ROCHESTER HILLS FIRE STATION No.4

CITY OF ROCHESTER HILLS, MICHIGAN

SITE PLAN APPROVAL PACKAGE

FEBRUARY 3, 2017

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CITY OF ROCHESTER HILLS

Project: ROCHESTER HILLS FIRE STATION No.4

2723 WALTON BLVD. ROCHSTER HILLS, MI 48309

Seal:



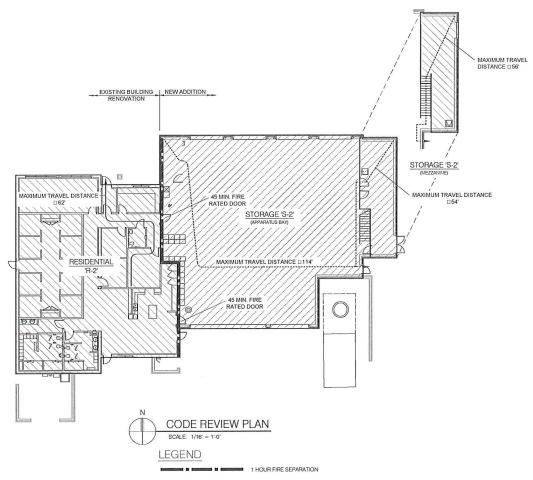
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COD	E COMPLIANCE	CALCULATIONS	
	PLUMBING F	TIXTURES	
REQUIRED PLUI	MBING FIXTURE CALCULATION	MPC TABLE	403
TOTAL CALC	ID STORAGE (S-2) AREA : ULATED OCCUPANT LOAD (PER 2012 ME AL OCCUPANT LOAD = 6 PEOPLE; (4 MA	C TABLE 1004.1 2) = 50 PEOPLE; (25 MALE/ 25 FEM. LE/ 2 FEMALE) *	ALE
*PER OWNER AFFAD	AVIT ACTUAL OCCUPANCY BASED ON U	BE.	
TOILET FIXTURES RE	DUIRED:	FEMALE	
WATERCLOSETS:	(1 PER 10 OCCUPANTS) 4/10 = 0.4 = (1) FIXTURE REQUIRED (2) PROVIDED + (1) URINAL + (1) UNISEX BARRIE	2/10 = 0.2 = (1) FIXTURE REQUIRED	
LAVATORIES:	(1 PER 10 OCCUPANTS) 4/10 = 0.4 = (1) FIXTURE REQUIRED (2) PROVIDED + (1) UNISEX BARRIE	(2) PROVIDED	
BATHTUBS/SHOWER (LIVING QUARTERS)	S: (1 PER 8 OCCUPANTS) 4/8 = 0.5 = (1) FIXTURE REQUIRED (2) PROVIDED	(1 PER 8 OCCUPANTS) 2/8 = 0.4 = (1) FIXTURE REQUIRED (1) PROVIDED	
DRINKING FOUNTAIN		OCCUPANTS) FIXTURE REQUIRED WIDED	
SERVICE SINKS:	(1) FIXTURE	REQUIRED	
	(1) PRO	WIDED	

PROJECT DATA & CODE COMPLIANCE CALCULATIONS CODE DATA 2012 MICHIGAN BUILDING CODE, 2012 MICHIGAN MECHANICAL CODE, 2012 MICHIGAN PLUMBING CODE 2006 INTERNATIONAL FUEL GAS CODE, MICHIGAN ELECTRICAL CODE, 2014 NEC W/PART 8 STATE AMENDMENTS ICC/ANSI A117.1-2009 MICHIGAN UNFORM THERBY CODE USE GROUPS: 'R-2' / 'S-2' MIXED USE, SEPARATED (1-HOUR SEPARATION) R-2 RESIDENTIAL (Firefighter Living Quarters) S-2 STORAGE (Apparatus Bay and Support Areas) MBC 2012 - 310.4 MBC 2012 - 311.3 MBC TABLE 503 CONSTRUCTION TYPE: IIB (FULLY SPRINKLED) USE GROUP 'R-2' USE GROUP 'S-2' ALLOWABLE BUILDING HEIGHT: 55; 4 STORIES 55; 3 STORIES ALLOWABLE BUILDING AREA: 16,000 S.F. 26,000 S.F. (PER STORY) ACTUAL: BUILDING HEIGHT: 32-0" (1-STORY) - O.K. BUILDING GROSS AREA: 9,663 S.F. - O.K. BUILDING OCCUPANT LOAD CALCULATIONS: MBC TABLE 1004.1.2 TABULAR OCCUPANCY TABULAR OCCUPANCY USE GROUP 'R-2' LIVING QUARTERS 4,055 S.F. GROSS/200 S.F. GROSS PER PERSON = 21 OCCUPANTS* USE GROUP 'S-2' (APPARATUS BAY/MEZZANINE) 5,608 S.F. GROSS/200 S.F. GROSS PER PERSON = 29 OCCUPANTS NOTE: BASED ON OWNER AFFIDAVIT, ACTUAL BUILDING OCCUPANT LOAD = 6 FIREFIGHTERS (4 MALE, 2 FEMALE) BUILDING EGRESS: MBC 1005 APPARATUS BAY AREA (S-2.) CORRIDORS & DOORS: 0.30 / OCCUPANT's 29 TOTAL OCCUPANTS = 8.7' MIN. (1) 36' DOORS PROVIDED - O.K. LMING QUARTERS (R-2) CORRIDORS & DOORS: 0.30° / OCCUPANTX 21 OCCUPANTS = 6.3° MIN. (2) 36° DOORS AND 5'-0° CORRIDORS PROVIDED - 0 K. TRAVEL DISTANCES: (WITH SPRINKLER SYSTEM) MBC TABLE 1016.2 OCCUPANCY: R-2 250 FT. MAX ACTUAL = 62 FT. - O.K. OCCUPANCY: S-2 400 FT. MAX ACTUAL = 114 FT. - O.K.



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Key Plan: No

Client:

ROCHESTER HILLS

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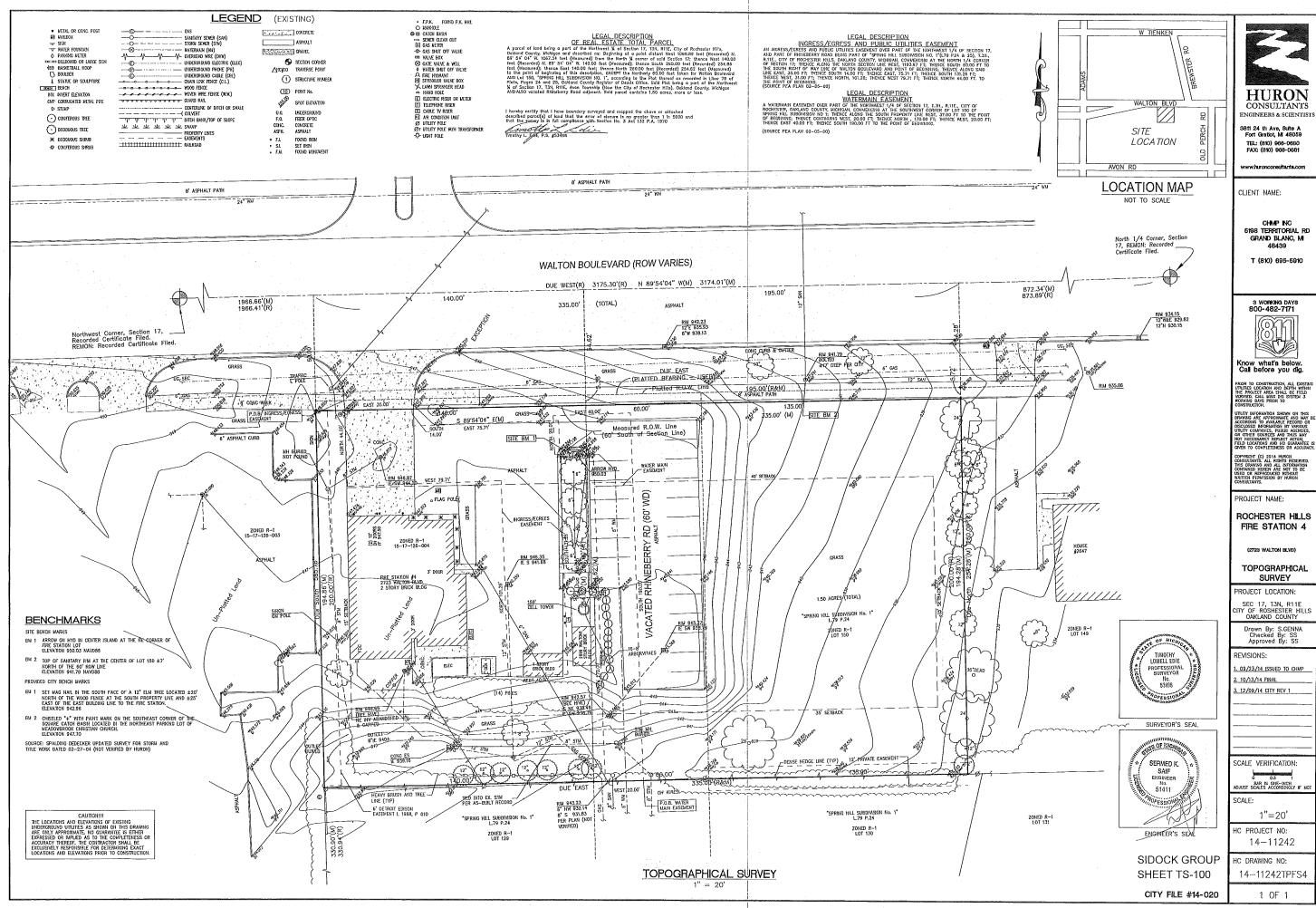
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CODE
COMPLIANCE
CALCULATIONS

Project Number: 916407

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GENERAL CIVIL NOTES

- PRIOR TO SUBMITTING PROPOSAL, VERIFY ALL CONDITIONS GOVERNING OR AFFECTING THE CIVIL WORK FRIEY ALL DIMENSIONS TO ENSURE THE PROPER FIT AND LOCATION OF THE CIVIL WORK, TAKE NDITIONAL DIMENSIONS AS REQUIRED: REPORT TO THE ENGINEER ANY AND ALL CONDITIONS WHICH MAY NTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK; FAMILIARIZE YOURSELF WITH THE ACTUAL CONDITIONS OF THE CIVIL WORK, ACCESS TO THE SITE AVAILABLE STORAGE SPACE, FACILITIES AND OBSTRUCTIONS THAT MAY BE ENCOUNTERED DURING THE
- CONTRACTOR TO FURNISH ALL NECESSARY LABOR, MATERIAL, EQUIPMENT AND FACILITIES TO FURNISH, FABRICATE AND PERFORM THE REQUIRED CIVIL WORK.
- ANY EXISTING CONSTRUCTION TO BE MODIFIED AS A PART OF THIS CONTRACT SHALL BE REBUILT AS REQUIRED TO THE SATISFACTION OF THE OWNER/ENGINEER.
- 4. EXISTING CONSTRUCTION NOT UNDERGOING ALTERATION IS TO REMAIN UNDISTURBED. WHERE SUCH CONSTRUCTION IS DISTURBED AS A RESULT OF THE OPERATIONS OF THIS CONTRACT, THE EXISTING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS REQUIRED AND TO THE SATISFACTION OF THE OWNER/ENGINEER.
- ALL WORK SHOWN ON THESE DRAWINGS MAY BE CHECKED BY AN INDEPENDENT TESTING AGENCY RETAINED BY OWNER TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ACCESS AS REQUIRED FOR TESTING PURPOSES.
- CONTRACTOR SHALL MAKE ALL NECESSARY FIELD VISITS FOR INSPECTION, MEASUREMENTS AND
- THE GENERAL CIVIL NOTES ARE INTENDED TO AUGMENT THE DRAWNINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THE DRAWNINGS, SPECIFICATION, AND/DOR THE GENERAL CIVIL NOTES, THE STRICTEST PROVISION AS DETERMINED BY THE ENSINEERS SHALL GOVERN.
- 8. WORK THE CIVIL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, STRUCTURAL, AND
- 9. ALL WORK SHALL CONFORM TO APPLICABLE STATE AND LOCAL CODES.
- 10. SOIL BORINGS: SOILS INFORMATION WILL BE AVAILABLE FROM THE ARCHITECT, SIDOCK GROUP. THE REPORT IS BY HAENGLE & ASSOCIATES ENGINEERING, INC, DATED 12052016, THE BORING LOGS SHOWSUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED, AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.
- 11. THE CONTRACTOR SHALL COMPLY WITH THE CONSTRUCTION SAFETY STANDARDS AND THE OCCUPATIONAL SAFETY STANDARDS (OSHA) AS ISSUED BY THE U.S. DEPARTMENT OF LABOR AND THE MICHIGAN DEPARTME OF LABOR (MIOSHA). THE CONTRACTOR SHALL ALSO COMPLY TO ALL REQUIREMENTS OF THE CITY OF ROCHESTER HILLS SPECIFIC SAFETY PLAN.
- 12. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH CITY OF ROCHESTER HILLS STANDARDS AND SPECIFICATIONS AND OTHER APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REGULATIONS.
- 13. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL THE EXISTING CONDITIONS AT THE SITE INCLUDING UTILITIES, SERVICES, ETC. AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES THEY CAUSE TO BOTH EXISTING, NEW CONSTRUCTION, PROPERTY AND ANY UNAUTHORIZED DISRUPTION TO ADJACENT OWNERS NORMAL USE OF UTILITIES, SERVICES AND THE SURROUNDING FACILITIES.
- I. THE LOTH INACI ON STALL OB IAIN AU I HONIZATION PRIOR TO MAXING CHANGES TO, OR INTERRUPTIONS OF UTILITIES AND SHALL COMPLY WITH SPECIAL INSTRUCTIONS FROM THE COWER TO MINIMIZE THE EFFECT ON THEIR OPERATIONS, PRIOR TO ANY EXCAVATION, EARTH MOVING WORK OR REMOVAL OF ANY PIPE FROM SERVICE, THE CONTRACTOR SHALL REVIEW WITH THE OWNERS REPRESENTATIVE THE LOCATION OF THE UNDERGROUND UTILITIES, SERVICE AND STRUCTURES IN THE AREA WHERE THE WORK IS BEING PERFORMED PROVIDE FULL THIS EUPERATION AND FALL SEX/ANTION AND EARTH MOVING OPERATIONS AND TAKE ALL RESPONSIBLE PRECAUTIONS TO PROTECT EXISTING UTILITIES, SERVICES AND OPERATIONS FROM DAMAGE O DISPURITION.
- 15. PROVIDE BARRIER PROTECTION FOR VEHICULAR AND PEDESTRIAN TRAFFIC AT EXCAVATIONS. TEMPORARY FENCING, BARRICADING AND PEDESTRIAN ROUTING SHALL BE COORDINATED WITH AND APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO CONSTRUCTION.
- 16, FOR PROTECTION OF UNDERGROUND UTILITIES THE CONTRACTOR SHALL CALL "MISS DIG" AT 800-482-7171 OR 811, A MINIMUM TOF THREE DAYS PRIOR TO EXCAVATION ON THE SITE. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THUS ROUTINELY BE NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF NOTIFYING UTILITY OWNER'S WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT
- 17. DISPOSE OF ALL EXCAVATED SOILS AND WASTE MATERIALS (NEW AND EXISTING) OFF SITE IN A LEGAL MANNER
- 18. PERFORM FINAL CLEANUP OF WORK AREAS, TO THE SATISFACTION OF THE OWNER.

CONTROL

- 1 TOPOGRAPHIC INFORMATION: EXISTING INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY BY HURON ONSULTANTS ENGINEERS & SCIENTISTS DATED 12/09/14. SUPPLEMENTED BY RECORD DRAWINGS AND FIELD OBSERVATIONS
- 2. VERTICAL CONTROL: ELEVATIONS SHOWN ARE BASED ON USGS/NAVD88 DATUM. THE BENCH MARKS USED
- LAYOUT: LOCATE BUILDING ADDITIONS BY MEASUREMENTS FROM CONNECTING AREAS OF EXISTING BUILDINGS. ENGAGE THE SERVICES OF A PROFESSIONAL SURVEYOR TO ASSIST IN LAYOUT, & CONSTRUCTION STAKING. CONFIRM HORIZONTAL AND VERTICAL CONTROL POINTS PRIOR TO CONSTRUCTION.

CLEARING, GRUBBING, & EARTHWORK

- AT THE START OF EARTHWORK OPERATIONS, ALL SURFACE VEGETATION & ROOT SYSTEMS SHALL BE REMOVED AND THE EXISTING TOPSOIL AND ANY OTHER ORGANIC SOILS SHALL BE REMOVED IN THEIR ENTIRETY FROM BELOWTHE PROPOSED BUILDING AND PAYEMENT AREAS, EXISTING RANDOM CONCRETE AND OTHER DEBRIS SHALL BE REMOVED FROM WITHIN THE BUILDING AREA, REMOVE STUMPS TO 18 INCHES BELOW FINAL GRADE IN BELOW THE PROPUSED BUILDING.

 SHALL BE REMOVED FROM WITHIN THE BUILDING AREA. REMOVE STUMPS TO TO INCIDES OF AREAS THAT WILL BE NEW LAWN. DISPOSE OF VEGETATIVE MATTER AND DEBRIS OFFSITE.
- 2 THE SUB-GRADE SHOULD BE THOROUGHLY PROOF-ROLLED WITH A HEAVY RUBBER-TIRED VEHICLE SUCH AS A THE SUB-SIMULE SHOULD BE INDIVIDUALLY THE SUB-SIMULE OF THE STATE OF T
- ALL EXCAVATIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE WHO SHALL BE
 CONSULTED WHEN POOR SOIL, WATER, OBSTRUCTIONS, PIPING, EXISTING FOOTINGS, EXCAVATIONS, ETC., ARE
 ENCOUNTERED.
- CONTRACTOR SHALL FURNISH ALL REQUIRED DEWATERING EQUIPMENT TO MAINTAIN A DRY EXCAVATION UNTIL
- MATERIAL FOR BACKELL OR ENGINEERED FILL REQUIRED TO ACHIEVE DESIGN GRADES SHOULD CONSIST OF OILS. THE ON-SITE SOILS THAT ARE FREE OF ORGANIC MATTER AND DEBRIS MAY BE USED FOR
- 6. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF ITS' MAXIMUM DENSITY AS DETERMINED BY THE HODS (ASTM D1557), IN LIFTS NOT EXCEEDING 12-INCHES IN LOOSE THIC
- 7. FROZEN MATERIAL SHALL NOT BE USED AS FILL, NOR SHALL FILL BE PLACED ON FROZEN SUB-GRADE
- 8 DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNTIL FIRST FLOOR LEVEL SLABS ARE IN PLACE AND HAVE REACHED 75% OF THEIR SPECIFIED DESIGN STRENGTH. SHORE AND BRACE WALLS AS REQUIRED IF BACKFILLING OPERATIONS ARE TO BE CARRIED OUT PRIOR TO PLACEMENT OF FLOOR SLABS.
- 9. PLACE BACKFILL AGAINST BOTH SIDES OF GRADE BEAMS AND FOUNDATIONS AT EQUAL ELEVATIONS OF
- 10. CONSTRUCTION DRAINAGE: STORM WATER ACCUMULATED IN THE PROJECT SITE EXCAVATIONS IS TO DRAIN
- 11. SLOPE SMOOTHLY BETWEEN INDICATED ELEVATIONS TO ACHIEVE POSITIVE DRAINAGE, SLOPE ALL EARTH

CLEARING, GRUBBING & EARTHWORK CONT.

- 12. NEW GRADES SHOWN ARE FINISHED GRADES AND INCLUDES TOP OF TOPSOIL OR SURFACES SUCH AS
- 13. PROVIDE 4 INCHES OF TOPSOIL, SEED AND MULCH AT DISTURBED LAWN AREAS, EXCEPT AS NOTED
- 14. TREES: TREES NOT INDICATED TO BE REMOVED OR TRANSPLANTED SHALL BE FENCED OFF WITH 4' HIGH ORANGE CONSTRUCTION FENCE AS SHOWN ON SHEET C-101. TREES INDICATED TO BE REMOVED, SHALL TRANSPLANTED WHERE SHOWN ON THE PLANS AND AS DIRECTED BY THE OWNER'S REPRESENTATION.
- 15. GREAT CARE SHALL BE TAKEN BY CONTRACTOR'S TO AVOID DAMAGE TO VEGETATION OUTSIDE THE LIMITS OF CONSTRUCTION AND TO KEEP THE CONSTRUCTION AREAS TO A MINIMUM. DRIVING SHALL NOT BE PERMITTED OUTSIDE THE LIMITS OF CONSTRUCTION.
- 17, TOPSOIL (REUSE EXISTING), SEED, FERTILIZE AND MULCH LAWN AREAS DISTURBED BY NEW

UTILITIES

1 MINIMUM COVER OF UNDERGROUND UTILITIES: WATER NATURAL GAS SANITARY SEWERS ALL OTHERS

PRESSURE UTILITIES MAY BE LAID APPROXIMATELY PARALLEL TO FINISH GRADE, EXCEPT AS INDICATED, WITH LOCAL DEEPENING TO AVOID OTHER UTILITIES OR OBSTRUCTIONS. MAINTAIN COVER BELOW DITCHES AND SURFACE DEPRESSIONS. PROVIDE TEMPORARY PROTECTION AS REQUIRED UNTIL COVER IS COMPLETED. INFORM OWNER'S REPRESENTATIVE IF AVAILABLE COVER, AT INDICATED ELEVATIONS, IS LESS THAN MINIMUM. VERTICAL CLEARANCE FOR ALL PIPES SHALL BE 18" MINIMUM FROM THE OUTSIDE OF PIPE.

- 2. EXISTING UTILITIES; INFORMATION HAS BEEN OBTAINED FROM EXISTING AVAILABLE DRAWINGS AND SURFACE FEATURES SHOWN ON THE TOPOGRAPHIC SURVEY, VERIFY THE INFORMATION BEFORE CONSTRUCTION. NOTIFY THE OWNER'S REPRESENTATIVE OF DISCREPANCIES OR INTERFERENCES.
- 3. WATER MAIN RESTRAINTS: PROVIDE ANCHORAGE AT ALL BENDS, TEES & ENDS AND AS REQUIRED TO
- AD ILIST THE ERAME AND COVER OF CATCH BASINS AND MANHOLES THAT ARE NOT INDICATED TO BE IED OR REMOVED, TO FINISH GRADE ELEVATION, ADJUSTMENTS SHALL BE MADE USING PRECAST GRADE RINGS
- 5. THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION
- 6. PRIOR TO CONSTRUCTION, EXISTING UTILITIES AT PROPOSED CONNECTIONS AND CROSSINGS SHALL BE LOCATIONS, ELEVATION AND SIZE, THE OWNER'S REPRESENTATIVE MAY CONFIRM, ADJUST OR REVISE DESIGN ELEVATIONS OF THE PROPOSED UTILITIES.
- UNDERDRAIN: PROVIDE TYPICAL UNDERDRAIN UNDER PAVEMENT AT NEW CATCH BASINS, INLETS AND OUTLIFT CONTROL STRUCTURES RECEIVING SURFACE DRAINAGE. UNDERDRAIN SHALL HAVE A MINIMU 2'-6" COVER AND A MINIMUM SLOPE OF 0.5%. SEE DETAIL ON C-807
- 8. PROVIDE EDGE DRAIN THAT TIES INTO STORM SEWER BELOW ALL STANDARD CURB, SEE DETAIL ON C-800.
- 9. PROVIDE A VALVE AND BOX ON FIRE HYDRANT ASSEMBLIES AT 3.5 FT FROM HYDRANT MINIMUM

- 1. ALL HOT MIX ASPHALT & CONCRETE PAVEMENT SHALL CONFORM TO THE 2012 MDOT SPECIFICATIONS FOR
- 2. SURFACE RESTORATION: RESTORE PAVEMENT & OTHER SURFACES DISTURBED BY CONTRACT OPERATIONS
- 3. PAVEMENT STRIPING: PROVIDE 4 INCH WIDE TRAFFIC YELLOW FOR ALL STANDARD PARKING SPACES & 4 INCH WIDE HANDICAP BLUE FOR ADA STRIPING, PAVEMENT LANE MARKINGS SHALL MEET THE REQUIREMENTS SET FORTH IN THE MODT 2012 STANDARD SPECIFICATION FOR REGULAR DRY PAINT MARKINGS, LANE MARKINGS, STOP BARS, ETC. SHALL BE COLD PLASTIC, ALSO CONFORMING WITH THE MODT SPECIFICATION. ANY CURING COMPOUND ON THE NEW CONCRETE PAVEMENT SURFACE MUST BE REMOVED PRIOR TO A PPLICATION OF ANY POUND ON THE NEW CONCRETE PAVEMENT SURFACE MUST BE REMOVED PRIOR TO APPLICAT UNGS, ALL PAINT SHALL BE LEAD FREE, & APPLIED PER MANUFACTURERS RECOMMENDATIONS
- 4 PROVIDE TEMPORARY INTERMITTENT MARKING FOR NEW PARKING AREA WHILE PAVEMENT CURES AND
- 5. EXISTING PAVEMENT TO BE REMOVED SHALL BE SAW CUT, FULL DEPTH, & RECTANGULAR.
- 6. WHEN PLACING NEW PAVEMENTS, MAINTAIN SLOPE OF EXISTING SURROUNDING SURFACES

1. AFTER FINAL ROLLING, PROTECT PAVEMENT FROM VEHICULAR TRAFFIC UNTIL THE SURFACE HAS COOLED SUFFICIENTLY TO ELIMINATE SURFACE ABRASION.

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301- LATEST REVISION SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING", EXCEPT AS MODIFIED BY STRUCTURAL REQUIREMENTS NOTED ON THE DRAWINGS.
- ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH AS NOTED BELOW.

 A EXTERIOR CONCRETE EXPOSED TO WEATHER: 4000 psi
 B. EXTERIOR FOUNDATIONS NOT EXPOSED TO WEATHER: 4000 psi
 C. GRADE WALLS: 4000 psi
- 3. ALL EXTERIOR CONCRETE INCLUDING WALLS SHALL BE AIR ENTRAINED 5% +/- 1%.
- ALL EXTERIOR CONCRETE EXPOSED TO WEATHER SHALL HAVE A MAXIMUM WATER TO CEMENTITIOUS RATIO OF 0.45
- 5. UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER SHALL BE CONCRETE CAST AGAINST EARTH CONCRETE CAST AGAINST EARTH
 CONCRETE EXPOSED TO EARTH OR WEATHER
 CONCRETE NOT EXPOSED EARTH OR WEATHER
- WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS AND SHALL CONFORM TO ASTM A185 (FY=75 KSI) AND HAVE A MINIMUM SIDE AND END LAP OF 8 INCHES.
- THE CONTRACTOR SHALL SUBMIT A JOINT PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL IF ONE HAS NOT BEEN PROVIDED ON THE PLAN SET. THE SUBMITTAL SHALL INCLUDE AS A MINIMUM A GRA REPRESENTATION WITH DIMENSIONS OF JOINT SPACING AND TYPES. SEE PAVING PLAN ON C-210 FOR MORE DETAIL IN JOINT TYPE AND SPACING.
- 8. THE CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGN(S) TO THE ENGINEER FOR REVIEW. PROPORTION MIX DESIGNS AS DEFINED IN ACI 301 SECTION 4. THE SUBMITTAL SHALL INCLUDE AS A MINIMUM CEMENT TYPE AND SOURCE, CEMENT CUBE STRENGTH, AGGREGATE GRADATIONS, WATER TESTS, AD-MIXTURE CATALOG INFORMATION AND CYLINDER STRENGTH TEST RESULTS FOR THE CONCRETE.
- 9. ALL REINFORCEMENT TO BE DETAILED, FABRICATED AND ERECTED ACCORDING TO THE ACI STANDARDS ETAILS AND DETAILING OF CONCRETE REINFORGEMENT", ACI 315 - LATEST REVISION AND "M EERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES", ACI 315R - LATEST
- SECTIONS 12.2 AND 12.15. LOCATIONS AND SPLICES SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION JOINT LOCATIONS, DETAILS AND AS SHOWN ON THE REINFORCING STEEL SHOP DRAWINGS.
- 11. PROVIDE DOWELS OF SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS.

CAST-IN-PLACE CONCRETE CONT.

- 10. UNLESS OTHERWISE SHOWN OR NOTED, AS A MINIMUM, PROVIDE TWO #5 BARS (ONE EACH FACE) AROUND INFRAMED OPENINGS IN SLABS AND WALLS. PLACE BARS PARALLEL TO SIDES OF OPENINGS AND EXTEND
- 11. PROVIDE 3/4" CHAMFER STRIP AT ALL EXPOSED CORNERS OF CONCRETE WALLS, INCLUDING EXPOSED
- 12. LOCATE ALL SLEEVES, OPENINGS, EMBEDDED ITEMS, ETC., AS INDICATED ON THE DRAWINGS, THE CONCRETE CONTRACTOR SHALL CHECK WITH ALL OTHER TRADES TO MAKE SURE THE SLEEVES, OPENINGS AND EMBEDDED ITEMS THAT ARE TO BE PROVIDED AND SET BY THEM ARE IN PLACE PRIOR TO PLACING OF CONCRETE IN THE AREA INVOLVED.
- 13. CONTRACTORS SHALL OBTAIN APPROVAL FROM THE ENGINEER, PRIOR TO PLACING OPENINGS OR SLEEVES, NOT SHOWN ON THE DRAWMIGS, THROUGH ANY STRUCTURAL MEMBERS, ROOF, WALLS OR FOUNDATIONS. REVIEW ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWMIGS FOR BASES, OPENINGS, SLEEVES, AMCHORS, INSERTS, CONDUITS, RECESSES AND OTHER DEVICES IN CONCRETE WORK BEFORE CASTING
- 14 PROVIDE POCKETS OR RECESSES IN CONCRETE WORK FOR STEEL COLUMNS AND REAMS AS REQUIRED AND/OR AS CALLED FOR IN THE SPECIFICATIONS EVEN IF NOT SHOWN ON THE DRAWINGS. PROVIDE CONCRETE FILL AFTER STEEL ERECTION TO SEAL OPENINGS.
- 15. REFER TO ARCHITECTURAL DRAWINGS FOR SLAB RECESSES AND/OR FLOOR FINISH MATERIALS.
- WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS SPECIFICALLY DETAILED. WELDING SHALL CONFORM TO AWS D1.4 SPECIFICATION.
- 17. THE CONCRETE SHALL BE THOROUGHLY COMPACTED BY VIBRATION SUPPLEMENTED BY SPADING, PUDDLING OR AGITATION, TO PREVENT HONEYCOMBING AND TO INSURE THE ELIMINATION OF VOIDS, VIBRATION MUST BE DIRECT ACTION IN THE CONCRETE AND NOT AGAINST FORMS OR REINFORCEMENT. HONEYCOMBING, VOIDS AND LARGE AIR POCKETS WILL NOT BE ACCEPTABLE.

SOIL EROSION AND SEDIMENTATION CONTROL

- 1. COMPLY WITH THE REQUIREMENTS OF THE OAKLAND COUNTY WATER RESOURCE COMMISSION EROSION 8 TROL PERMIT ALONG WITH ALL APPLICABLE FEDERAL STATE COUNTY AND CITY LAW CODES, AND REGULATIONS PERTAINING TO THE IMPLEMENTATION, MAINTENANCE, AND DOCUMENTATION OF ENTATION AND EROSION CONTROL PRACTICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND DOCUMENTATION OF SEDIMENTATION AND EROSION CONTROL AND STORMWATER QUALITY ISSUES RELATED TO THE PROJECT, AS REQUIRED AND AS NECESSARY TO COMPLY WITH APPLICABLE LAWS, CODES, AND REGULATIONS.
- INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN EVENTS TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. ANY NECESSARY IMPROVEMENTS OR REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- MENT AND EROSION FROM ALL WORK AREAS SHALL BE CONTAINED ON THE SITE, AWAY FROM WETLANDS, OUTFALLS, WATERWAYS, AND ENVIRONMENTALLY SENSITIVE AREAS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
- 5 MAINTAIN EROSION CONTROL MEASURES UNTIL CONSTRUCTION IS COMPLETE AND LAWN AREAS ARE FULLY
- PROVIDE JUTE MATTING OR NETTED MULCH ON TEMPORARY SLOPES 2:1 OR STEEPER. SEED AND MULCH OTHER SLOPES TO REMAIN UNFINISHED FOR MORE THAN 14 DAYS.
- 7. REMOVE SEDIMENTATION AND EROSION CONTROL MEASURES UPON COMPLETION OF PROJECT

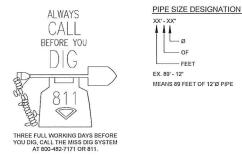
SEQUENCE OF EROSION AND SEDIMENTATION CONTROL OPERATIONS

- 1. A PERIMETER DEFENSE WILL BE INSTALLED PRIOR TO CONSTRUCTION TO CONTAIN RUNOFF FROM ALL PROPOSED DISTURBED AREAS, SEDIMENT CONTROL WILL BE INITIATED WHICH WILL CONSIST OF MAINTAINING ALL EXISTING VEGETATION AND DIRECTING ALL RUNOFF ON SITE.
- 2. DURING CONSTRUCTION THE ENDS OF ALL OPEN PIPES WILL BE PROTECTED BY FILTER FABRIC, STONE
- 3 ANY REMAINING DENUDED AREA SHALL BE SEEDED AND MULCHED DAILY, UPON COMPLETION OF FINAL
- 4. AT THE COMPLETION OF THE CONSTRUCTION, TEMPORARY CONTROL MEASURES WILL BE REMOVED AND CONVERTED TO PERMANENT CONTROLS, FINAL GRADING WILL BE COMPLETED AND THE GROUND WILL BE PERMANENTLY STABILIZED, FILTER FABRIC FENCES SHALL BE REMOVED AND ANY BARE SPOTS WILL BE SEEDED, CATCH BASINS AND DRAIN INLETS WILL BE CAREFULLY UNCOVERED AND ANY SEDIMENT OR DEBRIS
- 5. CONTRACTOR IS TO SEED CRITICAL AREAS IDENTIFIED BY OWNER OR OWNER'S REPRESENTATIVE DAILY, WHEN THOSE AREAS ARE SUBJECT TO EARTH CHANGES. CONTRACTOR IS ALSO RESPONSIBLE FOR REGUL MAINTENANCE OF PLANT COVER IN THESE AREAS. COVER SHALL BE MAINTAINED SO AS TO CONTROL OF
- 6. AT THE CONCLUSION OF CONSTRUCTION, THE OWNER WILL ASSUME THE RESPONSIBILITY FOR PERMANENT MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES.
- PROVIDE DUST CONTROL WITH AN ON-SITE WATER WAGON. WATER SHALL BE IMPLEMENTED AS NEEDED AND

AS-BUILT SURVEY:

- 1 CONTRACTOR SHALL ENGAGE THE SERVICES OF A LICENSED PROFESSIONAL SURVEYOR TO COMPLETE AN AS-BUILT SURVEY OF ALL NEW SITE ITEMS AS SPECIFIED IN THE STANDARD DETAILS OF THE CITY O ROCHESTER HILLS.
- 2. AS-BUILT SURVEY SHALL BE SUPPLIED TO THE DESIGN ENGINEER IN AUTOCAD FORMAT AS AN UPDATED DRAWING SET IN BOTH PDE AND AUTOCAD FORMAT.

CIVIL SYMBOLS LEGENDS EXISTING [589] GRADE CONTOUR — - (589) — — — — ____ stw ___ - -STORM SEWER ---- stw ---- - ---Sidock Group SANITARY SEWER ARCHITECTS ENGINEERS CONSULTANT Corporate Headquarters 45650 Grand River Avenue GAS --- GAS -- GAS - GAS -Novi, Michigan 48374 Ph: (248)349-4500 • Fax: (248)349-1429 UNDERGROUND — UGE — Design Studio OVERHEAD ELECTRIC LINE Novi, Michigan 48375 --- UGT ----_____ ugt — Novi • Wyandotte • Muskego OVERHEAD COMMUNICATION LINE — — — онт — Lansing • Gaylord • Sault Ste. Marie CURB AND GUTTER FENCE ____x___x___x___x CLEAN OUT Key Plan: No Scale ____ MANHOLE _---SQUARE PIPE END PLUG. CAP OR BULKHEAD Q FIRE HYDRAN ⊗ AND GW □ WATER VALVE Client: 759.96 GRADE ELEVATION CITY OF **ROCHESTER HILLS** -\o'\-LIGHT POLE -)0; 000 RIP RAP 0000 STONE UP HILL DOWN HILL 0 CHECK DAM ROCHESTER HILLS FIRE STATION No.4 PIPE FLOW DIRECTIONAL ARROW CB/IN FILTER DRAINAGE FLOW ARROW ROCHSTER HILLS, MI 48309 ASPHALT PAVING Seal: CONCRETE PAVING



MISS DIG SYMBOL LEGEND

SHEET SCALE: X/X" = 1'-0"

DETAIL REFERENCE

DRAWING REFERENCE SECTION REFERENCE

L___ OF

FFFT









Project Number:

Sheet Title:

CIVIL GENERAL

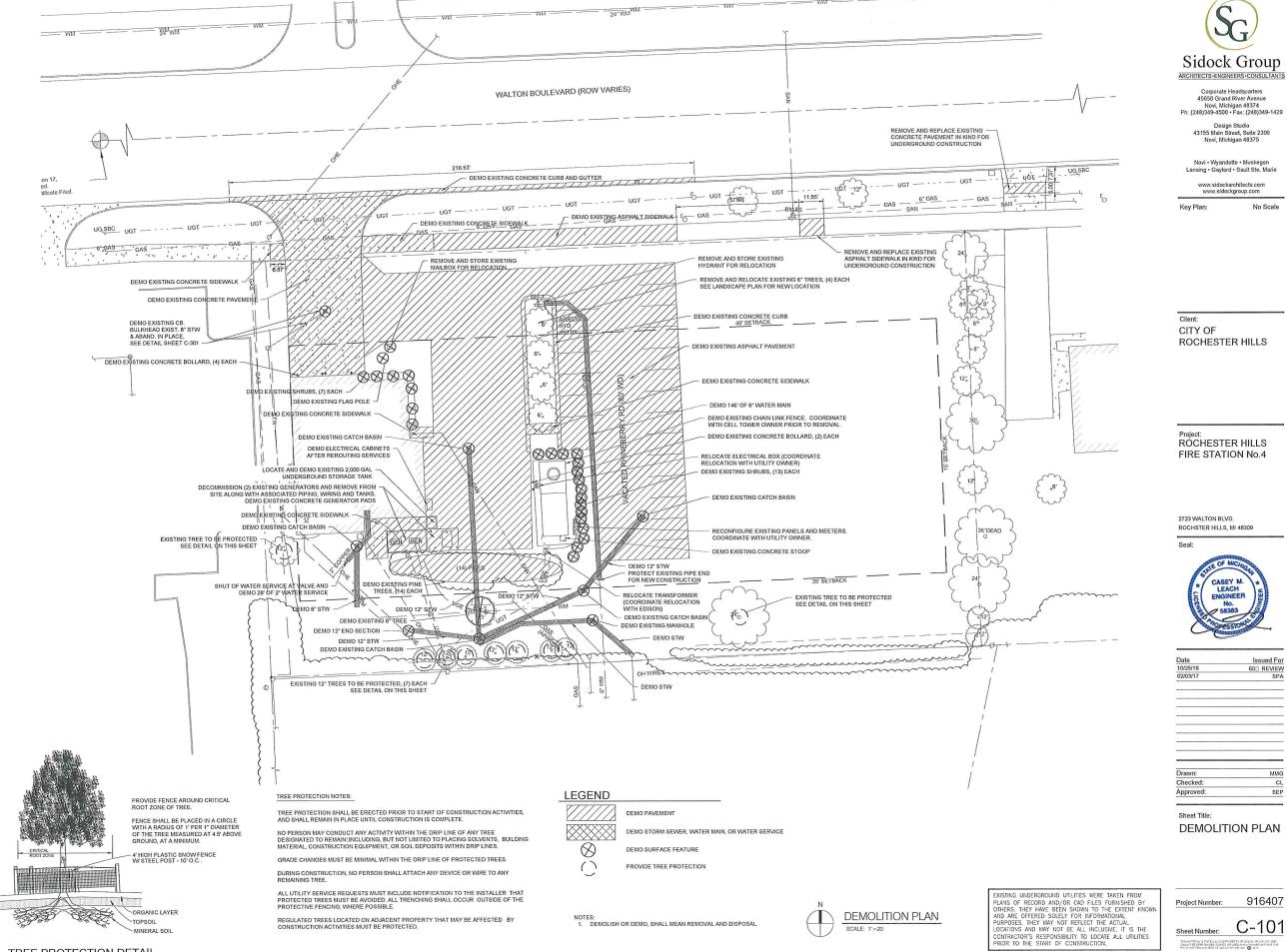
NOTES AND

Sheet Number: C-000 PLAN DETAIL THIS WATER A STREET ALL SAFEFFORTH OF SOOK SPORE INC. AND CONCEPT REPORTING CORP. CARROLL NEW WAY AT THE PRICE WATER AND STORY OF THE CONCEPT REPORTING CONCEPT OF THE CONCEPT REPORTING CONCEPT OF THE C

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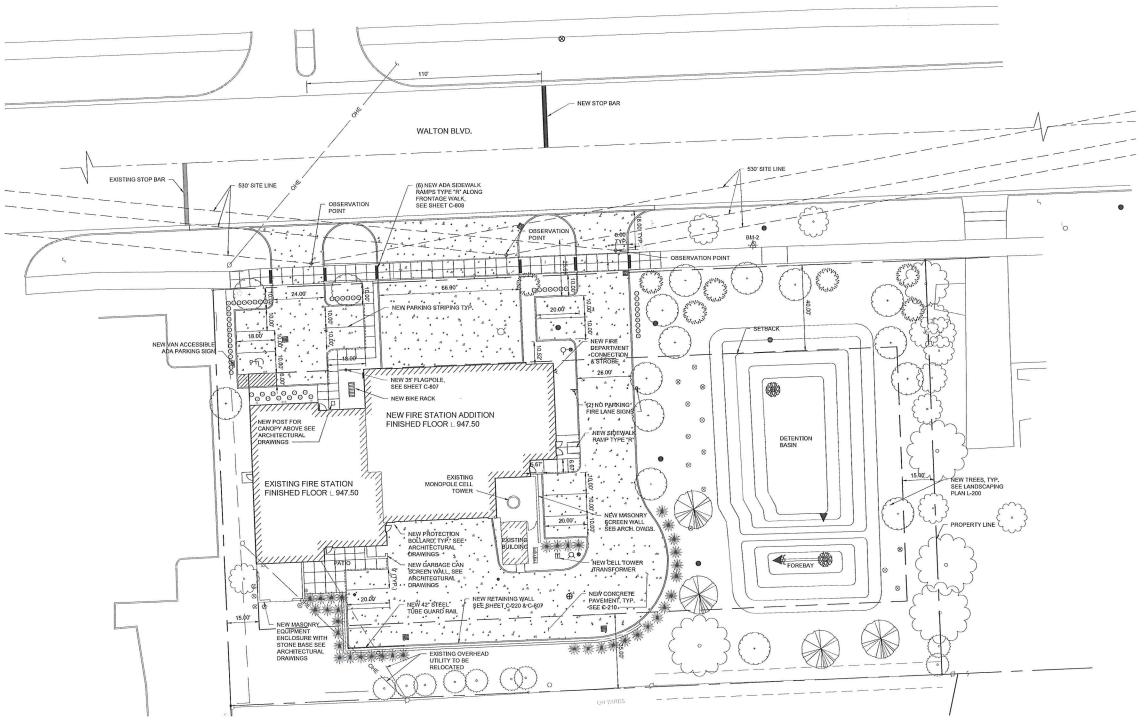
60% REVIEW SPA

916407



TREE PROTECTION DETAIL

CITY FILE #: 14-020



	ORDIN	NANCE TABLE	
	SITE & ABUTTING	G PROPERTIES ZONED R-1	
ORDINANCE	REFERENCE	REQUIRED	PROVIDED
USE	SECTION 138-4.300	MUNICIPAL BUILDING PERMITTED	FIRE STATION
SETBACKS	EXISTING	FRONT - 40 FT	40 FT
		REAR - 35 FT	65.7 FT
		SIDE - 15 FT	15 FT
LOT COVERAGE	SECTION 138-5.201, F	25% MAX	EX. BLDG 4,055 + NEW 5,608 =
		SITE = 1.50 AC = 65,340 SF	9,663 SF TOTAL
			14.8% COVERAGE
SLOPES	SECTION 138-9.203, B5	1:3 (33%) MAX SLOPE	1:3 (33%) MAX SLOPE
PARKING SETBACKS	SECTION 138-11.102, 4	FRONT - 10 FT	FRONT - 10 FT
		REAR - 10 FT	REAR - 10 FT
		SIDE - 10 FT	SIDE - 10 FT
PARKING REQUIRED	SECTION 138.11.204	MUNICIPAL	
		1 SPACE PER EMPLOYEE	13 STANDARD
		13 PER FIRE DEPARTMENT	1 ADA
	SECTION 138-11.300, A	1 ADA FOR UP TO 25 SPACES	14 TOTAL
PARKING SIZING	SECTION 138-11.300, B	WIDTH 11+5 FT FOR ADA	WIDTH 11+5 FT
	SECTION 138-11.302	LENGTH - 18 FT	LENGTH 18 FT
	SECTION 138-11.302	WIDTH - 10 FT CUSTOMERS	WIDTH - 10 FT CUSTOMERS
	SECTION 138-11.302, B	WIDTH - 9 FT EMPLOYEES	WIDTH - 9 FT EMPLOYEES
OFF-STREET LOADING	SECTION 138-11.303	NONE REQ'D IN R-1	NONE PROVIDED

FIRE DEPARTMENT NOTES:

- 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 TWO STOPPING, STANDING, PARKING, FIRE LANE; AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. FIRE PREVENTION ORDINANCE CHAPTER 5, SEC. 503.

 CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14.

 OPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING OR 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 & 307.6.2.3.





Corporate Headquarters 45650 Grand River Avenue Novi, Michigan 48374 Ph: (248)349-4500 • Fax: (248)349-1429

Design Studio 43155 Main Street, Suite 2306 Novi, Michigan 48375

Novi • Wyandotte • Muskegon Lansing • Gaylord • Sault Ste. Marie

No Scale

Key Plan:

CITY OF ROCHESTER HILLS

Project: ROCHESTER HILLS FIRE STATION No.4

2723 WALTON BLVD. ROCHSTER HILLS, MI 48309

Seal:

12/12/16



02/03/17	SPA
Drawn:	C. LEACH, C. JOHNSON
Drawn: Checked:	C. LEACH, C. JOHNSON C. LEACH

Issued For

OWNER REVIEW

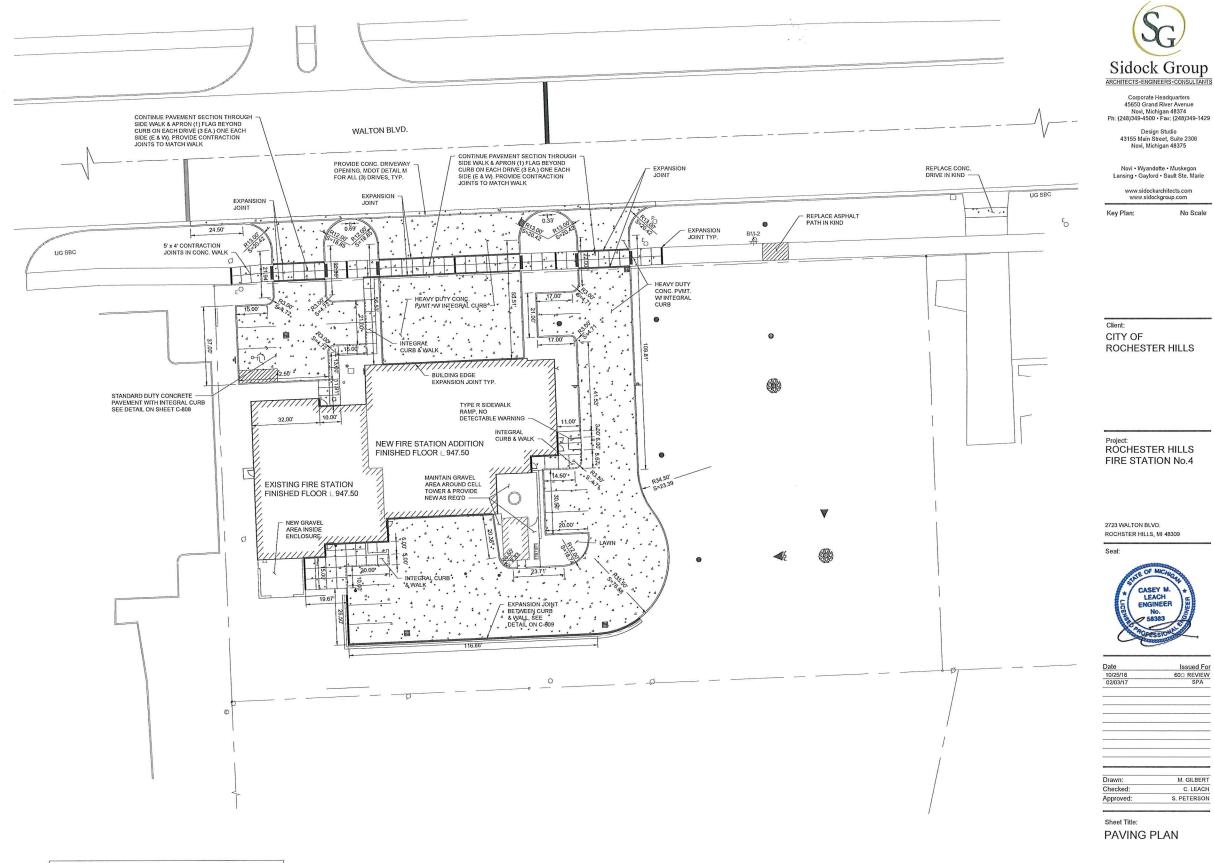
Sheet Title: SITE PLAN

EXISTING UNDERGROUND UTILITIES WERE TAKEN FROM PLANS OF RECORD AND/OR CAD FILES FURRISHED BY OTHERS. HER SHOWN TO THE EXTENT KNOWN AND ARE OFFERED SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT THE ACTUAL LOCATIONS AND MAY NOT BE ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.

916407

Sheet Number: C-200

THE WITCH A STREET CONTROL OF STATE OF CITY FILE #: 14-020



SLAB THICKNESS (IN)	PANEL SIZE FOR MAX SIZE AGGREGATE LESS THAN (FT.)	PANEL SIZE FOR MAX SIZE AGGREGATE ² * AND LARGER (FT.)
6	12	15
8	16	20

- ALL RADII ARE DIMENSIONED TO BACK OF CURB
 SEE SHEET C-808 FOR PAVING DETAILS
 SEE SHEET C-807 FOR MISC. SURFACE FEATURE DETAILS



EXISTING UNDERGROUND UTILITIES WERE TAKEN FROM EXSING UNDERGROUND UTILITIES WERE TAKEN FROM PLANS OF RECORD AID/OR CAD FILES TURNISHED BY OTHERS. THEY HAVE BEEN SHOWN TO THE EXTENT KNOWN AND ARE OFFERED SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT THE ACTUAL LOCATIONS AND MAY NOT BE ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.

916407 Project Number:

Issued For

M GILBERT

C. LEACH S. PETERSON

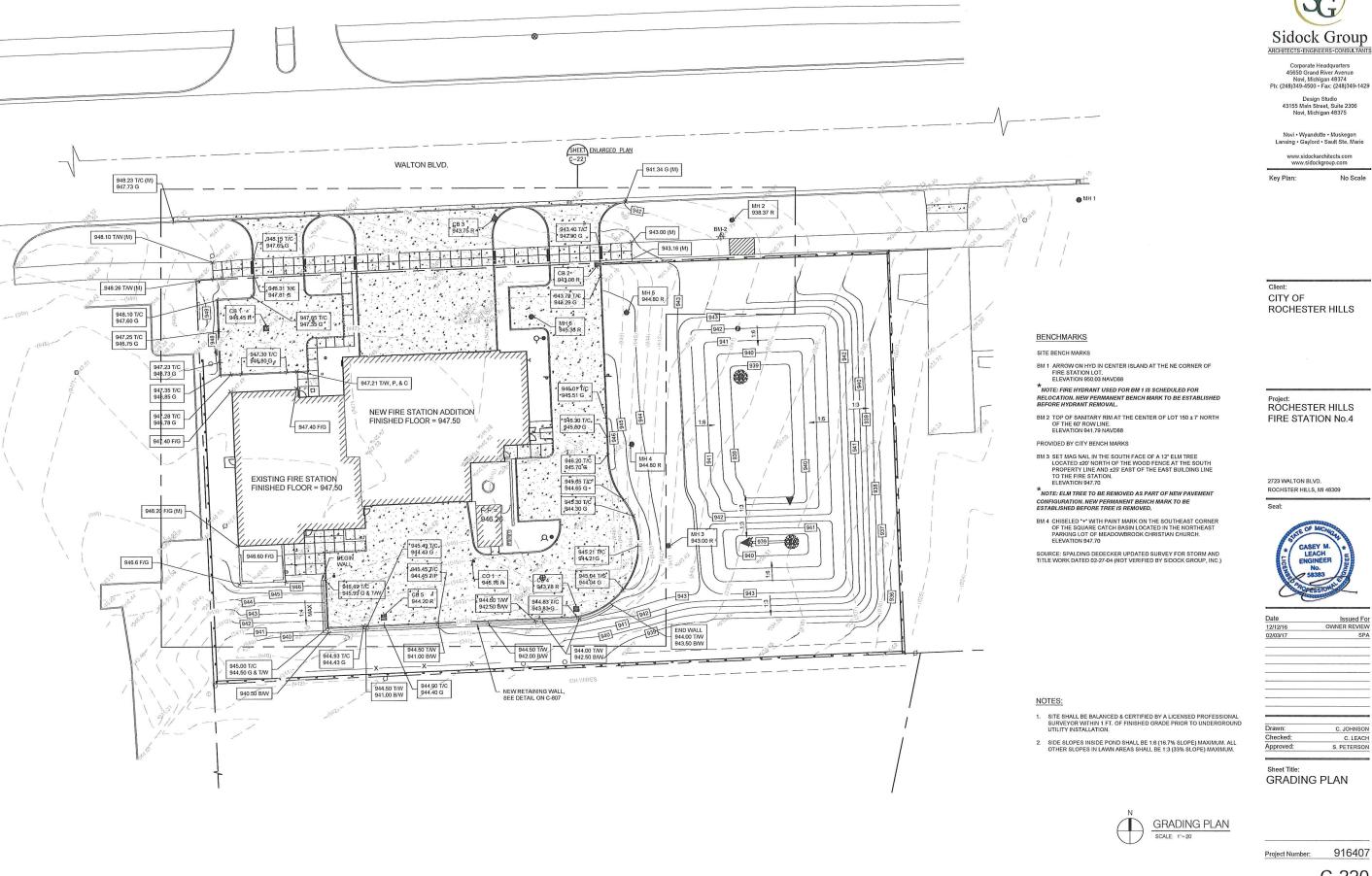
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No Scale

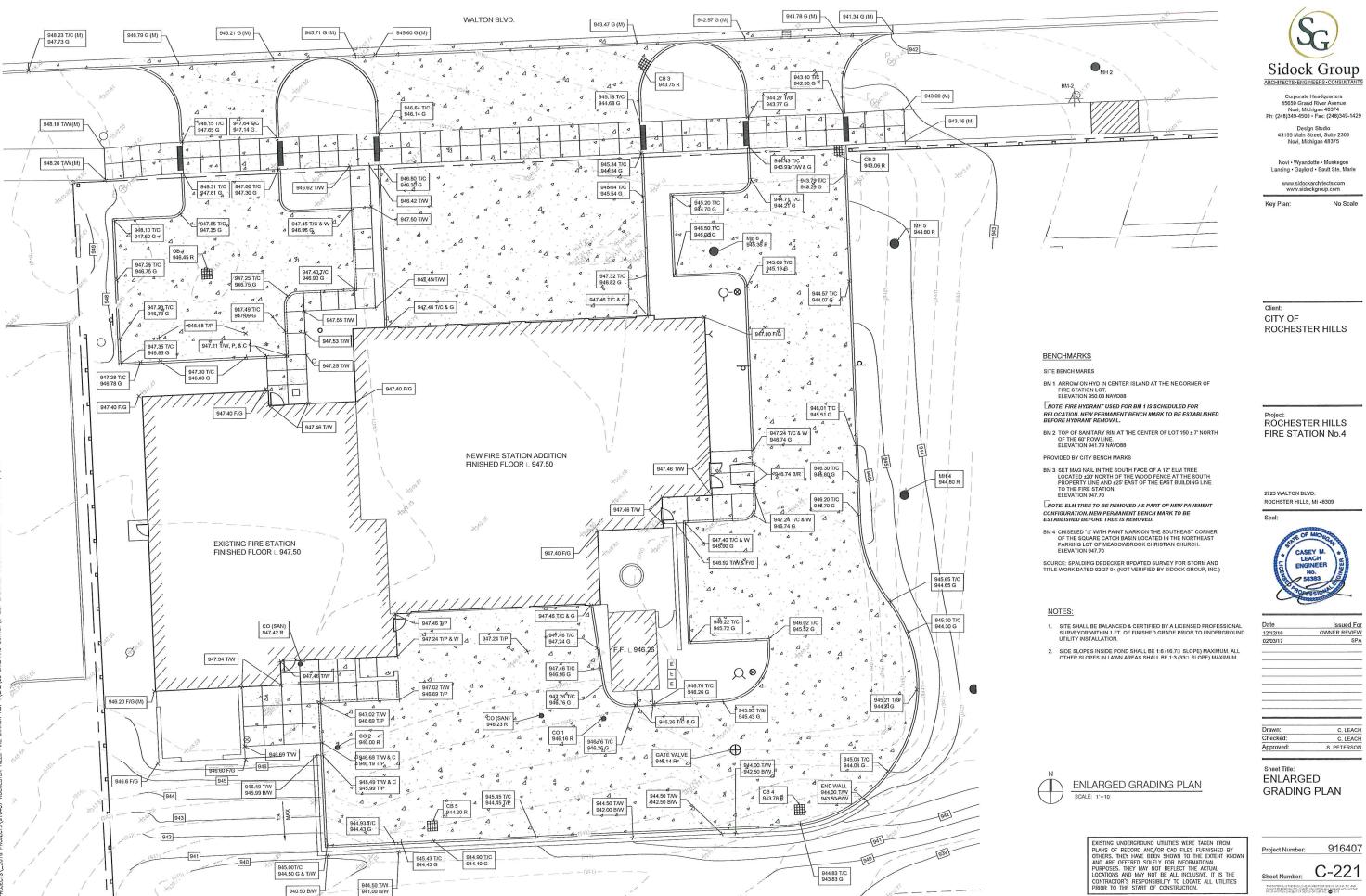
Sheet Number: C-210

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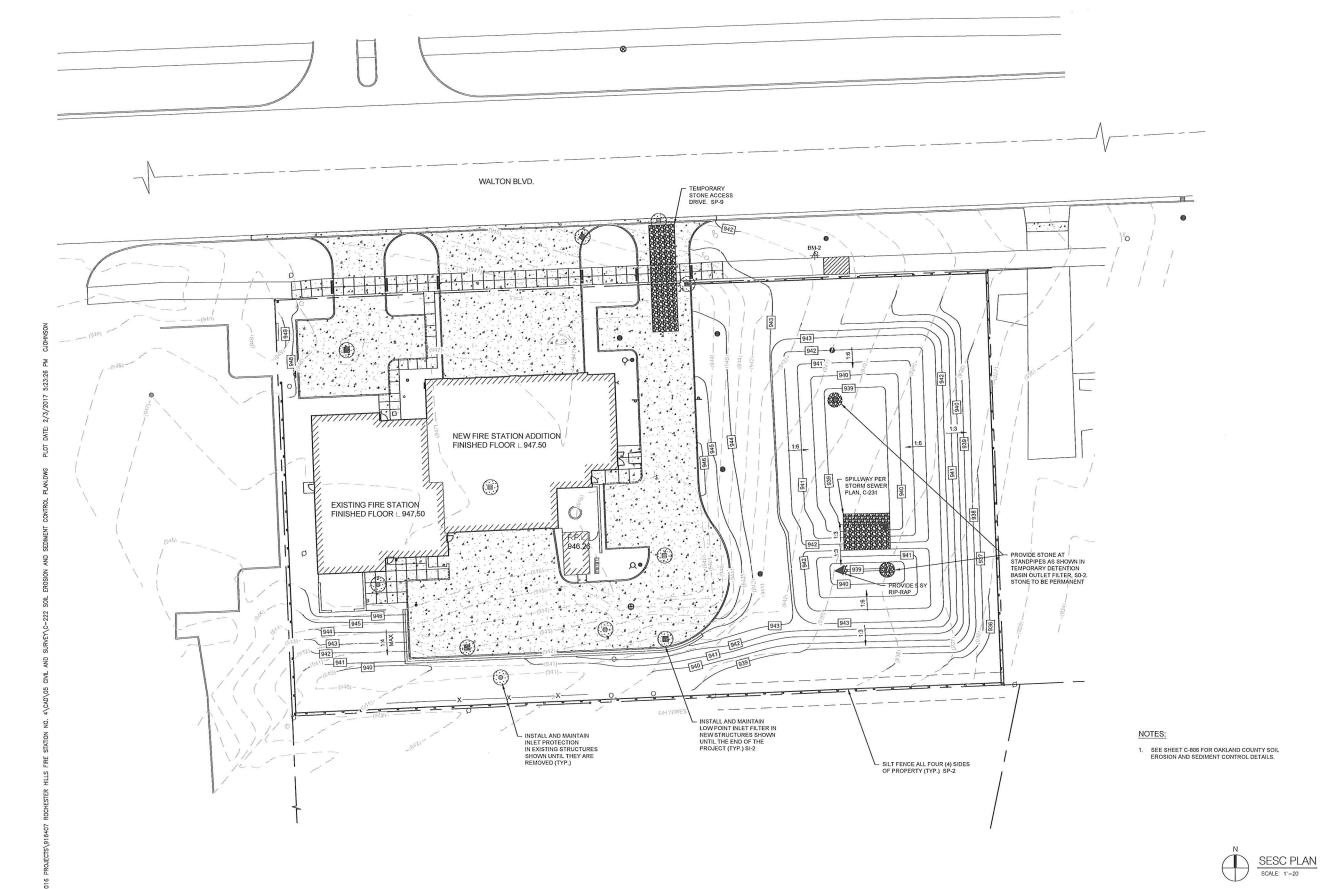


Sidock Group ARCHITECTS ENGINEERS CONSULTANTS

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www.sidockarchitects.com www.sidockgroup.com

Client: CITY OF ROCHESTER HILLS

Project: ROCHESTER HILLS FIRE STATION No.4

2723 WALTON BLVD. ROCHSTER HILLS, MI 48309

12/12/16 02/03/17



-	
Drawn:	C. JOHNSON
Drawn: Checked:	C. JOHNSON C. LEACH

Issued For OWNER REVIEW SPA

SOIL EROSION AND SEDIMENT CONTROL PLAN

Project Number: 916407

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