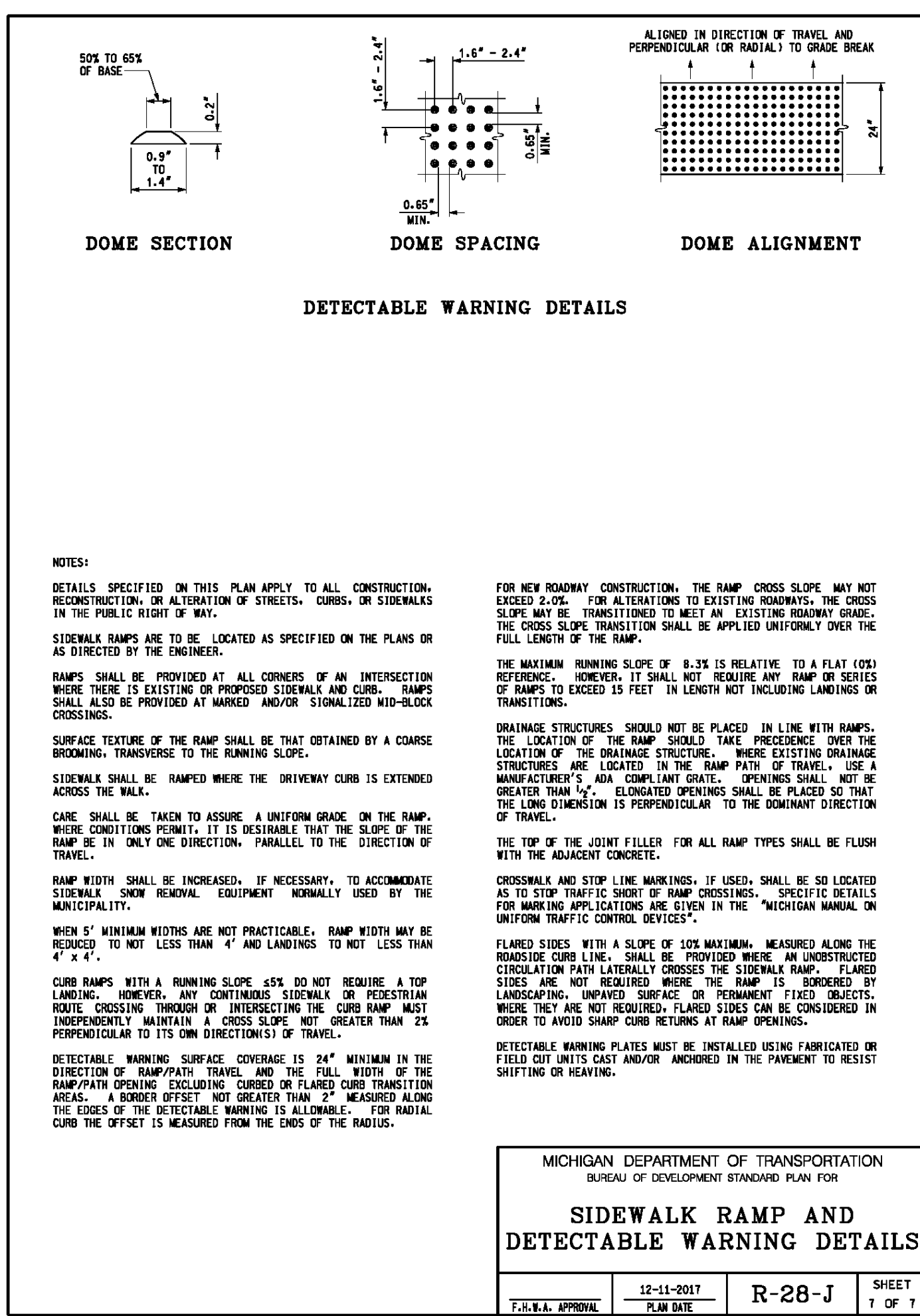
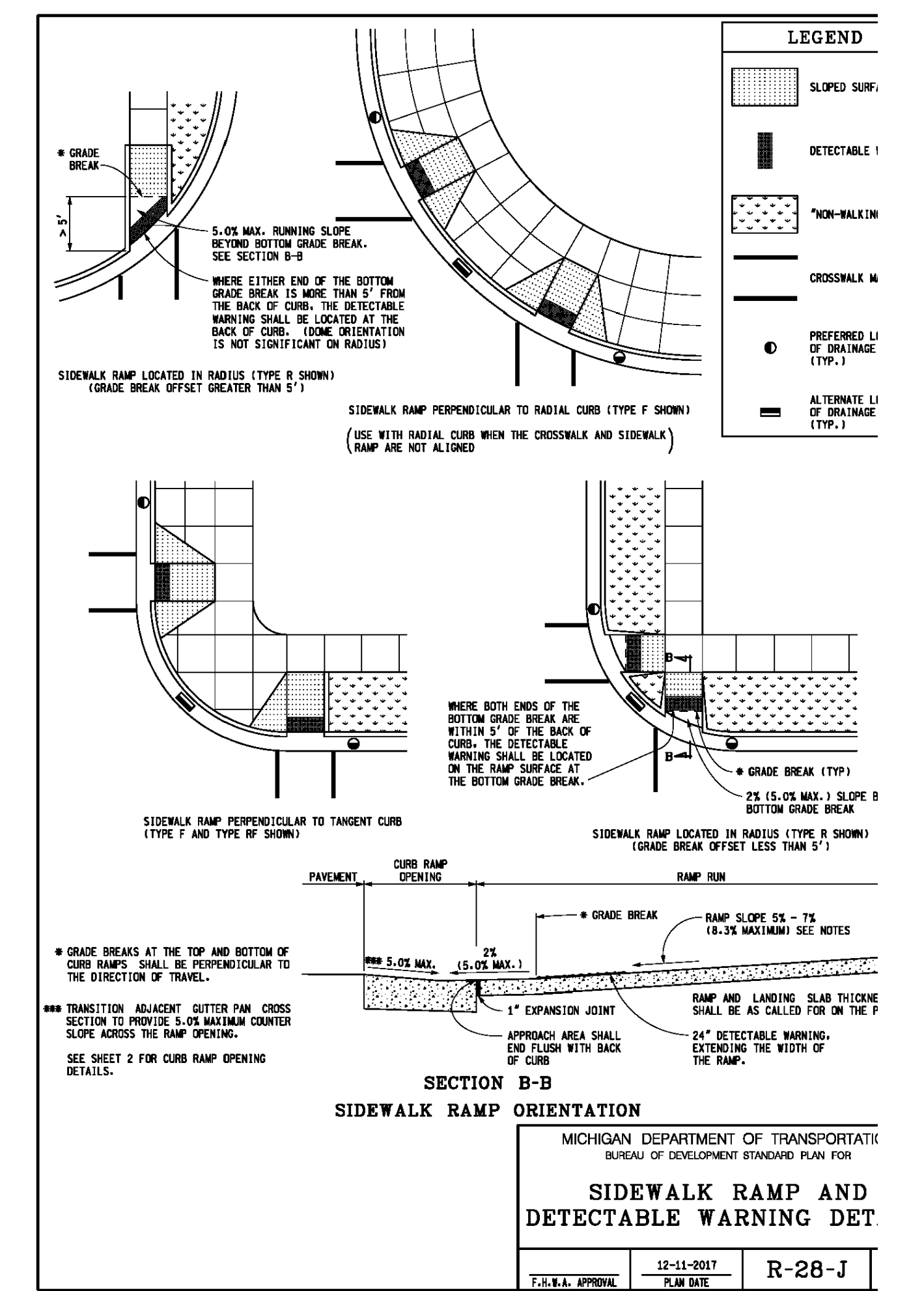
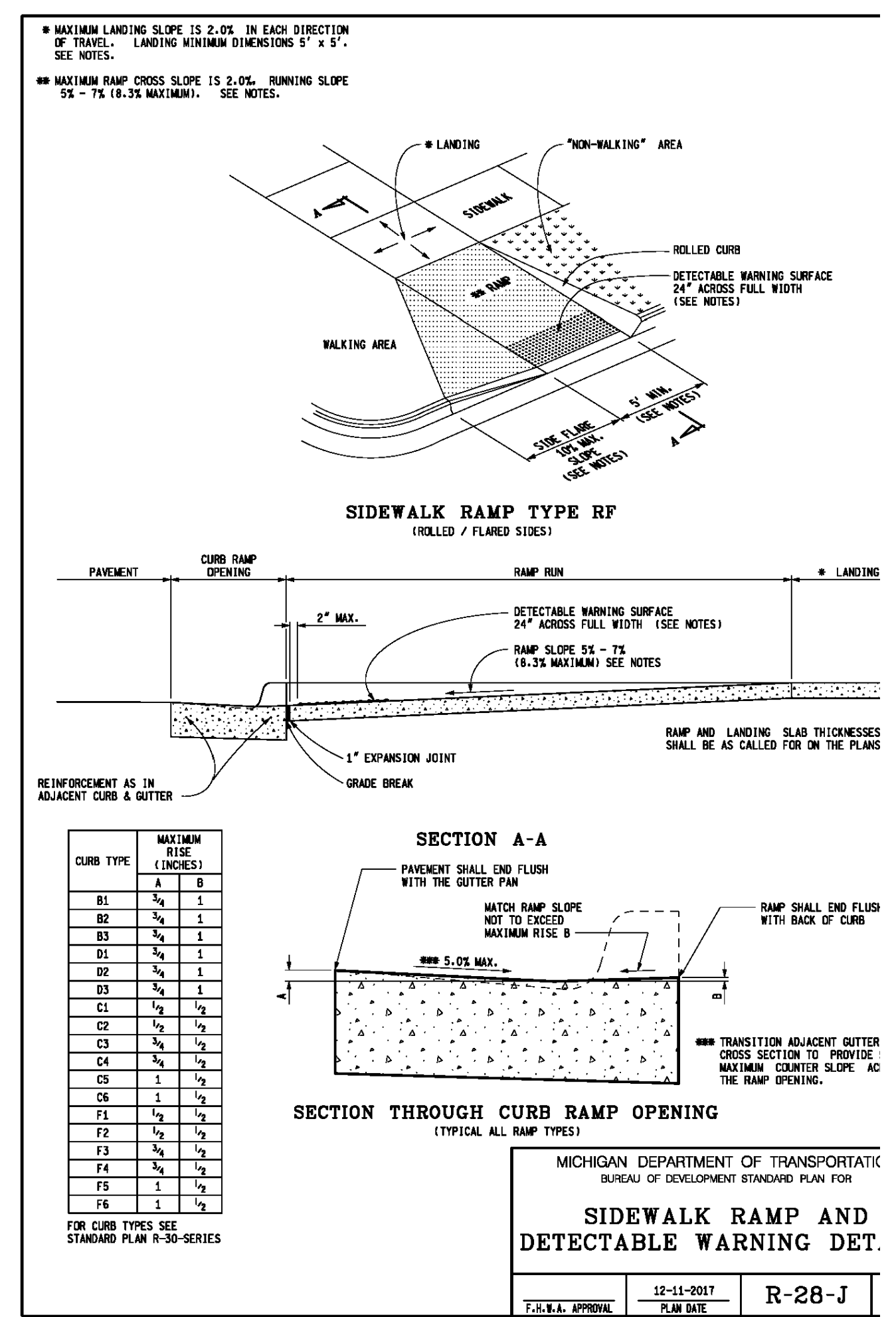
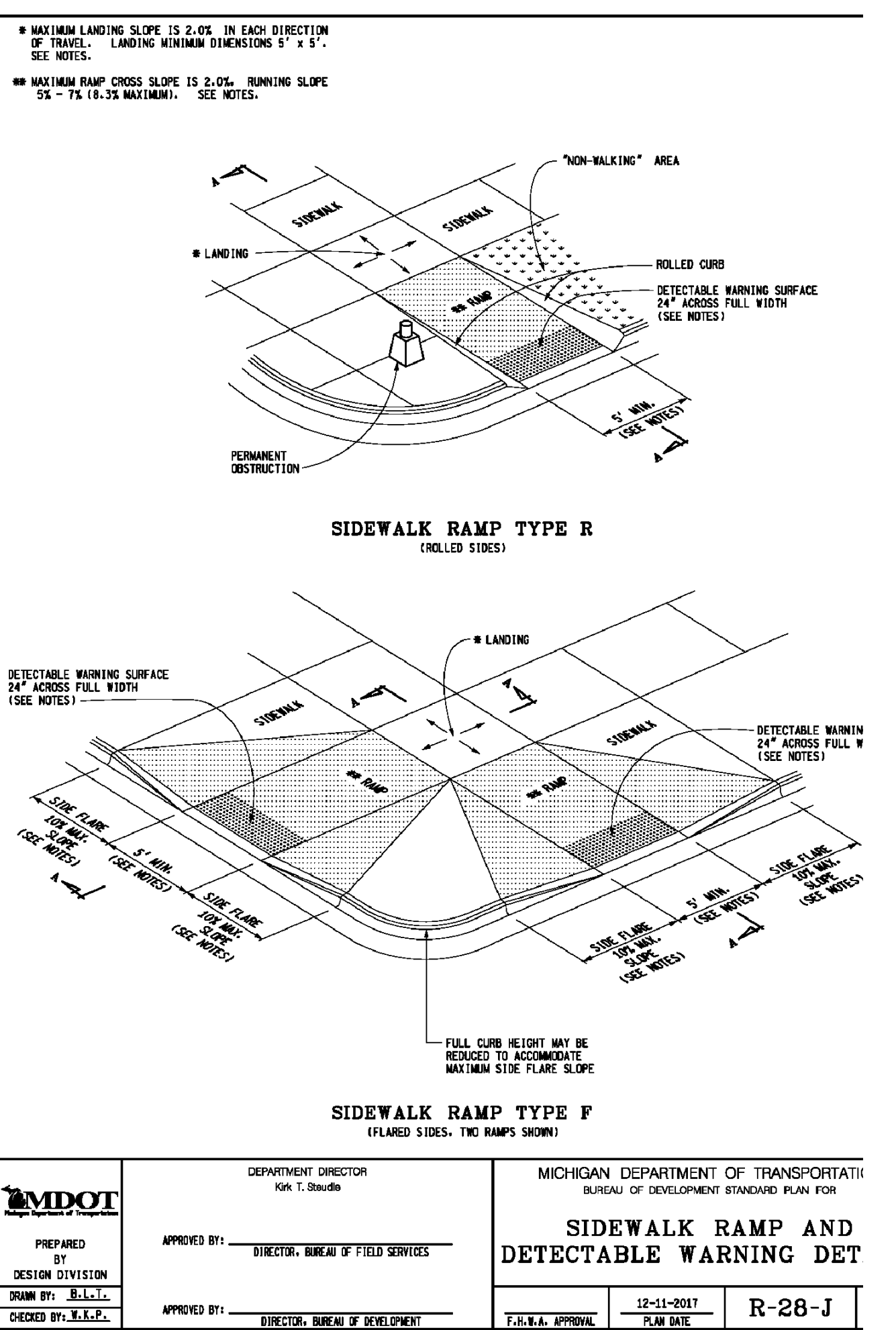
UNIT ID	SE WQU
PEAK FLOW RATE (CFS)	
TREATMENT FLOW RATE (CFS)	1.08

BARRACUDA S4

1000 Ohio Highway Drive
Hilliard, OH 43026

NOT TO SCALE

5 SHEET OF 9



CAR	REVISED PER CITY REVIEW COMMENTS	2-3-22
BY	MARK	DATE

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ROBERT B. AIKENS AND ASSOCIATES
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BIRMINGHAM, MI 48009

SITE DETAILS
SITE IMPROVEMENTS
STARBUCKS
CITY OF ROCHESTER HILLS

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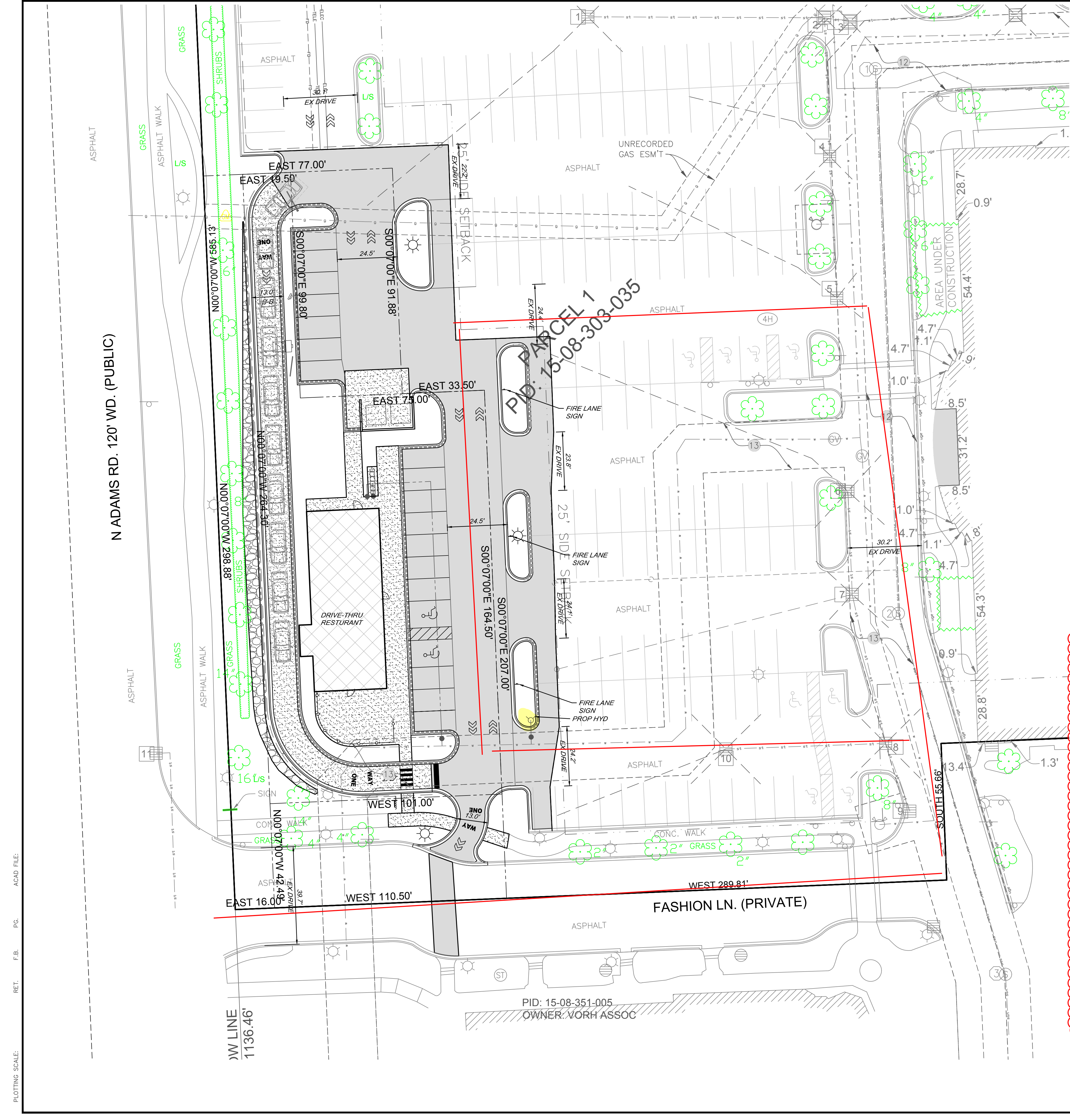
DE. BY:	CAR	CH. BY:	BMB	PROJECT NO.	1303285G2021
DR. BY:	CAR	APP. BY:	DSB		

STDS. SHEET 9 OF 12 C

DATE DECEMBER, 2021 FILE NO. D-5828- 9 9

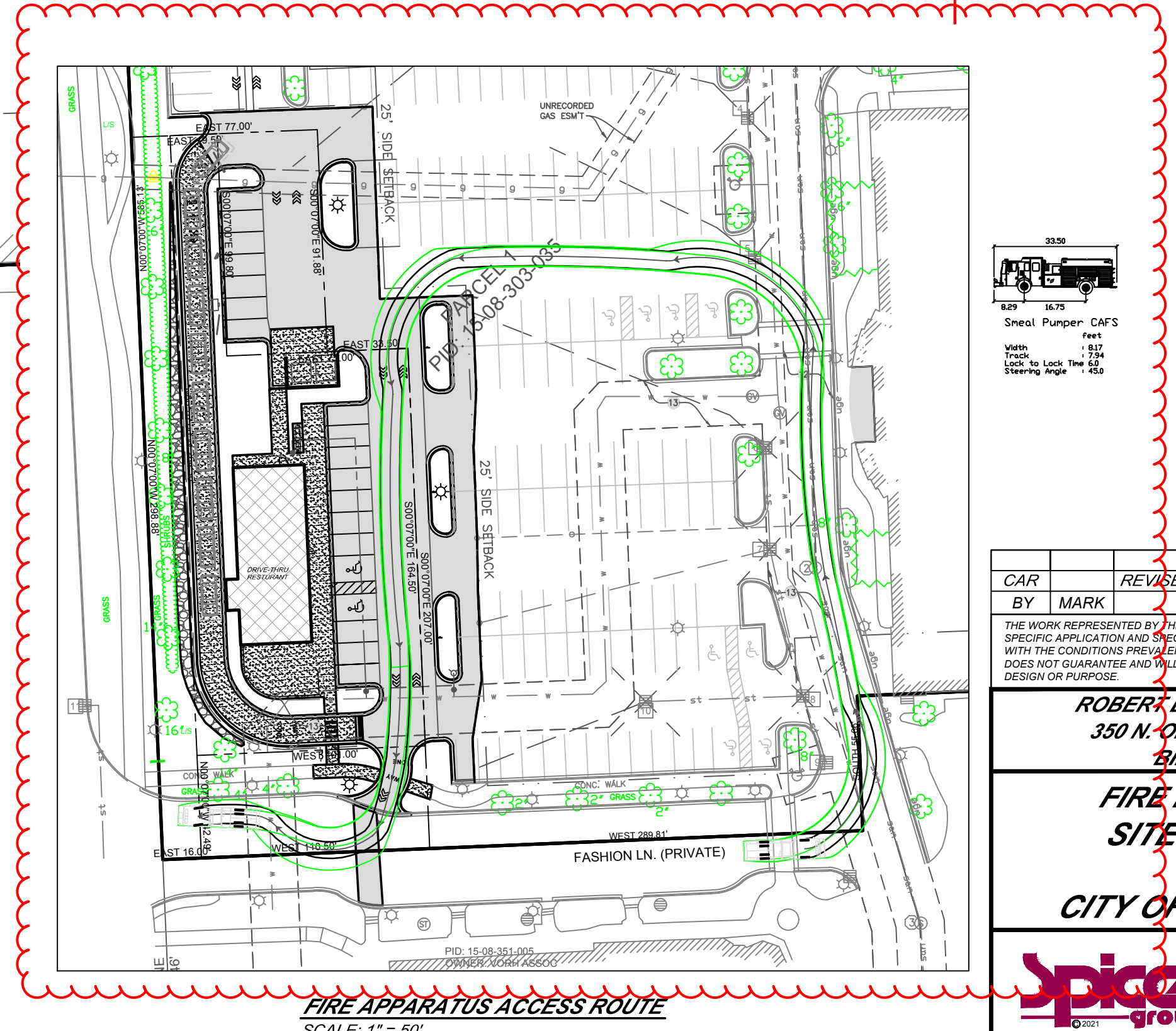
CITY FILE #21-141 SECTION 8

PLOTTING SCALE: RET. F.B. PG. ACAD FILE:



Provide auto-turn details through the site along the red lines indicated to show maneuverability throughout the site. See attached apparatus requirements.

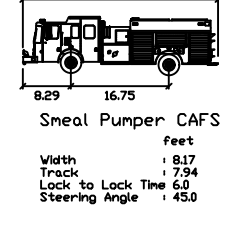
Remove this diagram and vehicle graphic. The one-way exit is not wide enough to be considered part of the fire apparatus access road and the pumper graphic does not match our largest apparatus.



BUILDING INFORMATION

BUILDING HEIGHT:	20' - 0" SINGLE STORY
LEASABLE AREA:	2,225 SQ. FT.
BUILDING USE:	COMMERCIAL
OCCUPANCY TYPE:	A-2
FIRE SPRINKLER:	NO
CONSTRUCTION TYPE:	V-B
EXIT CAPACITY:	EXIT 1: 36" WIDE EXIT 2: 36" WIDE EXIT 3: 42" WIDE

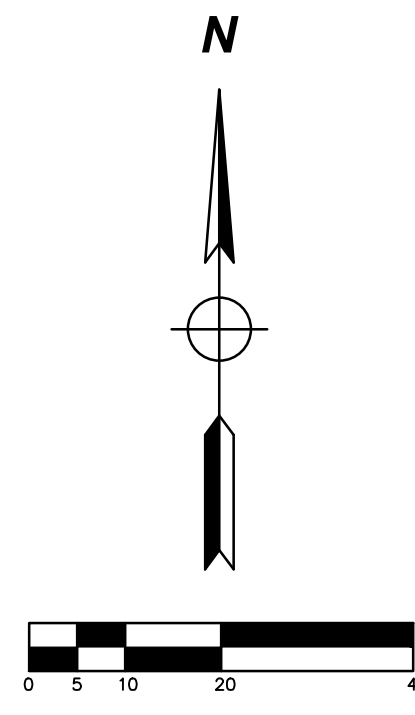
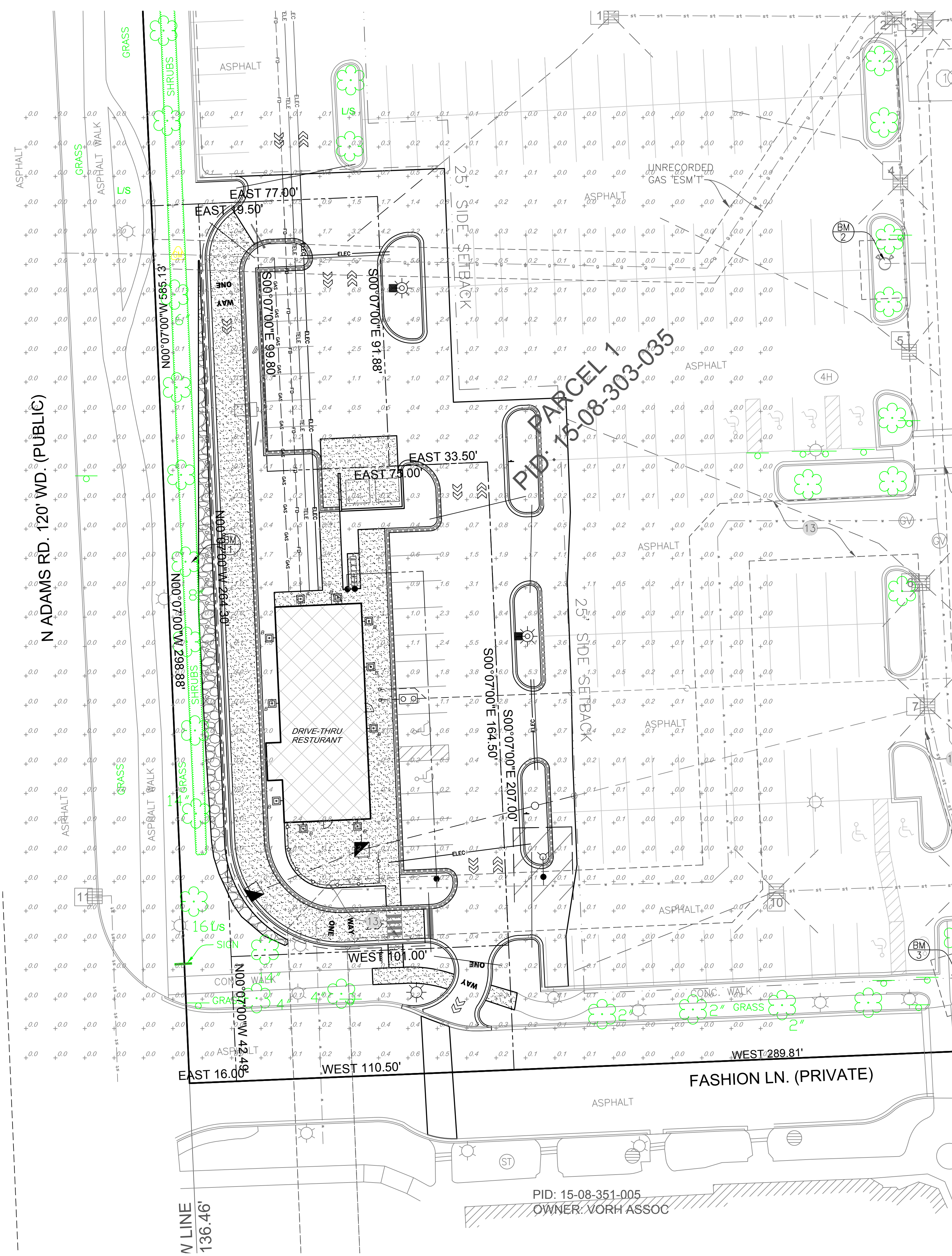
- FIRE DEPARTMENT NOTES:**
1. A KNOX KEY SYSTEM SHALL BE INSTALLED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE THROUGH THE KNOX COMPANY AT www.knoxbox.com (IFC 2006 sec. 1028.2).
 2. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE" AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (FIRE PREVENTION ORDINANCE CHAPTER 58, SEC 503).
 3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14.
 4. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING. OPEN BURNING FOR WARMING OF SAND AND/OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES FIRE PREVENTION ORDINANCE CHAPTER 58, SEC 307.6.2 & 307.62.3. MORTAR PERMIT CAN BE APPLIED FOR ONLINE AT www.rochesterhills.org/fire IN THE "FOR YOUR BUSINESS" SECTION.
 5. FIRE APPARATUS ACCESS ROADWAYS SHOULD BE DESIGNED TO SUPPORT THE LOAD OF THE FIRE APPARATUS (75,000 POUNDS) AND BE SURFACED TO PROVIDE ALL WEATHER DRIVING CAPABILITIES.
 6. A FLOW TEST IS REQUIRED TO EVALUATE THE CAPABILITIES OF THE WATER SUPPLY. THIS CAN BE OBTAINED BY CONTACTING THE ROCHESTER HILLS ENGINEERING DEPARTMENT AT 248-656-4640.



CAR BY:	REVISOR	DATE
MARK	REVISED PER CITY REVIEW COMMENTS	2-3-22
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ROBERT B. AIKENS AND ASSOCIATES 350 N. OLD WOODWARD, SUITE 300 BIRMINGHAM, MI 48009		
FIRE PROTECTION PLAN SITE IMPROVEMENTS STARBUCKS CITY OF ROCHESTER HILLS		
DE. BY:	CH. BY:	PROJECT NO.
CAR	BMR	130328SG2021
DR. BY:	APP. BY:	
CAR	DSP	
STDS.	SHEET 10 OF 12	C
DATE	FILE NO.	
DECEMBER, 2021	D-5828- 10	10
SCALE	1" = 20'	

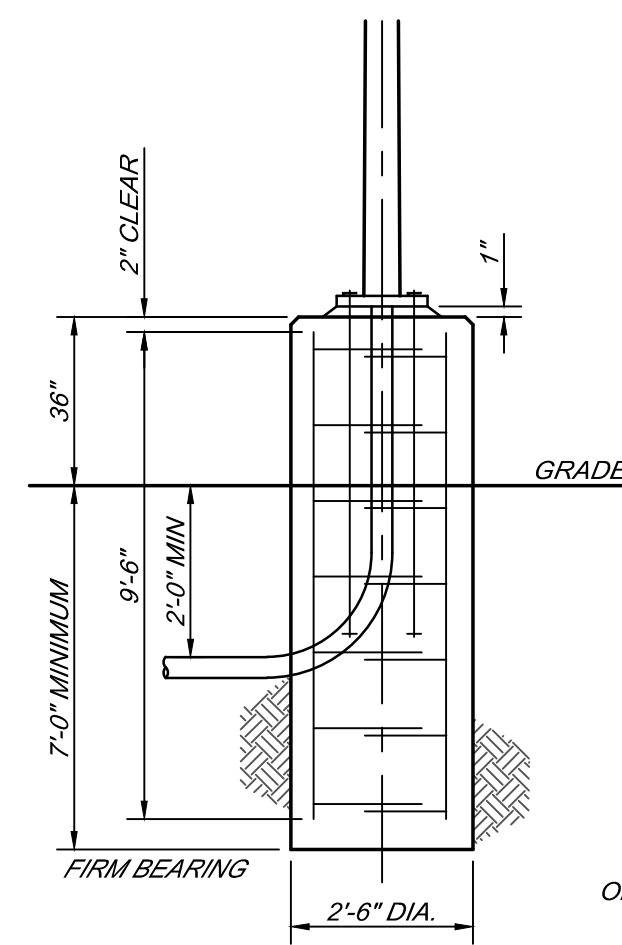
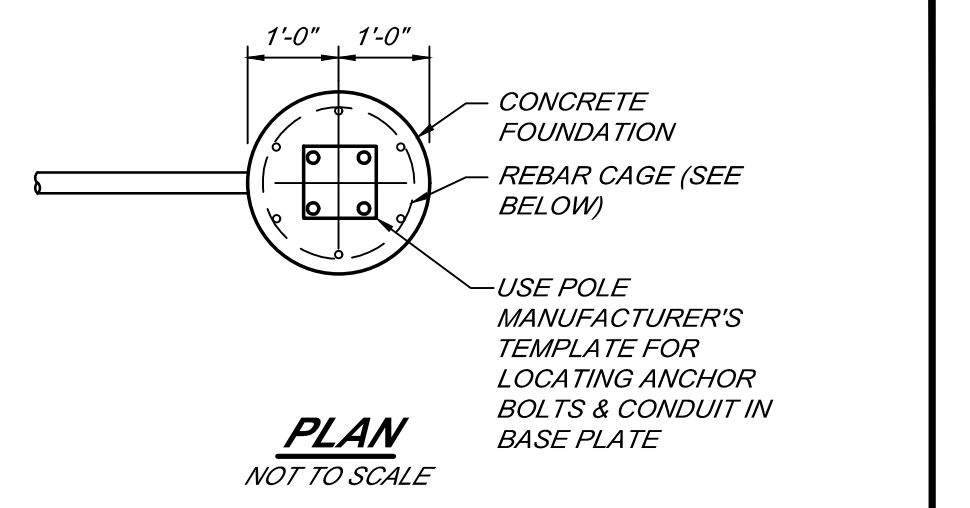
NOTE:
EXISTING TOPOGRAPHY BACKGROUND IS BASED FROM INFORMATION TAKEN ON 4-6-2021 BY MICHIGAN SURVEYING, INC. JOB #21-133.

RET. F.B. PG. ACAD FILE: PLOTTING SCALE:

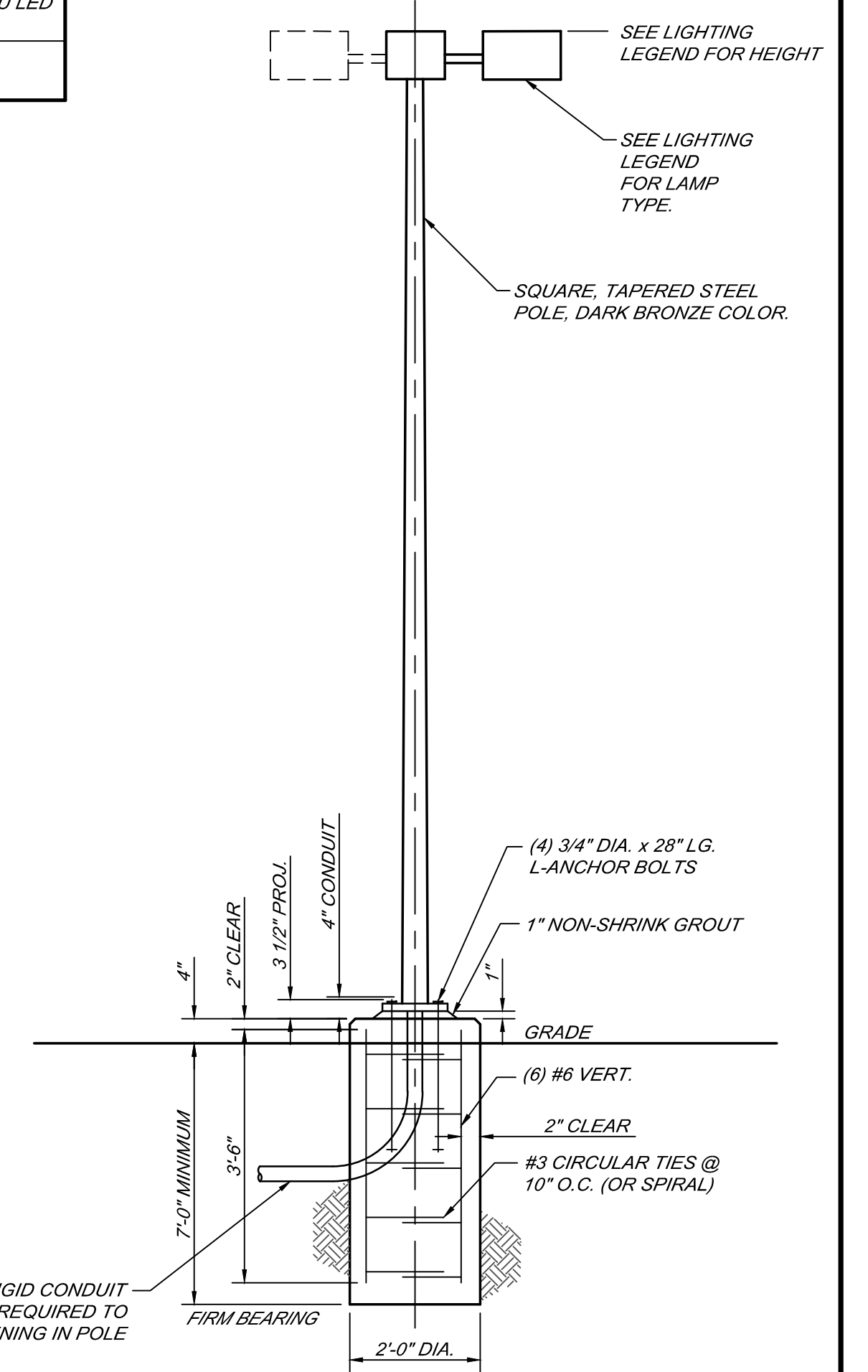


LIGHTING LEGEND				
SYMBOL	NO. REQ'D	MOUNTING HEIGHT	DESCRIPTION	MODEL (OR APPROVED EQUAL)
○	2	15 FT.	EX. FIXTURE - 250W METAL HALIDE	-
⊕ _A	1	12 FT.	50W LED	LITHONIA LIGHTING - WPX2 LED 40K MVOLT
⊕ _B	9	10 FT.	15W LED	LITHONIA LIGHTING-OLLWU LED P1 40K 120 DDB
☀	1	10 FT.	EX. FIXTURE - 150W METAL HALIDE	-

LIGHTING STATISTICS						
DESCRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
SITE	+	0.4 FC	9.9 FC	0.0 FC	NA	NA



TYPICAL LIGHT POLE IN PAVEMENT DETAIL
NOT TO SCALE



TYPICAL LIGHT POLE IN GRASS AREA DETAIL
NOT TO SCALE

NOTES:
LIGHT POLES SHALL BE LOCATED AS SHOWN, 3' FROM CENTER OF FOUNDATION TO BACK OF CURB OR HARDSURFACING.

SEE ARCHITECTURAL PLANS FOR SITE LIGHTING CIRCUIT LAYOUT.

CAR	REVISOR	REVISIONS	DATE

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ROBERT B. AIKENS AND ASSOCIATES
350 N. OLD WOODWARD, SUITE 300
BIRMINGHAM, MI 48009

SITE LIGHTING PLAN
SITE IMPROVEMENTS
STARBUCKS
CITY OF ROCHESTER HILLS

Spicer group
SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607 Tel.
989-754-4717 Fax.
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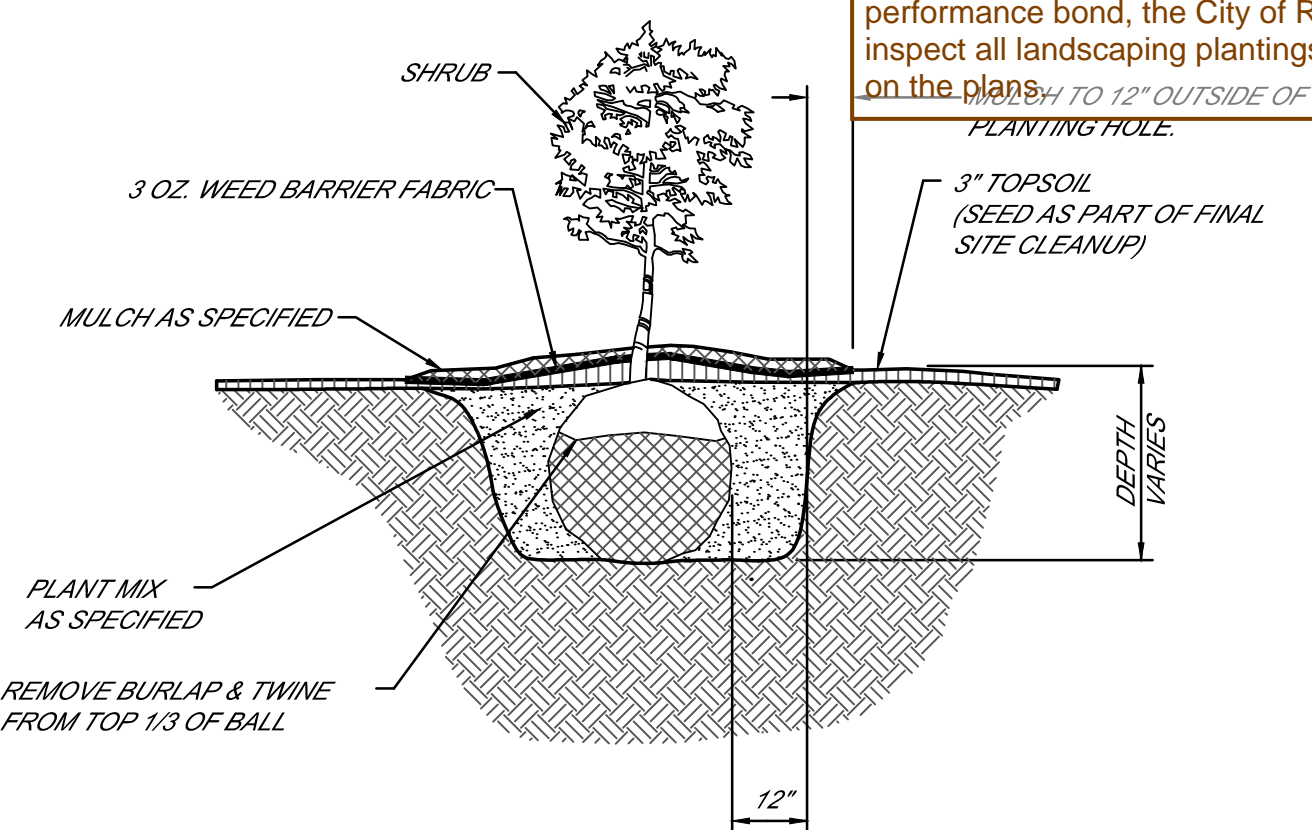
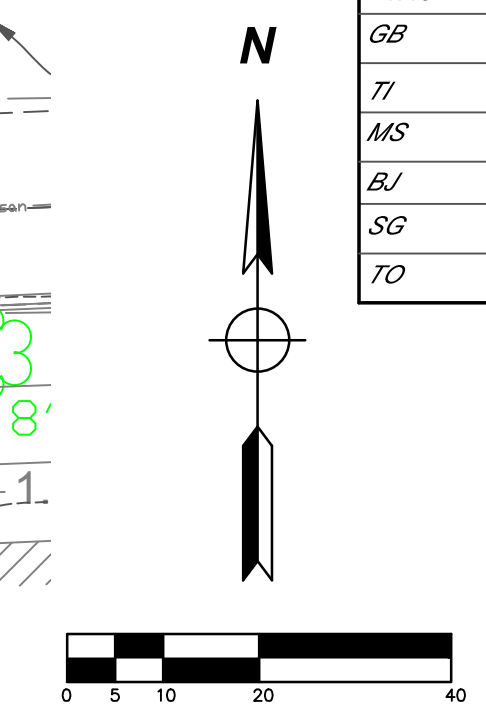
DE BY: CAR	CH. BY: BMB	PROJECT NO:
DR. BY: CAR	APP. BY: DJSB	1303285G2021
STDS.	SHEET 11 OF 12	C
DATE: DECEMBER, 2021	FILE NO: D-5828-11	11
SCALE: 1" = 20'		

NOTE:
EXISTING TOPOGRAPHY BACKGROUND IS BASED FROM INFORMATION TAKEN ON 4-6-2021 BY MICHIGAN SURVEYING, INC. JOB #21-133.

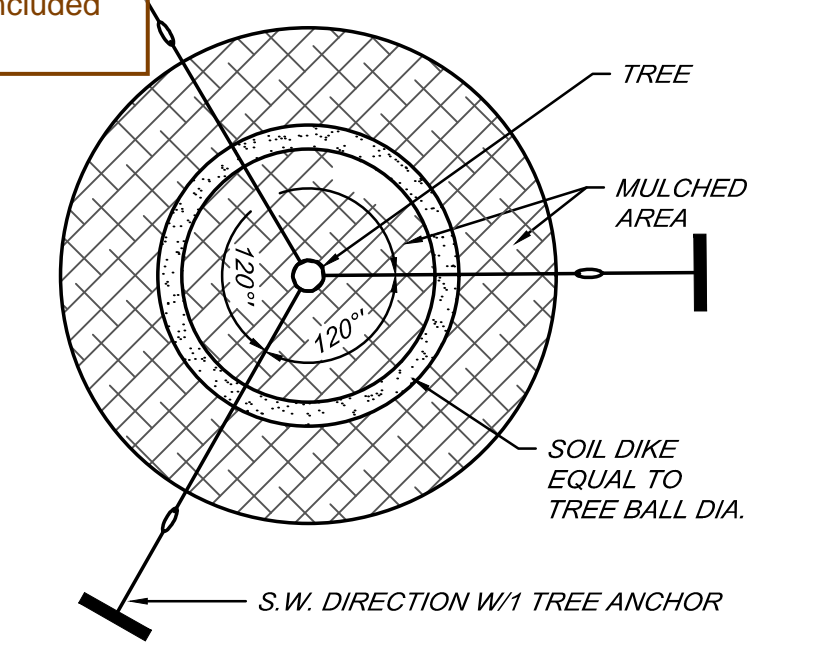
PLOTING SCALE: RET. F.B. PG. ACAD FILE:

LANDSCAPING SCHEDULE					
TAG	SCIENTIFIC NAME	COMMON NAME	CONDITION	SIZE	QTY.
GB	<i>Ginkgo biloba</i> (male)	Mailehair Tree	B&B	3" cal.	2
TI	<i>Tilia americana</i> 'Boulevard'	Boulevard Littleleaf Linden	B&B	3" cal.	1
MS	<i>Malus</i> 'Spring Snow'	Spring Snow Flowering Crabapple	B&B	3" cal.	2
BJ	<i>Juniperus horizontalis</i> 'Wiltonii'	Blue Rug Juniper	B&B	24" dia.	6
SG	<i>Spiraea</i> 'Goldmound'	Goldmound Spiraea	B&B	24" dia.	9
TO	<i>Thuja occidentalis</i> 'Techny'	Techny or Mission Arborvitae	B&B	6" ht.	11

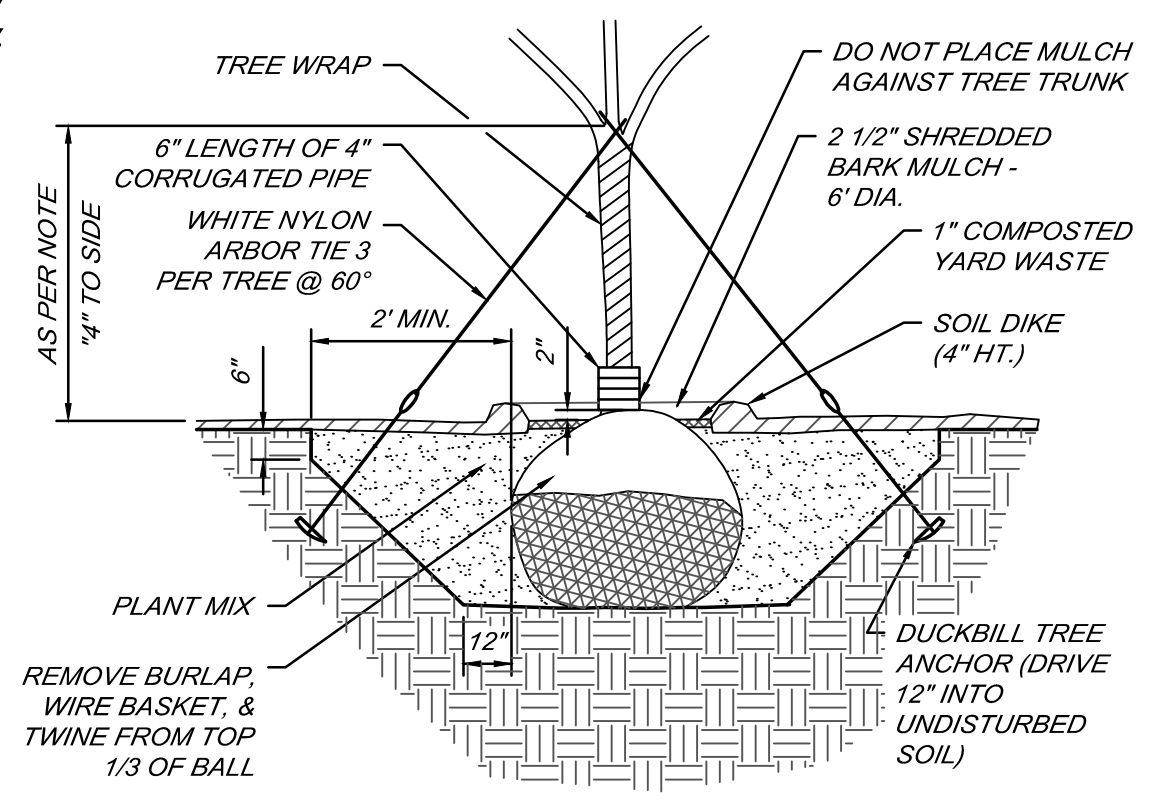
1. A unit cost estimate and total landscaping cost summary, including irrigation costs, for landscape bond purposes must be provided.
2. All landscape areas must be irrigated. This should be noted on the landscape plan and an irrigation plan must be submitted prior to staff approval of the final site plan. A note specifying that watering will only occur between the hours of 12AM and 5AM should be included on the plans.
3. Site maintenance notes listed in Section 138-12.109 of the Zoning Ordinance should be included on the plans.
4. A note stating "Prior to the release of the performance bond, the City of Rochester Hills must inspect all landscaping plantings." should be included on the plans.



TYPICAL SHRUB PLANTING DETAIL
NOT TO SCALE



TYP. TREE PLANTING PLAN VIEW
NOT TO SCALE



TYP. TREE PLANTING DETAIL
NOT TO SCALE

LANDSCAPING NOTES:
EXISTING LANDSCAPING TO REMAIN IN PLACE EXCEPT AS NOTED ON THE DEMOLITION PLAN.
LANDSCAPE STONES SHALL BE WASHED RIVER STONES 2" TO 3" DIA. INSTALLED OVER 3 OZ. WEED BARRIER FABRIC. FOR ALL INTERIOR LANDSCAPE ISLANDS.
HARDWOOD MULCH SHALL CONSIST OF SHREDDED MAPLE AND OAK INSTALLED 4" DEEP OVER 3 OZ. WEED BARRIER FABRIC. INSTALL AROUND ALL TREES AND AREA BETWEEN CURB & GUTTER AND PROPOSED BUILDING.
THE REMAINDER OF THE SITE SHALL HAVE 4" OF TOPSOIL MINIMUM AND BE HYDROSEED AND MULCHED.

LANDSCAPING CALCULATIONS

LANDSCAPING REQUIREMENTS:
- 1 CANOPY TREE PER 8 PARKING STALLS (FOR PARKING LOTS THAT EXCEED 20 SPACES)
- 1 DECIDUOUS SHADE TREE REQUIRED FOR EACH 150 S.F. REQUIRED INTERIOR LANDSCAPED AREA.
- 19 PARKING SPACES PROVIDED
LANDSCAPING PROVIDED:
EXISTING TREE = 11 TREES
RELOCATED TREE = 6 TREES
PROPOSED - 5 TREES
PROPOSED - 26 SHRUBS
TOTAL TREES = 22

EXISTING LANDSCAPE LEGEND

- EVERGREEN TREE
- SHRUB
- DECIDUOUS TREE
- TREE LINE

PROPOSED LANDSCAPE LEGEND

- DECIDUOUS TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- SHRUB

TREE PLANTING GENERAL NOTES:

1. GUY TREES AS FOLLOWS: < 3" TREES USE SMALL DUCKBILL ANCHOR. 3"-5" TREES USE MEDIUM DUCKBILL ANCHOR. > 5" TREES USE LARGE DUCKBILL ANCHOR.
2. PRUNE TO THIN & SHAPE CANOPY. REMOVE BROKEN, CROSSING, AND WEAK BRANCHES.
3. SET TOP OF BALL TO 2" ABOVE FINISH GRADE OF SURROUNDING SOIL.
4. STAYS OR GUYS TO BE SET ABOVE FIRST BRANCH OR 50% OF TREE HEIGHT, WHICHEVER IS GREATER. EVERGREEN TREES TO BE GUYED AT 2/3 OF TREE HEIGHT.
5. ANCHORS TO EXTEND 12" INTO UNDISTURBED SOIL.

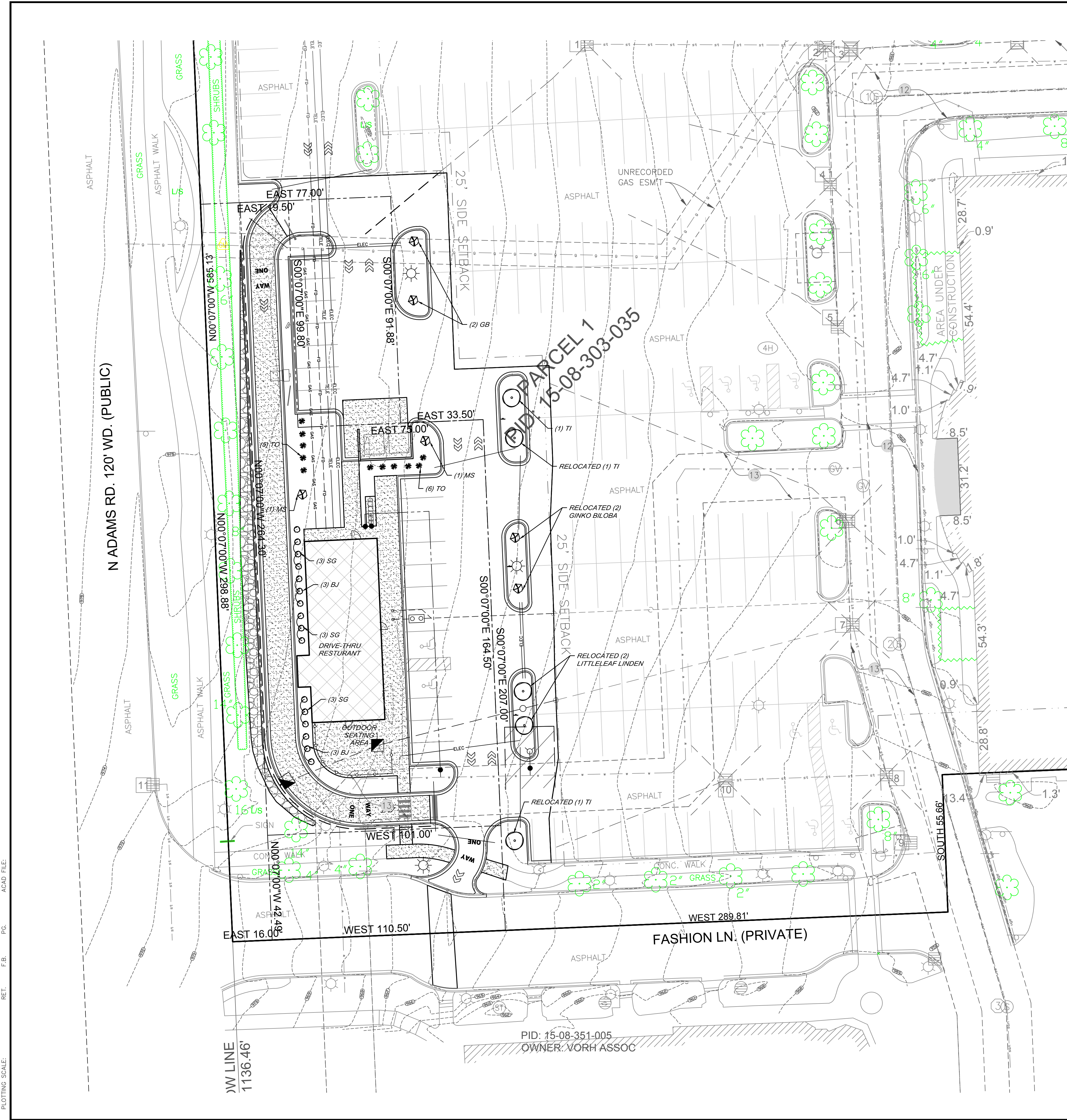
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CAR	REVISED PER CITY REVIEW COMMENTS	2-3-22
BY: MARK	REVISIONS	DATE

ROBERT B. AIKENS AND ASSOCIATES
350 N. OLD WOODWARD, SUITE 300
BIRMINGHAM, MI 48009
**LANDSCAPE PLAN
SITE IMPROVEMENTS
STARBUCKS
CITY OF ROCHESTER HILLS**

DE BY: CAR	CH BY: BMB	PROJECT NO:
DR BY: CAR	APP BY: DSB	130326SG2021
STDS.	SHEET 12 OF 12	L
DATE: DECEMBER, 2021	FILE NO:	1.1
SCALE: 1" = 20'	D-5828-12	



PLOTTING SCALE: RET. F.B. PG. ACAD FILE: