

CONSTRUCTION SITE PLANS FOR: OMNESS DESIGN MARION CO. WWTP GARAGE

SITUATED IN THE STATE OF OHIO, COUNTY OF MARION CITY, PLEASANT TOWNSHIP

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pproval Date	Plans Prepared By : Accelerate Accelerate A	Signatures below signify only concurrence with the general purpose and general location of the project. All technical details remain the responsibility of the engineer preparing the plans.	ENG. FILE NO	OMNESS DESIGN INC. MARION CO. WWTP GARAGE 2160 RICHLAND RD	
	<u>E-86763</u> Ohio Reg. No. <u>E-86763</u> <u>2/8/24</u> Date			Scale : Horiz. = AS NOTED Sheet No. : 1 OF 10 Original Sheet Size = 24"x36" Sheet No. : 23-202-001	

I HEREBY STATE THAT THESE PLANS HAVE BEEN PREPARED WITH OUR KNOWLEDGE AND CONCURRENCE AND REPRESENT OUR INTENT AND INTEREST.

MARION COUNTY SANITARY ENGINEER

DATE

GENERAL NOTES

WHERE SPECIFIED, THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (O.D.O.T. NUMBERS) SHALL APPLY EXCEPT AS MODIFIED OR EXPANDED HEREIN OR IN THE TECHNICAL SPECIFICATIONS

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES AS SHOWN ON THE PLANS WERE OBTAINED FROM THE OWNERS OF THE UTILITY. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS APPROXIMATE. THE EXACT LOCATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE EXISTING UTILITIES IN THE PROJECT AREA SHALL BE PROTECTED DURING CONSTRUCTION.

UTILITIES NOTIFICATION

AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING COMPANIES:

- 1. OHIO UTILITY PROTECTION SERVICE (811)
- 2. MARION COUNTY SANITARY ENGINEER 3. PLEASANT TOWNSHIP

MAINTAINING TRAFFIC

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND CONTROLLING TRAFFIC ON ALL STREETS AND ROADS AFFECTED BY CONSTRUCTION AND SHALL. PRIOR TO ANY CONSTRUCTION, SUBMIT A CONSTRUCTION SCHEDULE TO THE LOCAL AUTHORITY FOR APPROVAL INDICATING DATES AND DURATION OF EACH PHASE OF CONSTRUCTION.

ALL CONSTRUCTION SIGNS AND TEMPORARY TRAFFIC CONTROL AND PROTECTION DEVICES SHALL BE ERECTED AND MAINTAINED IN ACCORDANCE WITH "OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," AND O.D.O.T. ITEM 614 - MAINTAINING TRAFFIC. PAYMENT FOR MAINTAINING TRAFFIC SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

TESTING OF MATERIALS

ANY MATERIALS DELIVERED OR OTHERWISE INCORPORATED INTO THE PROJECT MAY BE SUBJECTED TO TESTING BY THE ENGINEER TO INSURE COMPLIANCE WITH SPECIFICATIONS. TESTS PERFORMED WILL BE PAID FOR BY THE OWNER WITH NO ADDITIONAL COST ASSUMED BY THE CONTRACTOR.

MISCELLANEOUS ITEMS

THE CONTRACTOR SHALL REMOVE ANY MAILBOX, STREET SIGNS, YARD LIGHTS, FENCES, LAWN ORNAMENTS, ETC. WHICH COULD BE DAMAGED DURING THE COURSE OF CONSTRUCTION AND RESET SAME AFTER CONSTRUCTION HAS PASSED THE AREA.

ANY CATCH BASINS, LAWNS, DRIVEWAYS, OR OTHER VARIOUS ITEMS DISTURBED DURING THE CONSTRUCTION OF THE PROJECT SHALL BE REPAIRED TO A LIKE OR BETTER CONDITION. PAYMENT OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

TRENCH PROTECTION

THE CONTRACTOR SHALL PROVIDE SHORING, SHEETING, BRACING, TRENCH BOX, ETC., AS REQUIRED TO PROTECT EXISTING STRUCTURES, UTILITIES, WORKMEN, ETC. PAYMENT OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

BACKFILLING SHALL FOLLOW IMMEDIATELY BEHIND CONSTRUCTION AND ONLY THE MINIMUM LENGTH OF TRENCH REQUIRED FOR CONSTRUCTION SHALL BE OPEN AT ANY GIVEN TIME.

CONCRETE

ALL CONCRETE UTILIZED WITHIN THIS PROJECT SHALL BE O.D.O.T. CLASS "QC MISC" UNLESS OTHERWISE STATED. PAYMENT FOR CONCRETE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

CLEARING AND GRUBBING

THIS WORK SHALL CONSIST OF CLEARING, GRUBBING, SCALPING, REMOVAL OF TREES AND STUMPS, AND DISPOSING OF ALL VEGETATION AND DEBRIS WITHIN THE LIMITS OF THE PROJECT AREA AS DIRECTED BY THE ENGINEER. PAYMENT FOR CLEARING AND GRUBBING SHALL BE INCLUDED IN THE CONTRACT PRICES FOR THE PROJECT.

AGGREGATE BACKFILL

CONTRACTOR SHALL USE O.D.O.T. ITEM 304 BACKFILL IN ALL UTILITY TRENCHES IN ALL DISTURBED ASPHALT OR PROPOSED ASPHALT AREAS UNLESS OTHERWISE NOTED. PAYMENT FOR AGGREGATE BACKFILL MATERIAL SHALL BE INCLUDED IN THE CONTRACT PRICES FOR THE PROJECT.

EARTH BACKFILL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING SUITABLE EARTH BACKFILL IN ALL GRASS AREAS. THE TOP 6 INCHES OF THE FILL MATERIAL SHALL BE TOPSOIL. PAYMENT FOR EARTH BACKFILL MATERIAL AND TOPSOIL SHALL BE INCLUDED IN THE CONTRACT PRICES FOR THE PROJECT.

SEEDING AND MULCHING

ALL GRASS AREAS DISTURBED DURING THE COURSE OF THE CONTRACT SHALL BE PROPERLY SEEDED, MULCHED, AND FERTILIZED ACCORDING TO O.D.O.T. ITEM 659. PAYMENT FOR SEEDING AND MULCHING SHALL BE INCLUDED IN THE CONTRACT PRICES FOR THE PROJECT.

EXCAVATION

CONTRACTOR SHALL REMOVE ALL TOPSOIL ENCOUNTERED PRIOR TO PLACING PROPOSED FILL MATERIAL AND REPLACE WITH SUITABLE CLAY SOIL TO SUBGRADE ELEVATIONS. IN CUT AREAS, A MINIMUM OF 12" OF 203 MATERIAL SHALL BE REMOVED AND PLACED TO PROPER GRADE AND COMPACTION. PAYMENT FOR EXCAVATION SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

PROOF ROLLING AND SOFT SUBGRADE REPAIRS

UPON COMPLETION OF PREPARING THE SUBGRADE AND PRIOR TO THE PLACEMENT OF THE OVERLYING COURSE, THE CONTRACTOR SHALL PROOF ROLL THE SUBGRADE WITH A LEGALLY FULLY LOADED TANDEM AXLE DUMP TRUCK IN THE PRESENCE OF AN ENGINEER. ANY SOFT SUBGRADE ENCOUNTERED, IN WHICH SATISFACTORY STABILITY CANNOT BE OBTAINED BY MOISTURE CONTROL AND COMPACTION, SHALL HAVE THE UNSTABLE MATERIAL EXCAVATED TO A DEPTH REQUIRED BY AN ENGINEER. SUITABLE MATERIAL SHALL THEN BE PLACED IN THE EXCAVATED AREA, COMPACTED, AND SHAPED TO CONFORM WITH PLAN LINES. THE REPAIRED AREAS SHALL THEN BE PROOF ROLLED TO VERIFY THEIR STABILITY. PAYMENT FOR PROOF ROLLING AND SUBGRADE REPAIRS SHALL BE INCLUDED IN THE CONTRACT PRICES FOR THE PROJECT.

STORM SEWERS

THE CONTRACTOR MAY USE THE FOLLOWING MATERIAL SPECIFICATIONS IN PREPARING THE UNIT PRICE BID FOR THE STORM SEWER CONDUIT.

1. ADS N-12 ST IB PERFORATED PIPE (PER ASTM F-2648) WITH BUILT IN BELL AND

TO INSURE PROPER HORIZONTAL AND VERTICAL ALIGNMENT OF THE STORM SEWERS DURING CONSTRUCTION, THE CONTRACTOR SHALL USE A LASER ALIGNMENT DEVICE CAPABLE OF BOTH HORIZONTAL AND VERTICAL ADJUSTMENT.

ALL TRENCHES FOR THE STORM SEWER SHALL CONFORM TO STANDARD DRAWING STM-5 BEDDING FOR STORM SEWERS LOCATED IN STANDARD DRAWINGS. PAYMENT FOR STORM SEWER TRENCH AND BEDDING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

ALL CATCHBASINS SHALL CONFORM TO ODOT STANDARD DETAILS CB1 AND CB2 AS SHOWN IN THE STANDARD DETAILS. CATCHBASINS TO HAVE 2-4 FINGER DRAINS, 4"Ø, LENGTH TO FIT AREA, BUT NOT MORE THAN 15'. PERFORATED STORM CONDUITS MAY SERVICE AS FINGER DRAINS.

SANITARY SERVICE CONNECTION

THE CONTRACTOR MAY USE THE FOLLOWING MATERIAL SPECIFICATIONS IN PREPARING THE CONTRACT PRICE FOR THE PROJECT.

1. ASTM D-3034, SDR-35, POLYVINYL CHLORIDE

ALL POLYVINYL CHLORIDE PIPE SHALL MEET ASTM D-3212 JOINT SPECIFICATIONS.

TO INSURE PROPER HORIZONTAL AND VERTICAL ALIGNMENT OF THE SANITARY SEWERS DURING CONSTRUCTION, THE CONTRACTOR SHALL USE A LASER ALIGNMENT DEVICE CAPABLE OF BOTH HORIZONTAL AND VERTICAL ADJUSTMENT.

ALL TRENCHES FOR THE SANITARY SEWER SHALL CONFORM TO STANDARD DRAWING SAN-21 TRENCH AND BEDDING LOCATED IN STANDARD DRAWINGS. PAYMENT FOR SANITARY SEWER TRENCH AND BEDDING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

CLEANOUTS WILL BE INSTALLED AT CHANGES IN ALIGNMENT.

PROHIBITED.

WATER SERVICE CONNECTION

THE MATERIAL SUPPLIED FOR THE 1" WATER SERVICE LINES SHALL BE THE FOLLOWING:

1. ASTM D-2737 CTS POLYETHYLENE PIPE, DR 9, 250 PSI, WITH INSTALLATION MEETING ASTM D-2774

ITEM 452 NON-REINFORCED CONCRETE PAVEMENT

- 1. 8" THICK CONCRETE SLAB 4500 PSI AT 28 DAYS, 6 % AIR ENTRAINMENT, 5" MAX. SLUMP, W/C = 0.40 (WATER TO CEMENT RATIO).
- 2. WITHIN 24 HOURS AFTER EACH CONCRETE SLAB PLACEMENT, SAW CUT, 2" DEPTH. SLAB JOINTS SHALL BE SPACED 10'-12' ON CENTER MAX. WITH LENGTH TO WIDTH OF SLAB AREAS NO MORE THAN 1.5:1.). PROVIDE ADDITIONAL JOINTS AT BUILDING CORNERS, TRANSITIONS AND PENETRATIONS PER PRACTICE STANDARDS.

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SPIGOT (PER ASTM F-2648) WITH GASKETS (PER ASTM F-477) FOR SIZES: 2" - 60"

ROOF AND FOUNDATION DRAIN CONNECTIONS TO THE SANITARY SEWER ARE

Plans Prepared By keever Approval | Date **GENERAL NOTES** sociates, Inc. P.O. BOX 325, 1810 E. MANSFIELD ST. BUCYRUS, OHIO 44820 DYLAN J. Phone: (419) 562-7757 Fax: (419) 562-4717 WYATT E-86763 ONAL 2/8/24 E-86763 Ohio Reg, No.



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SRIM=970.04 <u>-967.93</u> 148.5/LF 6' FENCE/WITH -SLOPED BARB WIRE TOP MATCH EXISTING 6"X6" WYE CONNECTION INV = 967.14 PROP PROPANE TANK SANITARY CONNECTION NOTES: PER MARION COUNTY SANITARY ENGINEER INSTRUCTIONS, PROPOSED STORM WATER CONDUIT RIM≠971⁄.37 AND STRUCTURES SHALL BE ADDED AS NEEDED WITH DIRECT OUTLET TO GRAVE CREEK. NO STORM WATER DETENTION BE REQUIRED. EXISTING TOPOGRAPHY PROVIDED BY ACAD FILES PROVIDED TO MAKEEVER & ASSOCIATES MY MARION COUNTY SANITARY ENGINEER. ©RIM=971.59 S RIM=972.14 RM=972.09 BENCHMARKS BM1 - CHISELED SQUARE ON THE WEST SIDE OF THE GEAR SCREW UNIT. ELEVATION - 973.27 BUILDING EASEMENT REFERENCE REVISIONS County Recorder Description No. City's No. Grantor Volume Page AS BUILT





PROPOSED STORM INVERTS

HW-1 (HW-1) INV 12" N-12 = 968.53 (W)

CB13 (CB-1) TC 972.88

INV 12" N-12 = 970.10 (S) INV 8" N-12 = 970.20 (È)

CB14 (CB-1) TC 973.25 INV 12" N-12 969.73 (E) INV 12" N-12 969.83 (N)

CO15 (SAN-6) INV 8" = 970.32

CO16 (SAN-6) INV 8" = 969.73

CO17 (SAN-6) INV 8" = 970.51

CO51 (SAN-6) INV 8" = 969.37

PROPOSED SANITARY INVERTS

CO48 (SAN-5) INV 6" SDR35 = 967.49

CO49 (SAN-5) INV 6" SDR35 = 968.95

CO50 (SAN-5) INV 6" SDR35 = 970.51

MH 25 (EXISTING) TC 970.04 INV 36" = 950.44 (N) INV 36" = 950.39 (S) INV 18" = 951.54 (W) INV 6" SDR35 = 961.11 (E) (NEW) SEAL NEW PENETRATION WITH BOOT SEAL CONFORMING TO ASTM C-923

1000G OIL/WATER SEPERATOR STIGER GI-1000 DESIGN BASIS INV. 6" SDR35 INLET = 969.83 INV. 6" SDR35 OUTLET = 969.66

Cut/Fill Summary

Name	Cut	Fill	Net
FINAL GRADE_to_original_less_9in_topsoil TOPSOIL	0.00 Cu. Yd. 879.50 Cu. Yd.	2143 Cu. Yd. 0.00 Cu. Yd.	2143 Cu. Yd. <fill> 879.50 Cu. Yd.<cut></cut></fill>
STONE UNDER BUILDING (12")	0 Cu. Yd.	296 Cu. Yd.	296 Cu. Yd. <fill></fill>
STONE DRIVE & PARKING (12")	0 Cu. Yd.	427 Cu. Yd.	427 Cu. Yd. <fill></fill>
CONCRETE PAVEMENT SECTION (8" CONCRETE, 6" STONE) (14")	0 Cu. Yd.	222 Cu. Yd.	222 Cu. Yd. <fill></fill>
STRUCTURAL FILL REQUIRED FROM OFFSITE	0 Cu. Yd.	1198 Cu. Yd.	1198 Cu. Yd. <fill></fill>

BENCHMARKS BM1 - CHISELED SQUARE ON THE WEST SIDE OF THE GEAR SCREW UNIT. ELEVATION - 973.27





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STORM WATER ROUTING

OVERALL RUNOFF WILL BE COLLECTED IN CATCH BASINS AND WILL FLOW THROUGH A SERIES OF STORM SEWER PIPES. THESE STORM SEWERS IN TURN FLOW INTO THE SEDIMENT/WATER QUALITY BASIN. THE OUTLET FOR THIS SEDIMENT/WATER QUALITY BASIN WILL BE CONSTRUCTED WITH A CONCRETE STRUCTURE AND RIPRAP CHANNEL PROTECTION IN ACCORDANCE WITH ODOT SPECIFICATIONS. THE SEDIMENT/WATER QUALITY BASIN AND OUTLET STRUCTURE WILL BE CONSTRUCTED IN ACCORDANCE WITH ODOT SPECIFICATIONS.

WASTE MATERIALS

ALL WASTE MATERIALS WILL BE COLLECTED AND REMOVED FROM THE SITE DAILY. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ONSITE, ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICE STATING THESE PRACTICES WILL BE POSTED IN THE OFFICE TRAILER AND THE CONTRACTOR, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED DURING THE CONSTRUCTION PHASE OF THE PROJECT. CONTRACTOR SHALL KEEP CONTAINERS AVAILABLE ON SITE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTES. CONTAINERS SHALL BE COVERED AND LEAK-PROOF.

TOXIC OR HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE CONTRACTOR, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE

PORTABLE SANITARY WASTE FACILITIES WILL BE PROVIDED ONSITE AND THE COLLECTED WASTE DISPOSED OF PROPERLY.

WASTE DISPOSAL

CONTRACTOR SHALL KEEP CONTAINERS AVAILABLE ON SITE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTES

CLEAN HARD FILL

BRICKS, HARDENED CONCRETE, AND SOIL WASTE THAT ARE CONTAMINATED SHALL NOT BE LOCATED NEAR CATCH BASINS, WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS AND OTHER STORM WATER DRAINAGE AREAS.

CONSTRUCTION AND DEMOLITION DEBRIS

CONSTRUCTION AND DEMOLITION DEBRIS WASTE WILL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714.

CONSTRUCTION CHEMICAL COMPOUNDS

MIXING OR STORAGE OF COMPOUNDS SUCH AS FERTILIZERS, LIME, ASPHALT, AND CONCRETE SHALL NOT BE LOCATED NEAR CATCH BASINS, WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS AND OTHER STORM WATER DRAINAGE AREAS. THIS LOCATION WILL BE DETERMINED BY THE CONSTRUCTION MANAGER.

EQUIPMENT FUELING AND MAINTENANCE

DESIGNATED AREAS FOR FUELING AND/OR PERFORMING VEHICLE MAINTENANCE SHALL BE IN LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS AND OTHER STORM WATER DRAINAGE AREAS. THIS LOCATION WILL BE DETERMINED BY THE CONSTRUCTION MANAGER.

NO STORAGE TANKS SHALL BE KEPT ON SITE.

CONCRETE WASH WATER

DESIGNATED AREAS FOR CONCRETE CHUTES OR OTHER WASH WATER SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS AND OTHER STORM WATER DRAINAGE AREAS. THIS LOCATION WILL BE DETERMINED BY THE CONSTRUCTION MANAGER.

CONTAMINATED SOILS

ALL CONTAMINATED SOILS BY PETROLEUM OR OTHER CHEMICAL SPILLS MUST BE TREATED AND/OR DISPOSED IN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES.

SPILL REPORTING REQUIREMENTS

IN AN EVENT OF A SMALL RELEASE. LESS THAN 25 GALLONS OF PETROLEUM WASTE. THE CONTRACTOR SHALL USE PETROLEUM BASED AND CONCRETE CURING COMPOUNDS PER MANUFACTURES HANDLING PROCEDURES.

IN AN EVENT OF A LARGE RELEASE, MORE THAN 25 GALLON OF PETROLEUM WASTE, THE CONTRACTOR SHALL CONTACT OHIO EPA (AT 1-800-282-9378), THE LOCAL FIRE DEPARTMENT AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS.

OPEN BURNING

OPEN BURNING IS ONLY PERMITTED IN RESTRICTED AREAS FOR BARBECUES, HEATING, AND CERTAIN OCCUPATIONAL PURPOSES (AS DEFINED IN OAC 3745-19).

NO OPEN BURNING IS ALLOWED IN A NON-RESTRICTED AREA WHICH IS WITHIN 1000 FEET OF AN INHABITED BUILDING. OPEN BURNING IN AN UNRESTRICTED AREA IS LIMITED TO SCRAP LUMBER, WOODEN FENCE POSTS, AGRICULTURAL, LAND CLEARING, OR LANDSCAPE WASTES.

DUST CONTROLS/SUPPRESSANTS

CONTRACTOR SHALL KEEP DUST TO A MINIMUM BY SPRINKLING DUST SUPPRESSANT. THE DUST SUPPRESSANT SHALL BE KEPT AWAY FROM CATCH BASINS, WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS AND OTHER STORM WATER DRAINAGE AREAS.

AIR PERMITTING REQUIREMENTS

CONTRACTOR SHALL BEWARE THAT AIR POLLUTION PERMITS MAY BE REQUIRED FOR ACTIVITIES INCLUDING, BUT NOT LIMITED TO, MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, RETE CRUSHERS AND LARGE GENERA

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SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN INVENTORY OF MATERIALS

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

FERTILIZERS

WOOD

CLEANING SOLVENTS

ROOFING SHINGLES

PETROLEUM BASED PRODUCTS

• LAMPS (INCLUDES FLUORESCENT LAMPS)

- CONCRETE
- DETERGENTS
- PAINTS (ENAMEL AND LATEX) METAL STUDS
- MASONRY BLOCK
- TAR
- SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES:

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING:

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION.

- AN EFFECT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR
- APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE. PRODUCT WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL
- MANUFACTURER'S LABEL. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
- WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE
- CONTAINER. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED. • THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF
- MATERIALS ONSITE. MATERIAL SAFETY AND DATA SHEETS WILL BE AVAILABLE UPON REQUEST.
- THE CONTRACTOR CAN USE PROTECTED STORAGE AREAS FOR INDUSTRIAL OR CONSTRUCTION MATERIALS TO MINIMIZE EXPOSURE TO SUCH MATERIALS TO STORM WATER.

HAZARDOUS PRODUCTS:

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

- PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
- ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS (MSDS) WILL BE RETAINED ON SITE. • IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURE'S OR LOCAL AND STATE
- RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRODUCT PRACTICES WILL BE FOLLOWED ONSITE

PETROLEUM PRODUCTS:

ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS:

FERTILIZERS USED WILL BE APPLIED PER OHIO DEPARTMENT OF TRANSPORTATION (ODOT) SPECIFICATIONS. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM SEWER, STORAGE WILL BE IN A COVERED SHED OR OFFICE. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS:

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS

CONCRETE TRUCKS:

CONCRETE TRUCKS WILL WASH OUT OR DISCHARGE SURPLUS CONCRETE ONLY IN AREAS DESIGNATED. THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS AND OTHER STORM WATER DRAINAGE AREAS. THE LOCATION WILL BE DETERMINED BY THE CONSTRUCTION MANAGER.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

- MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS MAY INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

Plans Prepared By

E-86763

Ohio Reg, No.

- THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
- THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
- THE CONTRACTOR, RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS, WILL BE IN CHARGE OF SPILL PREVENTION AND CLEANUP. HE WILL DESIGNATE AT LEAST TWO OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA.

PROCESS WASTEWATER/LEACHATE MANAGEMENT

ALL PROCESS WASTEWATERS, (WHICH INCLUDES EQUIPMENT WASHING, LEACHATE ASSOCIATED WITH ON-SITE WASTE DISPOSAL, AND CONCRETE WASH-OUTS) SHALL BE COLLECTED AND DISPOSED OF PROPERLY TO A PUBLICLY OWNED TREATMENT WORKS.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENT. THE PAVED STREETS ADJACENT TO THE SITE ENTRANCE WILL BE MAINTAINED TO REMOVE ANY EXCESS MUD, DIRT, OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

THE STORM WATER POLLUTION PREVENTION PLAN REFLECTS THE COUNTY REQUIREMENTS FOR STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL. TO ENSURE COMPLIANCE THIS PLAN WAS ESTABLISHED BASED ON A STORM WATER POLLUTION PREVENTION PLAN EXAMPLE PROVIDED BY THE OHIO EPA.

MAINTENANCE/INSPECTION PROCEDURES

THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS:

- 1. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWED ANY STORM
- EVENT OF 0.5 INCHES OR GREATER BY A QUALIFIED INSPECTION PERSONNEL. 2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; REPAIRS REQUIRED WILL BE COMPLETED
- WITHIN 24 HOURS OF REPORT. 3. SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE
- FENCE. 4. SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT AND TEARS. TO SEE IF THE FABRIC IS SECURELY
- ATTACHED TO THE FENCE POST, AND TO SEE IF THE FENCE POSTS ARE FIRMLY IN THE GROUND. 5. SEDIMENT IN THE DRAINAGE SWALES WILL BE REMOVED.
- 6. TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. 7. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM
- TO BE COMPLETED BY THE INSPECTOR IS ATTACHED. 8. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE INSPECTIONS, SUCH REPAIRS AND FILLING OUT THE
- INSPECTION AND MAINTENANCE REPORT. 9. INSPECTIONS MAY BE REDUCED TO MONTHLY PLUS RAIN EVENTS IF SITE IS DORMANT. 10. REPAIR OR REPLACE MISSING OR SUB-FUNCTIONAL BMPS WITHIN 3 DAYS FOR NON-SEDIMENT PONDS AND 10
- DAYS FOR SEDIMENT PONDS. 11. DOCUMENT INSPECTIONS WITH OHIO STORM WATER POLLUTION PREVENTION PLAN TEM[LATE REPORTS.

MAINTAIN RECORDS FOR THREE YEARS. NON-STORM DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORM DISCHARGE WILL OCCUR FROM THE SITE DURING THE

CONSTRUCTION PERIOD:

- WATER FROM WATER LINE FLUSHINGS
- PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC HAZARDOUS MATERIALS HAVE OCCURRED) UNCONTAMINATED GROUND WATER (FROM DEWATERING EXCAVATION).

ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO DRAINAGE SWALES PRIOR TO DISCHARGE.

DEWATERING

ALL TRENCHES, EXCAVATIONS, AND LOW AREAS THAT REQUIRE DEWATERING SHALL HAVE THE WATER DIRECTED/PUMPED TO A SEDIMENT BASIN PRIOR TO DISCHARGE FROM THE SITE. IF OILY OR CHEMICALLY CONTAMINATED WATER IS TO BE GENERATED, NOTIFY ENGINEER PRIOR TO ANY DISCHARGE.

	SITE	DESCRIPTION		SEQUENCI	CE OF CONSTRUCTION SCHEDULE ACTIVITIES:			
PROJECT NAME AND LOCAT (LATITUDE, LONGITUDE, OR	OJECT NAME AND LOCATION: MARION COUNTY WWTP GARAGE ATITUDE, LONGITUDE, OR ADDRESS) 2160 RICHLAND RD MARION ON 42202 MARION ON 42202			THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:				
		MARION OH 43302		1. CLEAR AND GRUB				
OWNER NAME AND ADDRES	SS:	MARION COUNTY SANITARY ENGINEER		2. INSTALL SILT FENC	NCE, AND SEDIMENT CONTROLS WITHIN 7 DAYS OF GRUBBING ACTIVITIES			
		222 W. CENER ST		3. INSTALL STABILIZE				
		MARION OH 43302		4. REMOVE TOPSOIL	IL FROM SITE AND STOCK PILE			
				5. STABILIZE STOCK	KPILES WITHIN 7 DAYS OF LAST CONSTRUCTION ACTIVITY			
DESCRIPTION: (PURPOSE AND TYPES OF SOIL DISTURBING ACTIVITIES)				6. PERFORM SITE GR	GRADING ACTIVITIES			
				7. INSTALL UNDERGF	GROUND UTILITIES			
THIS PROJECT IS FOR THE DEVELOPMENT A NEW VEHICLE STORAGE BUILDING				^{8.} INSTALL SEDIMEN	NT AND EROSION CONTROLS AROUND ALL CATCH BASINS			
	S WILL INCL	UDE: SITE PREPARATION AND BUILDING		9 INSTALL DRIVEWA	AY AND PARKING AREA			
CONSTRUCTION.				11. COMPLETE GRADI CONSTRUCTION A	DING AND INSTALL PERMANENT SEEDING WITHIN 7 DAYS OF LAST ACTIVITY			
SITE AREA: THE SITE AREA	A OF 0.76 AC	CRES WILL HAVE .70 ACRES DISTURBED	BY THE ABOVE	12 REMOVE ACCUMU (CONTINUAL EVEN	ULATED SEDIMENT FROM SEDIMENT AND EROSION CONTROL DEVICES ENT)			
LISTED CONSTRUCTION ACTIVITIES				13. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETED AND THE SITE IS STABILIZED, REMOVE SEDIMENT AND EROSION CONTROL AND RESEED ANY AREAS DISTURBED BY THIS REMOVAL				
RUNOFF COEFFICIENT: PRE		CTION COEFFICIENT OF THE SITE IS CN =	= 75	14. OWNER TO PROVIDE MAINTENANCE				
		JCTION COEFFICIENT FOR THE SITE WIL	L BE CN = 92	NAME OF RECEIVING	EXISTING STORM RUNOFF DISCHARGES TO GRAVE CREEK			
MPERVIOUS AREA: PRE				WATERS:				
POS	ST-CONSTRU	$\mathbf{JC} \mathbf{HON} \mathbf{IMPERVIOUS} \mathbf{AREA} = 74.5\%$						
EXISTING SOIL TYPES: Gwg SLC Pw	g1B1 - GLYN DPE - PEWAMO S	WOOD SILOT LOAM GROUND MORRAINE SILTY CLAY LOAM, 0% TO 1% SLOPES	2% TO 6%					
EXISTING LAND USE: THI	IS SITE WAS	PREVIOUSLY UNDEVELOPED FIELD AT V	VWTP					
SWP3	ENG. FILE N IMP. ACCT. CONTRACT N COMPLETION CONTRACTOF		0 NO O DATE	OMNESS DESIGN MARION CO. WWTP GAR/ 2160 RICHLAND RD				
					Scale : Horiz. = AS NOTED Vert. = AS NOTED			
					Original Sheet Size = $24^{\circ}x36^{\circ}$			

SITE AREA:	LISTED CO	AREA OF 0.76 ACRES WILL HAVE .70 ACRES
RUNOFF COE	FFICIENT:	PRE-CONSTRUCTION COEFFICIENT OF TH
		POST-CONSTRUCTION COEFFICIENT FOR
IMPERVIOUS	AREA:	PRE-CONSTRUCTION IMPERVIOUS AREA
		POST-CONSTRUCTION IMPERVIOUS AREA
EXISTING SO	IL TYPES:	Gwg1B1 - GLYNWOOD SILOT LOAM GROUI SLOPE
		Pw - PEWAMO SILTY CLAY LOAM, 0% TO 1

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& ssociates, Inc.	TATE OF
P.O. BOX 325, 1810 E. MANSFIELD ST. BUCYRUS, OHIO 44820 Phone: (419) 562-7757 Fax: (419) 562-4717	DYLAN J.
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18/24



SOILS MAP

S:\2023\202

Dwg. No. : 23-202-001

Date : 2-6-2024

EROSION AND SEDIMENT CONTROL

- 1. THE IMPLEMENTATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL CONFORM TO THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL, AND THE OHIO EPA'S GENERAL PERMIT PROGRAM FOR THE DISCHARGE OF STORM WATER. IF CONFLICTS EXIST REGARDING THE EROSION AND SEDIMENT CONTROL PRACTICES, THE MORE RESTRICTIVE SHALL APPLY.
- 2. EROSION AND SEDIMENT CONTROL PRACTICES NOT ALREADY ON THIS PLAN MAY BE NECESSARY DUE TO UNFORESEEN ENVIRONMENTAL CONDITIO AND/OR CHANGES IN DRAINAGE PATTERNS CAUSED BY EARTH-MOVING ACTIVITY. ADDITIONAL PRACTICES SHALL BE IMPLEMENTED AT THE DEVELOPER'S EXPENSE AS DIRECTED BY THE OWNER, ENGINEER, OEPA OR GOVERNING AUTHORITY.
- 3. THE DEVELOPER AND/OR HIS CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN. THEY SHALL ALSO BE RESPONSIBLE FOR MAKING ALL CONTRACTORS AND SUB-CONTRACTORS AWARE OF PROVISIONS ON THIS PLAN.
- 4. REPAIRS TO ANY EROSION AND SEDIMENT CONTROL MEASURES, STRUCTURES, DEVICES, OR RELATED ITEMS SHALL BE MADE WITHIN 14 DAYS.
- 5. SEDIMENT BASINS/TRAPS AND PERIMETER SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN SEVEN DAY FROM THE START OF THE GRUBBING AND CLEARING OPERATIONS AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE PERMANENTLY STABILIZED.
- 6. STREAMS, INCLUDING BEDS AND BANKS, SHALL BE RESTABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED, INTERRUPTED, OR STOPP

OHIO ENVIRONMENTAL PROTECTION AGENCY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOTES

- 1. THIS CONTRACT DRAWING SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST.
- 2. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.50" OF RAIN PER 24-HOUR PERIOD. PERMANENT RECORDS OF MAINTENAN AND INSPECTION MUST BE MAINTAINED FOR 2 YEARS AFTER THE COMPLETION OF CONSTRUCTION AND THE FILING OF THE NOTICE OF TERMINATION (NOT) PER THE OHIO EPA NPDES PERMIT AND SHOULD INCLUDE THE NAME OF THE INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, CERTIFICATION OF COMPLIANCE, AND CORRECTIVE MEASURES TAKEN.
- 3. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF. SOLIDS, SANITARY AND TOXIC WASTE MUST BE DISPOSED OF IN / PROPER MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. IT IS PROHIBITED TO BURN, BURY OR POUR OUT ONTO THE GROUND OR INTO THE STORM SEWERS ANY SOLVENTS, PAINTS, STAINS, GASOLINES, DIESEL FUEL, USED MOTOR OIL, HYDRAULIC FLUID, ANTIFREE CEMENT CURING COMPOUNDS, AND OTHER SUCH TOXIC AND HAZARDOUS WASTE. WASH OUT OF CEMENT TRUCKS SHOULD OCCUR IN A DIKED, DESIGNATED AREA WHERE THE WASHINGS CAN COLLECT AND BE DISPOSED OF PROPERLY WHEN THEY HARDEN. STORAGE TANKS SHOULD BE LOCATED IN DIKED AREAS AWAY FROM ANY DRAINAGE CHANNELS. THE DIKED AREA SHOULD HOLD A VOLUME 110% OF THE LARGEST TANK.
- 4. THE DEVELOPER SHALL ENSURE A NOTICE OF TERMINATION (NOT) IS FILED PER THE OHIO EPA NPDES PERMIT REQUIREMENTS.

CONSTRUCTION ENTRANCE

STONE SIZE - NO. 2 (2-1/2" TO 1-1/2") OR ITS EQUIVALENT.

LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 70 FEET.

THICKNESS - NOT LESS THAN EIGHT (8) INCHES.

WIDTH - TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

FILTER CLOTH - GEOTEXTILE MEETING FIGURE 7.4.1 OF THE RAINWATER AND LAND DEVELOPMENT MANUAL WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.

WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASH IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.

MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PERFORMED AFTER EACH RAIN.

THIS CONSTRUCTION SHALL INCLUDE ALL MATERIALS AND COSTS RELATIVE TO CONSTRUCTING, MAINTAINING, REMOVAL AND RESTORATION OF STABILIZED ENTRANCE WITHIN THE VARIOUS CONSTRUCTION ITEMS.

THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICAL BEFORE MAJOR GRADING ACTIVITIES. CONSTRUCTION ENTRANCES SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABLIZED OR REPLACED WITH A



PLAN VIEW

CONSTRUCTION ENTRANCE SCALE: NONE

EASEMENT REFERENCE				REVISIONS						
	County	Recorder	Curanter	No.	Description Ap	proval	Date			
City's NO.	Volume	Page	Grantor							
					AS BUILT					

PERMANENT ROADWAY SURFACE

Figure 7.4.1

Geotextile Specification for Construction Entrance					
Minimum Tensile Strength	200 lbs.				
Minimum Puncture Strength	80 pei.				
Minimum Tear Strength	50 lbs.				
Minimum Burst Strength	320 psi.				
Minimum Elongation	20%				
Equivalent Opening Size	EOS < 0.6 mm.				
Permittivity	1×10-3 cm/sec.				

	SILT FENCE NOTES	TEMPORARY	AND PERMANENT	SEEDING				
	SILT FENCE SEDIMENT BARRIER UTILIZES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED.	THE LIMITS OF SEEDING AND MULCHING AREA AS SHOWN WITHIN THE PLAN SEEDING HAS BEEN ASSUMED TO BE 5' OUTSIDE THE WORK LIMI' RIGHT-OF-WAY WHICHEVER IS GREATER. ALL AREAS NOT DESIGNATED TO BE SEEDED SHALL REMAIN UNDER NATURAL GROUND COVER. TH DISTURBED OUTSIDE THE SEEDING LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.						
ONS	THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE TO THE STRUCTURE)	THE CONTRACTOR SHALL MAINTAIN A BUFFER STRIP AS DESIGNATED ON THE PLAN TO PREVENT SEDIMENT FROM LEAVING SITE. THIS STRIP SHAL MAINTAINED AT ALL TIMES AND NO SOIL SHALL BE PLACED ON THIS STRIP.						
N 4	THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-INCH OVERLAYS AND SECURELY SEALED.	TEMPORARY SEED S MORE. THESE IDLE A TEMPORARY SEEDIN	HALL BE APPLIED BETWEE REAS SHOULD BE SEEDED	EN CONSTRUCTION OPE O AS SOON AS POSSIBLE	RATIONS ON SOIL THAT WILL NO E AFTER GRADING OR SHALL BE	OT BE GRADED OF SEEDED WITHIN	R REWORKED FOR 45 DAYS OR 7 DAYS. SEVERAL APPLICATION	
THE	WHEN STANDARD STRENGTH FILTER FABRIC IS USED A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.	PERMANENT VEGETA AGENCY, PROVIDES	ATION SHALL NOT BE CONS ADEQUATE COVER AND IS	UNTIL GROUND COVER IS ACHIE CONTROL SOIL EROSION SATISF	CHIEVED WHICH, IN THE OPINION OF THE APPROVIN			
YS	POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT, FENCE POST SPACING SHALL NOT EXCEED 6 FEET.	TEMPORARY	Y SEEDING SPECIE	ES SELECTION	PERM	ANENT SEE	DING	
	A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.	SEEDING DATES	SPECIES	LB/1,000 SF. LB./AC.	SEED MIX	SEED RATE	NOTES	
PED.	THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. EXCESS MATERIAL SHALL LAY AT THE BOTTOM OF THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.	MARCH 1 TO AUGUST 15	OATS TALL FESCUE ANNUAL RYEGRASS PERENNIAL RYEGRASS	3 4 BUSHEL 1 40 1 40 1 40 1 40	CREEPING RED FESCUE DOMESTIC RYEGRASS	SF. Constraint GENERAL USE 1/2-1 20 1/2-1 20 1/4-1/2 10	D-40 D-20	
	WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.		TALL FESCUE ANNUAL RYEGRASS RYE	1 40 1 40 3 2 BUSHEL	TALL FESCUE	<u>1/4-1/2</u> 10 <u>1</u> 4-1/2	40 40	
	THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.		TALL FESCUE ANNUAL RYEGRASS	1 40 1 40	STEEP TALL FESCUE	3ANKS OR CUT SI	LOPES 40	
R NCE	SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.	AUGUST 16 TO NOVEMBER 1	WHEAT TALL FESCUE	3 2 BUSHEL 1 40	CROWN VETCH TALL FESCUE	1/4 1/2	10 DO NOT SEED LATER 20 THAN AUGUST 20 DO NOT SEED LATER	
N	RAINWATER & LAND DEVELOPMENT MANUAL SPECIFICATIONS FOR SILT FENCE 1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.		PERENNIAL RYEGRASS TALL FESCUE	1 40 1 40 1 40	TALL FESCUE ROAD	1/2 1/2 DITCHES AND SV	20 THAN AUGUST /ALES	
A	2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS THAT MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.	NOVEMBER 1 TO SPRING SEEDING NOTE: OTHER APPROVI	ANNUAL RYEGRASS USE MULCH ONLY, SODDI DORMANT SEEDING ED SEED SPECIES MAY BE SUBST	ING PRACTICES OR	TALL FESCUE DWARF FESCUE KENTUCKY RYEGRASS	1 2 2 1/4 S	40 90 5	
.20,	3. ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.				KENTUCKY BLUEGRASS PERENNIAL RYEGRASS KENTUCKY BLUEGRASS	1 1/2 6 1 1/2 6 1 1/2 6 1 1/2 6	60 60 60 FOR SHADED AREAS	
	4. SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.				CREEPING RED FESCUE	1 1/2 6	60 1 011 01 1 0 2 2 7 1 1 2 1 0	
	5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.				Table 1: Peer Anne requiring personnel statistical	erent Stabilization Ien Three frame is apply oro	das caritreis	
	6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.				Any unuse that will be downers for one (1998) Any answ within 60 that of a surface o	yaar or Willin seven days of the or distantense also of Willin has days of machin	cat recent 9. Trai grade	
	7. THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.	SOIL STABILIZA	TION		liké statie and at final grade Citror enves et final grade Table 2: Temp	Willia cover days of read- with flat area	ling final groete	
	8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.	STABILIZATION OF DIST ACCORDANCE WITH TH	URBED AREAS SHALL, AT A	A MINIMUM, BE INITIATE D IN THE FOLLOWING TA	D IN Arms requiring two porcey simblifunds ABLES. Arry distants arous within 80 hort of an particle water of the club and not of the practice Arry distants arous that will be dorma	Time frame to apply oreal Within two stops of the mo distributions if the most will more from 12 stops of the r	ilas controla at recent remain idio for reat recent	
N N	9. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-IN. OVERLAP PRIOR TO DRIVING INTO THE GROUND, (SEE DETAILS).				nees fran 14 days but leas then one y and not within 50 fault of a seriace work the state	er, distantianos within the area mor For residential subciviatar mum to stabilized ar least instantiar of parent country lot(e).	n 5. sintarihod arran Saven dinga prior to 19. The Included	
IING	10. MAINTENANCE—SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER THE FABRIC OR AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING SHALL BE PERFORMED,AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE				Delarised areas that will be take over w Where vegetarize stabilization to a otherwise unoblatication allowed Plannasses and temporary stabiliz	<u>riter — Prior to the creat of whiter</u> taique may cause shuchard indeli e stabilization technique must be e allee ana defined in Part VII.	waatser Rig or ann angioyed.	
	REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED. SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE. SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF	INLET PROTEC	ALL DANDY SACK PER MAN	<u>CK)</u> NUFACTURERS RECOMN	IENDATION. NO			
ANY	DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY. CRITERIA FOR SILT FENCE MATERIALS 1. FENCE POST – THE LENGTH SHALL BE A MINIMUM OF 32 INCHES. WOOD POSTS WILL BE 2-BY-2-IN. NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS, THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINIMUM 16 INCHES INTO THE GROUND. WHERE POSSIBLE. IF NOT POSSIBLE. THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING	CASTING SHALL BE WI SYSTEM IS ACCEPTAE STORAGE BEFORE OV	RAPPED WITH LOOSE GEO BLE. SACK SHALL HAVE OV VERFLOWS ARE ENGAGED	OSYNTHETIC MATERIAL, (/ERFLOWS AND ALLOW 2	ONLY A BAG TYPE 2' OF SEDIMENT			
	OF THE FENCE DUE TO SEDIMENT/WATER LOADING. 2. SILT FENCE FABRIC – SEE CHART BELOW.	MAINTENANCE: AFTE WITH BROOM.	ER SILT HAS DRIED, REMOV	VE IT FROM THE SURFAC	CE OF THE BAG	SE!	DIMENT BAG (DANDY SACK)	
	2x2 HARDWOOD SUPPORT FRAME SUPPORT FRAME SUPPORT FRAME	SEDIMENT BAGS SHAL	L BE INSPECTED IMMEDIA	TELY AFTER EACH RAIN	IFALL AND AT			
	FILTER FABRIC							
	$14" \qquad \qquad$	ACCOMPLISHED PROM	MPTLY.	LIVILINI OF SEDIMENT B				
	Minimum Puncture Strength 50 lbs (220 N) ASTM D 4833	SEDIMENT DEPOSITS		TER EACH RAINFALL. SE	DIMENT DEPOSITS	SECTIC	DN A	
	Minimum Tear Strength 40 lbs (180 N) ASTM D 4533	MUST BE REMOVED W ONE-HALF THE HEIGH	T OF THE BARRIER.	SITION REACHES APPRO	JAIMATELY	SCALE: N	IONE	

SILT FENCE DETAIL

COMPACTED

Plans Prepared By

EARTH BACKFILL-

∖`4"√



SILT FENCE SPLICE DETAIL SCALE: NONE

> ssociates, Inc. P.O. BOX 325, 1810 E. MANSFIELD ST.

> > 2/8/24

keever

BUCYRUS, OHIO 44820

Phone: (419) 562-7757 Fax: (419) 562-4717

E-86763 Ohio Reg, No,

FABRIC PROPERTIES	VALUES	TEST METHOD
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	≤ 0.84 mm	ASTM D 4751
Minimum Permittivity	1X10-2 sec1	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355

PREPARED AND SEEDED. CONCRETE WASHOUT • THE CONCRETE WASHOUT SIGN SHALL BE WITHIN 30' OF THE CONCRETE WASHOUT. WASHOUT FACILITIES SHALL BE CLEANED OR REPLACED AND READY FOR USE ONCE THE WASHOUT IN 75% FULL. WHEN THE CONCRETE WASHOUT IN NO LONGER NEEDED, THE HARDENED CONCRETE SHOULD BE REMOVED FROM THE SITE AND DISPOSED OF. MATERIALS USED TO CONSTRUCT THE CONCRETE WASHOUT SHALL ALSO BE REMOVED FROM THE SITE AND DISPOSED OF.





DYLAN J.

WYATT E-86763

4IN

SWP3 DETAILS



ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SEDIMENT BAG BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE,

TAPLES, 2 PER BALE PLASTIC LINING BECTION B-B OT TO SCALE PLASTIC LINING PLASTIC LINING PLASTIC LINING	B B B B B B B B B B B B B B B B B B B
ENG. FILE NO.	Scale : Horiz. = AS NOTED Vert. = AS NOTED Original Sheet Size = 24"x36" Date : 2-6-2024







Partial Site Plan 1" = 10'





for Marion County Engineer

Located at

2160 Richland Road Marion, OH 43302

Marion County, OH



<u>GENERAL ACCESSIBILITY NOTES:</u> 1. ALL INDICATED DIMENSIONS ARE <u>CLEAR/FINISH</u> VALUES. 2. REFERENCED STANDARD IS ANSI A117.1–2009.

- INDICATED NOTES AND DIAGRAMS ILLUSTRATE COMMON CONDITIONS ADDRESSED WITHIN ANSI A117.1. GENERAL CONTRACTOR
- SHOULD REFERENCE COMPLETE ANSI A117.1–2009 FOR CONDITIONS NOT DESCRIBED WITHIN THESE NOTES. CHANGES IN LEVEL – VERTICAL (303.2): CHANGES IN LEVEL OF 1/4" HIGH MAXIMUM SHALL BE PERMITTED TO BE VERTICAL. REFER TO FIG 303.2.
- . CHANGES IN LEVEL BEVELED (303.3): CHANGES IN ELEVATION BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2. REFER TO FIG 303.3.
- . CHANGES IN LEVEL RAMPED (303.4): CHANGES IN LEVEL GREATER THAN 1/2" SHALL BE RAMPED PER 405 OR 406. . TURNING SPACE – FLOOR OR GROUND SURFACES (304.2): FLOOR OR GROUND SURFACES OF A TURNING SPACE SHALL
- COMPLY WITH 302. CHANGES IN LEVEL ARE NOT PERMITTED. 7.1. EXCEPTION: SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED.
- TURNING SPACE SIZE (304.3): TURNING SPACE SHALL COMPLY WITH COMPLY WITH ONE OF THE FOLLOWING OPTIONS:
 8.1. CIRCULAR SPACE (304.3.1): THE TURNING SPACE SHALL BE A SPACE OF 60" IN DIAMETER MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE TOE AND KNEE SPACE COMPLYING WITH 306.
 8.2. T-SHAPED SPACE (304.3.2): THE TURNING SPACE SHALL BE A T-SHAPED SPACE WITHIN A 60" SQUARE MINIMUM WITH
- ARMS AND BASE 36" WIDE MINIMUM. EACH ARM OF THE T SHALL BE CLEAR OF OBSTRUCTIONS 12" MINIMUM IN EACH DIRECTION AND THE BASE SHALL BE CLEAR OF OBSTRUCTIONS 24" MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCES COMPLYING WITH 306 AT THE END OF EITHER THE BASE OR ONE ARM. CLEAR FLOOR OR GROUND SPACE (305.2): FLOOR OR GROUND SURFACES OF A CLEAR FLOOR OR GROUND SPACE SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT PERMITTED
- 9.1. EXCEPTION: SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED. 10. CLEAR FLOOR OR GROUND SPACE – SIZE (305.3): THE CLEAR FLOOR OR GROUND SPACE SHALL BE 30" MINIMUM BY 48"
- MINIMUM. REFER TO FIG 305.5. 11. CLEAR FLOOR OR GROUND SPACE – KNEE CLEARANCE (305.4): UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR OR GROUND
- SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 306. 12. CLEAR FLOOR OR GROUND SPACE – APPROACH (305.6): ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR OR GROUND
- SPACE SHALL ADJOIN AN ACCESSIBLE ROUTE OR ADJOIN ANOTHER CLEAR FLOOR OR GROUND SPACE. 13. CLEAR FLOOR OR GROUND SPACE – MANEUVERING CLEARANCE (305.7): WHERE A CLEAR FLOOR OR GROUND SPACE IS LOCATED IN AN ALCOVE OR OTHERWISE CONFINED ON ALL OR PART OF THREE SIDES, ADDITIONAL MANEUVERING CLEARANCES SHALL BE PROVIDED AS FOLLOWS:
- PARALLEL APPROACH (305.7.1): ALCOVES SHALL BE 60" WIDE MINIMUM WHERE THE DEPTH EXCEEDS 15". REFER TO FIG 305.7.2
 FORWARD APPROACH (305.7.1): ALCOVES SHALL BE 36" WIDE MINIMUM WHERE THE DEPTH OF THE ALCOVE EXCEEDS 24". REFER TO FIG 305.7.2
- . TOE CLEARANCE (306.2): REFER TO FIG 306.2. GENERAL (306.2.1): SPACE UNDER AN ELEMENT BETWEEN THE FINISH FLOOR OR GROUND AND 9" ABOVE THE FINISH FLOOR OR GROUND SHALL BE CONSIDERED TOE CLEARANCE AND SHALL COMPLY WITH 306.2.
- 14.1. MAXIMUM DEPTH (306.2.2): TOE CLEARANCE SHALL EXTEND 25" MAXIMUM UNDER AN ELEMENT.
- MINIMUM DEPTH (306.2.3): WHERE TOE CLEARANCE IS REQUIRED AT AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE TOE CLEARANCE SHALL EXTEND 17" MINIMUM UNDER THE ELEMENT.
 ADDITIONAL CLEARANCE (306.2.4): SPACE EXTENDING GREATER THAN 6" BEYOND THE AVAILABLE KNEE CLEARANCE AT 9" ABOVE THE FINISH FLOOR OR GROUND SHALL NOT BE CONSIDERED TOE CLEARANCE.
- 14.4. WIDTH (306.2.5): TOE CLEARANCE SHALL BE 30" WIDE MINIMUM.
- KNEE CLEARANCE (306.3): REFER TO FIG 306.3
 GENERAL (306.3.1): SPACE UNDER AN ELEMENT BETWEEN 9" AND 27" ABOVE THE FINISH FLOOR OR GROUND SHALL BE CONSIDERED KNEE CLEARANCE AND COMPLY WITH 306.3.
 15.1. MAXIMUM DEPTH (306.3.2): KNEE CLEARANCE SHALL EXTEND 25" MAXIMUM UNDER AN ELEMENT AT 9" ABOVE THE
- FINISH FLOOR OR GROUND.
 15.2. MINIMUM REQUIRED DEPTH (306.3.3): WHERE KNEE CLEARANCE IS REQUIRED UNDER AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE KNEE CLEARANCE SHALL BE 11" DEEP MINIMUM AT 9" ABOVE THE FINISH FLOOR OR GROUND, AND 8" DEEP AT 27" ABOVE THE FINISH FLOOR OR GROUND.
- 15.3. CLEARANCE REDUCTION (306.3.4): BETWEEN 9" AND 27" ABOVE THE FINISH FLOOR OR GROUND, THE KNEE CLEARANCE SHALL BE PERMITTED TO REDUCE AT A RATE OF 1" IN DEPTH FOR EACH 6" IN HEIGHT.
 15.4. WIDTH (306.3.5): KNEE CLEARANCE SHALL BE 30" WIDE MINIMUM.
- 16. FORWARD REACH UNOBSTRUCTED (308.2.1): WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48" MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15" MINIMUM ABOVE THE FINISH FLOOR OR GROUND. REFER TO FIG 308.2.1.
- 17. FORWARD REACH OBSTRUCTED (308.2.2): WHERE A HIGH FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEAR SPACE SHALL EXTEND BENEATH THE ELEMENT FOR A DISTANCE OF NOT LESS THAN THE REQUIRED REACH DEPTH OVER THE OBSTRUCTION. THE HIGH FORWARD REACH SHALL BE 48" MAXIMUM WHERE THE REACH DEPTH IS 20" MAXIMUM. WHERE THE DEPTH EXCEEDS 20", THE HIGH FORWARD REACH SHALL BE 44" MAXIMUM AND THE REACH DEPTH SHALL BE 25" MAXIMUM. REFER TO FIG 308.2.2
- 18. SIDE REACH UNOBSTRUCTED (308.3): WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE EDGE OF THE CLEAR FLOOR SPACE IS 10" MAXIMUM FROM THE ELEMENT, THE HIGH SIDE REACH SHALL BE 48" MAXIMUM AND THE LOW SIDE REACH SHALL BE 15" MINIMUM ABOVE THE FINISH FLOOR OR GROUND. REFER TO FIG 308.3.1
- 18.1. EXCEPTION: EXISTING ELEMENTS THAT ARE NOT MORE ALTERED ARE PERMITTED AT 54" MAXIMUM ABOVE THE FLOOR.
 19. SIDE REACH OBSTRUCTED (308.3.2): WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34" MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24" MAXIMUM. THE HIGH SIDE REACH SHALL BE 48" MAXIMUM FOR A REACH DEPTH OF 10" MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 10", THE HIGH SIDE REACH SHALL BE 46" FOR A REACH DEPTH OF 24" MAXIMUM. REFER TO FIG 308.3.1.

ACCESSIBLE ROUTE NOTES:

- WALKING SURFACES SLOPE (403.3): THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
 WALKING SURFACES – CLEAR WIDTH (403.5): THE MINIMUM CLEAR WIDTH OF WALKING SURFACES SHALL BE 36"
- 2.1. EXCEPTION: THE CLEAR WIDTH (403.3). THE MINIMUM CLEAR WIDTH OF WALKING SURFACES SHALL BE 50
 2.1. EXCEPTION: THE CLEAR WIDTH SHALL BE PERMITTED TO BE REDUCED TO 32" MINIMUM FOR A LENGTH OF 24" MAXIMUM PROVIDED THAT REDUCED WIDTH SEGMENTS ARE SEPARATED BY SEGMENTS THAT ARE 48" LONG MINIMUM AND 36" WIDE MINIMUM. REFER TO FIG 403.5.
- CLEAR WIDTH AT 180° TURN (403.5.1): WHERE AN ACCESSIBLE ROUTE MAKES A 180 DEGREE TURN AROUND A ELEMENT WHICH IS LESS THAN 48" WIDE, CLEAR WIDTH SHALL BE 42" MINIMUM APPROACHING THE TURN, 48" MINIMUM AT THE TURN AND 42" MINIMUM LEAVING THE TURN. REFER TO FIG 403.5.1 (A)
 3.1. EXCEPTION: SECTION 402.5.1 SHALL NOT APPLY WHERE THE CLEAR WIDTH DURING THE TURN IS 60" MINIMUM. REFER
- TO FIG 403.5.1 (B). 4. PASSING SPACES (403.5.2): AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN 60" SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200' MAXIMUM. PASSING SPACES SHALL BE EITHER: A SPACE 60" MINIMUM BY 60" MINIMUM; OR AN INTERSECTION OF TWO WALKING SURFACES PROVIDING A T-SHAPED SPACE COMPLYING WITH 304.3.2 WHERE THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND 48" MINIMUM BEYOND THE INTERSECTION.

ACCESSIBLE DOOR NOTES:

- NOTES AND DIAGRAMS APPLY TO ALL DOORS, DOORWAYS AND GATES THAT ARE PART OF AN ACCESSIBLE ROUTE.
 ALL INDICATED DIMENSIONS ARE <u>CLEAR/FINISH</u> VALUES.
- DOUBLE-LEAF DOORS AND GATES (404.2.1): AT LEAST ONE ACTIVE LEAF SHALL COMPLY WITH 404.2.2 & 404.2.3.
 CLEAR WIDTH (404.2.2): DOOR OPENINGS SHALL PROVIDE A CLEAR WIDTH OF 32" MINIMUM. CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. OPENINGS MORE THAN 24" IN DEPTH AT DOORS AND DOORWAYS WITHOUT DOORS SHALL PROVIDE PROVIDE A CLEAR OPENING OF 36" MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE REQUIRED CLEAR OPENING LOWER THAN 34" ABOVE THE FINISH FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34" AND 80" ABOVE THE FINISH FLOOR OR GROUND SHALL NOT EXCEED 4".
- 4.1. EXCEPTION 1: DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78" MINIMUM ABOVE THE FINISH FLOOR OR GROUND.
 4.2. EXCEPTION 2: IN ALTERATIONS, A PROJECTION OF 5/8" MAXIMUM INTO THE REQUIRED CLEAR OPENING WIDTH SHALL BE
- PERMITTED FOR THE LATCH SIDE STOP.
- MANEUVERING CLEARANCES AT SWINGING DOORS AND GATES (404.2.3): REFER TO FIG 404.2.3.2
 MANEUVERING CLEARANCES AT DOORWAYS WITHOUT DOORS (404.2.3.4): REFER TO 404.2.3.4
- DOORS IN SERIES AND GATES IN SERIES (404.2.5): REFER TO FIG 404.2.5
 DOOR AND GATE HARDWARE (404.2.6): HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST TO OPERATE. OPERABLE PARTS OF A SUCH HARDWARE SHALL BE 34" MINIMUM AND 48" MAXIMUM ABOVE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
- 8.1. EXCEPTION: LOCKS USED ONLY FOR SECURITY PURPOSES AND NOT USED FOR NORMAL OPERATIONS SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 404.2.6.
 9. DOOR AND GATE CLOSERS (404.2.7.1): DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5
- SECONDS MINIMUM. 10. SPRING HINGES (404.2.8.2): DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.
- 11. DOOR AND GATE OPENING FORCE (404.2.8): FIRE DOORS SHALL HAVE A MINIMUM CLOSING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE OTHER THAN FIRE DOORS SHALL BE AS FOLLOWS:
- 12. INTERIOR HINGED DOORS AND GATES: 5 POUNDS MAXIMUM 13. SLIDING OR FOLDING DOORS: 5 POUNDS MAXIMUM
- 13.1. THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR IN A CLOSED POSITION.
 14. AUTOMATIC DOORS (404.3): AUTOMATIC DOORS AND AUTOMATIC GATES SHALL COMPLY WITH ANSI/BHMA A156.10 LISTED IN DOORS (404.3): AUTOMATIC DOORS AND AUTOMATIC GATES SHALL COMPLY WITH ANSI/BHMA A156.10 LISTED IN
- SECTION 105.2.4. LOW-ENERGY AND POWER-ASSISTED DOORS SHALL COMPLY WITH ANSI/BHMA A156.19 LISTED IN SECTION 105.2.3. 14.1. EXCEPTION: DOORS, DOORWAYS AND GATES DESIGNED TO BE OPERATED ONLY BY SECURITY PERSONNEL SHALL NOT BE REQUIRED TO COMPLY WITH SECTIONS 404.3.2, 404.3.4 & 404.3.5.
- THRESHOLDS (404.2.4) THRESHOLDS, IF PROVIDED AT DOORWAYS, SHALL BE 1/2" HIGH MAXIMUM. RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH 302 AND 303.

ACCESSIBLE PLUMBING FIXTURES AND ACCESSORIES: DRINKING FOUNTAINS:

- CLEAR FLOOR SPACE (602.2): UNITS SHALL HAVE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH AND CENTERED ON UNIT. KNEE AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED.
 OPERABLE PARTS (602.3): OPERABLE PARTS SHALL COMPLY WITH 309.
- 3. SPOUT HEIGHT (602.4): SPOUT OUTLETS OF WHEELCHAIR ACCESSIBLE DRINKING FOUNTAINS SHALL BE 36" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. SPOUT OUTLETS OF DRINKING FOUNTAINS FOR STANDING PERSONS SHALL BE 38" MINIMUM AND 43" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
- 4. SPOUT LOCATION (602.5): THE SPOUT SHALL BE LOCATED 15" MINIMUM FROM THE VERTICAL SUPPORT AND 5" MAXIMUM FROM THE FRONT EDGE OF THE UNIT, INCLUDING BUMPERS. WHERE ONLY A PARALLEL APPROACH IS PROVIDED, THE SPOUT SHALL BE LOCATED 3 1/2" FROM THE FRONT EDGE OF THE DRINKING FOUNTAIN, INCLUDING BUMPERS. REFER TO FIG 602.5.
- 5. WATER FLOW (602.6): THE SPOUT SHALL PROVIDE A WATER FLOW OF 4" HIGH MINIMUM IN HEIGHT. THE ANGLE OF THE WATER STREAM FROM SPOUTS WITHIN 3" OF THE FRONT OF THE FOUNTAIN SHALL BE 30 DEGREES MAXIMUM, AND FROM SPOUTS BETWEEN 3" AND 5" FROM THE FRONT OF THE DRINKING FOUNTAIN SHALL BE 15 DEGREES MAXIMUM, MEASURED HORIZONTALLY RELATIVE TO THE FRONT OF THE DRINKING FOUNTAIN.
- WATER CLOSETS AND TOILET COMPARTMENTS:
- 1. LOCATION (604.2): THE WATER CLOSET SHALL BE POSITIONED WITH A WALL OR PARTITION TO THE REAR AND ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 16" MINIMUM TO 18" MAXIMUM FROM THE SIDE WALL OR PARTITION, EXCEPT THAT THE WATER CLOSET SHALL BE 17" MINIMUM AND 19" MAXIMUM FROM THE SIDE WALL OF PARTITION IN THE AMBULATORY ACCESSIBLE TOILET PARTITION SPECIFIED IN 604.10.
- CLEARANCE WIDTH (604.3.1): CLEARANCE AROUND A WATER CLOSET SHALL BE 60" MINIMUM MEASURED PERPENDICULAR FROM THE SIDE WALL. REFER TO FIG 604.3.

- 3. CLEARANCE DEPTH (604.3.2): CLEARANCE AROUND A WATER CLOSET SHALL BE 56" MINIMUM IN DEPTH, MEASURED PERPENDICULAR FROM THE REAR WALL. REFER TO FIG 604.3.
- 4. CLEARANCE OVERLAP (604.3.3): THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, DISPENSERS, SANITARY NAPKIN DISPOSAL UNITS, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AND CLEARANCES REQUIRED AT OTHER FIXTURES, AND THE TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.
- SEATS (604.4): THE HEIGHT OF A WATER CLOSET ABOVE THE FINISH FLOOR SHALL BE 17" MINIMUM AND 19" MAXIMUM MEASURED TO THE TOP OF THE SEAT. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION.
- GRAB BARS (604.5): GRAB BARS FOR WATER CLOSETS SHALL COMPLY WITH 609. GRAB BARS – SIDEWALL (604.5.1): THE SIDE WALL GRAB BAR SHALL BE 42" LONG MINIMUM, LOCATED 12" MAXIMUM FROM
- THE REAR WALL AND EXTENDING 54" MINIMUM FROM THE REAR WALL. IN ADDITION, A VERTICAL GRAB BAR 18" MINIMUM IN LENGTH SHALL BE MOUNTED WITH THE BOTTOM OF THE BAR AT 39" MINIMUM AND 41" MAXIMUM ABOVE THE FLOOR, AND THE CENTERLINE OF THE BAR LOCATED 39" MINIMUM AND 41" MAXIMUM FROM THE REAR WALL. REFER TO FIG 604.5.1. GRAB BARS REAR WALL (604.5.2) THE REAR WALL GRAB BAR SHALL BE 36" LONG MINIMUM AND EXTEND FROM THE
- CENTERLINE OF THE WATER CLOSET 12" MINIMUM ON ONE SIDE AND 24" MINIMUM ON THE OTHER SIDE. REFER TO FIG 604.5.2 9. FLUSH CONTROLS (604.6): FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS
- SHALL COMPLY WITH 309. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET EXCEPT IN AMBULATORY ACCESSIBLE COMPARTMENTS COMPLYING WITH 604.10. 10. DISPENSERS (604.7): TOILET PAPER DISPENSERS SHALL COMPLY WITH 309.4 WHERE DISPENSER IS LOCATED ABOVE GRAB BAR,
- THE OUTLET OF THE DISPENSER SHALL BE LOCATED WITHIN AN AREA 24" MINIMUM AND 36" MAXIMUM FROM THE REAR WALL. WHERE DISPENSER IS LOCATED BELOW THE GRAB BAR, THE OUTLET OF THE DISPENSER SHALL BE LOCATED WITHIN AN AREA 24" MINIMUM AND 42" MAXIMUM FROM THE REAR WALL. THE OUTLET OF THE DISPENSER SHALL BE LOCATED 18" MINIMUM AND 48" MAXIMUM ABOVE THE FLOOR. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROL DELIVERY, OR DO NOT ALLOW CONTINUOUS PAPER FLOW.. REFER TO FIG 604.7.
- 11. WHEELCHAIR ACCESSIBLE COMPARTMENT MINIMUM AREA (604.9.2.1): WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL BE 60" WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 56" DEEP MINIMUM FOR WALL HUNG WATER CLOSETS AND 59" DEEP MINIMUM FOR FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. WHEELCHAIR ACCESSIBLE COMPARTMENTS FOR CHILDREN'S USE SHALL BE 60" WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 59" DEEP MINIMUM FOR WALL HUNG AND FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. REFER TO FIG 604.9.2
- WHEELCHAIR ACCESSIBLE COMPARTMENT DOORS (604.9.3): TOILET COMPARTMENT DOORS, INCLUDING HARDWARE, SHALL COMPLY WITH 404 EXCEPT THAT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42" MINIMUM. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL COMPLYING WITH 404.2.6 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA. REFER TO FIG 604.9.3.1.
 WHEELCHAIR ACCESSIBLE COMPARTMENT APPROACH (604.9.4): COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR
- RIGHT-HAND APPROACH TO THE WATER CLOSET.
 14. TOE CLEARANCE AT CLEARANCE AT COMPARTMENTS (604.9.5.1): THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION
- SHALL PROVIDE A CLEARANCE OF 9" MINIMUM ABOVE THE FINISH FLOOR AND 6" DEEP MINIMUM BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS.
 14.1. EXCEPTION 1: TOE CLEARANCE AT THE FRONT PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 62" DEEP WITH A WALL-HUNG WATER CLOSET OR 65" WITH A FLOOR-MOUNTED WATER CLOSET.
- 14.2. EXCEPTION 2: TOE CLEARANCE AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66" WIDE.
 15. TOE CLEARANCE AT COMPARTMENTS FOR CHILDREN'S USE (604.9.5.2): THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE A CLEARANCE OF 12" MINIMUM ABOVE THE FINISH FLOOR AND 6" DEEP MINIMUM BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS.
 15.1. EXCEPTION 1: TOE CLEARANCE AT THE FRONT PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 65"
- DEEP. 15.2. EXCEPTION 2: TOE CLEARANCE AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66" WIDE. 16. WHEELCHAIR ACCESSIBLE COMPARTMENT GRAB BARS (604.9.6): GRAB BARS SHALL COMPLY WITH 609. A SIDE-WALL GRAB BAR COMPLYING WITH 604.5.1 SHALL BE PROVIDED AND BE LOCATED ON THE WALL CLOSEST TO THE WATER CLOSET. IN ADDITION, A REAR-WALL GRAB BAR COMPLYING WITH 604.5.2 SHALL BE PROVIDED.
- AMBULATORY ACCESSIBLE COMPARTMENTS SIZE (604..10.2): AMBULATORY ACCESSIBLE COMPARTMENTS SHALL HAVE A DEPTH OF 60" AND A WIDTH OF 36".
 AMBULATORY ACCESSIBLE COMPARTMENTS – DOORS (604.10.3): TOILET COMPARTMENT DOORS, INCLUDING HARDWARE, SHALL
- COMPLY WITH 404, EXCEPT THAT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42" MINIMUM. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL COMPLYING WITH 404.2.6 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA. REFER TO FIG 604.10 AMBULATORY ACCESSIBLE COMPARTMENTS - GRAB BARS (604.10.4): GRAB BARS SHALL COMPLY WITH 609. A SIDE-WALL
- GRAB BAR COMPLYING WITH 604.5.1 SHALL BE PROVIDED ON BOTH SIDES OF THE COMPARTMENT.
 COATS, HOOKS AND SHELVES (604.8): COAT HOOKS PROVIDED WITHIN TOILET COMPARTMENTS SHALL BE 48" MAXIMUM ABOVE THE FLOOR. SHELVES SHALL BE 40" MINIMUM AND 48" MAXIMUM ABOVE THE FLOOR.

URINALS 1. HEIGHT AND DEPTH (605.2): URINALS SHALL BE THE STALL—TYPE OR WALL—HUNG TYPE WITH THE RIM 17" MAXIMUM ABOVE

- FINISH FLOOR OR GROUND. URINALS SHALL BE 13 1/2" DEEP MINIMUM MEASURED FROM THE OUTER FACE OF THE URINAL RIM TO THE BACK OF THE FIXTURE. REFER TO FIG 605.2.
- CLEAR FLOOR SPACE (605.3): A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED.
 FLUSH CONTROLS (605.4): FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS
- SHALL COMPLY WITH 309 LAVATORIES 1. CLEAR FLOOR SPACE (606.2): A CLEAR FLOOR SPACE COMPLYING WITH 305.3, POSITIONED FOR A FORWARD APPROACH. KNEE
- AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED. THE DIP OF THE OVERFLOW SHALL NOT BE CONSIDERED IN DETERMINING THE KNEE AND TOE CLEARANCES. 1.1. EXCEPTION 1: A PARALLEL APPROACH COMPLYING WITH 305 AND CENTERED ON THE SINK SHALL BE PERMITTED TO A KITCHEN SINK IN A SPACE WHERE A COOK TOP OR CONVENTIONAL RANGE IS NOT PROVIDED.
- HEIGHT (606.3): LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. FAUCETS (606.4): CONTROLS FOR FAUCETS SHALL COMPLY WITH 309. HAND-OPERATED METERING FAUCETS SHALL REMAIN OPEN FOR 10 SECONDS MINIMUM.
- 4. EXPOSED PIPES AND SURFACES (606.6): WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES OR SINKS.
- MIRRORS . HEIGHT (603.3): MIRRORS LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. MIRRORS NOT LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.

1.1. EXCEPTION: OTHER THAN WITHIN ACCESSIBLE DWELLING OR SLEEPING UNITS, MIRRORS ARE NOT REQUIRED OVER LAVATORIES OR COUNTERS IF A MIRROR IS LOCATED WITHIN THE SAME TOILET OR BATHING ROOM AND MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE AT 35" MAXIMUM ABOVE THE FLOOR.

- GRAB BARS:

 1.
 CROSS SECTION (609.2): GRAB BARS SHALL HAVE A CROSS SECTION COMPLYING WITH 609.2.1 OR 609.2.2.

 2.
 CIRCULAR CROSS SECTION (609.2.1): GRAB BARS WITH CIRCULAR CROSS SECTIONS SHALL HAVE AN OUTSIDE DIAMETER OF 1

 1./4" MINIMUM AND 2" MAXIMUM.
- 3. NON-CIRCULAR CROSS SECTION (609.2.2): GRAB BARS WITH A NON-CIRCULAR CROSS SECTIONS SHALL HAVE A
- CROSS-SECTION DIMENSION OF 2" MAXIMUM AND A PERIMETER DIMENSION OF 4" MINIMUM AND 4.8" MAXIMUM. 4. SPACING (609.3): THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1 1/2". THE SPACE BETWEEN THE GRAB
- BAR AND PROJECTING OBJECTS BELOW AND AT THE ENDS SHALL BE 1 1/2" MINIMUM. THE SPACE BETWEEN THE GRAB BAR AND PROJECTING OBJECTS ABOVE SHALL BE 12" MINIMUM.
 4.1. EXCEPTION 1: THE SPACE BETWEEN THE GRAB BARS AND SHOWER CONTROLS, SHOWER FITTINGS, AND OTHER GRAB BARS ABOVE THE GRAB BAR SHALL BE 1 1/2" MINIMUM
- 4.2. EXCEPTION 2: RECESSED DISPENSERS PROJECTING FROM THE WALL 1/4" MAXIMUM MEASURED FROM THE FACE OF THE DISPENSER AND COMPLYING WITH SECTION 604.7 SHALL BE PERMITTED WITHIN THE 12" SPACE ABOVE AND THE 1 1/2" SPACES BELOW AND AT THE ENDS OF THE GRAB BARS.
 5. POSITION OF GRAB BARS (609.4.1): GRAB BARS SHALL BE INSTALLED IN A HORIZONTAL POSITION, 33" MINIMUM AND 36"
- MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE TOP OF THE GRIPPING SURFACE OR SHALL BE INSTALLED AS REQUIRED BY ITEMS 1 THROUGH 3 BELOW. 1. THE LOWER GRAB BAR ON THE BACK WALL OF A BATH TUB SHALL COMPLY WITH SECTION 607.4.1.1 OR 607.4.2.1. 2. VERTICAL GRAB BARS SHALL COMPLY WITH SECTIONS 604.5.1, 604.4.1.2.2, 607.4.2.2 AND 608.3.1.2.
- GRAB BARS PRIMARILY FOR CHILDREN'S USE SHALL COMPLY WITH 609.4.2
 SURFACE HAZARDS (609.5): GRAB BARS AND ANY WALL OR OTHER SURFACES ADJACENT TO GRAB BARS SHALL BE FREE OF SHARP AND ABRASIVE ELEMENTS AND SHALL HAVE ROUND EDGES.
- FITTINGS (609.6): GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
 INSTALLATION (609.7): GRAB BARS SHALL BE INSTALLED IN ANY MANNER THAT PROVIDES A GRIPPING SURFACE AT THE
- SPECIFIED LOCATIONS AND THAT DOES NOT OBSTRUCT THE REQUIRED CLEAR FLOOR SPACE.B HORIZONTAL AND VERTICAL GRAB BARS SHALL BE PERMITTED TO BE SEPARATE BARS, A SINGLE BAR PIECE, OR A COMBINATION THEREOF.
- 9. STRUCTURAL STRENGTH (609.8): ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHEN A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS IS APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE.

ACCESSIBLE SIGNAGE: 1. REQUIRED SIGNAGE LOCATIONS

- 1.1. <u>DIRECTIONAL AND INFORMATIONAL SIGNS</u>: SIGNS THAT PROVIDE DIRECTION TO OR INFORMATION ABOUT INTERIOR SPACES AND FACILITIES OF THE SITE SHALL COMPLY WITH 703.2.
- 1.2. <u>MEANS OF EGRESS EXIT DOORS</u>: DOOR AT EXIT PASSAGEWAYS, EXIT DISCHARGE AND EXIT STAIRWAYS SHALL BE IDENTIFIED BY TACTILE SIGNS COMPLYING WITH 703.1, 703.2 AND 703.3.
- MEANS OF EGRESS AREAS OF REFUGE: SIGNS REQUIRED BY BUILDING CODE TO PROVIDE INSTRUCTIONS IN AREAS OF REFUGE SHALL COMPLY WITH 703.1, 703.2 & 703.3.
 MEANS OF EGRESS – DIRECTIONAL SIGNS: SIGNS REQUIRED BY BUILDING CODE TO PROVIDE DIRECTIONS TO
- ACCESSIBLE MEANS OF EGRESS SHALL COMPLY WITH 703.2. 1.5. <u>PARKING</u>: ACCESSIBLE PARKING SPACES COM;LYING WITH 502.
- 1.6. <u>ENTRANCES</u>: WHERE NOT NOT ALL ENTRANCES COMPLY WITH 404, ENTRANCES COMPLYING WITH 404 SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. DIRECTIONAL SIGNS COMPLYING WITH 703.2 THAT INDICATE THE LOCATION OF THE NEAREST ENTRANCE COMPLYING WITH 404 SHALL BE PROVIDED AT ENTRANCES THAT DO NOT COMPLY WITH 404
- 1.7. <u>ELEVATORS:</u> WHERE EXISTING ELEVATORS DO NOT COMPLY WITH 407, ELEVATORS COMPLYING WITH 407 SHALL BE CLEARLY IDENTIFIED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
 1.8. <u>TOILET ROOMS AND BATHING ROOMS</u>: WHERE EXISTING TOILET OR BATHING ROOMS DO NOT COMPLY WITH 603.
- DIRECTIONAL SIGNS INDICATING INCOMES. WHICKE LAISTING FOLLET ON DATHING ROOMS DO NOT COMPLET WITH OUS, DIRECTIONAL SIGNS INDICATING THE LOCATION OF THE NEAREST TOILET OR BATHING ROOM COMPLYING WITH 603, WITHIN THE FACILITY SHALL BE PROVIDED. SIGNS SHALL COMPLY WITH 703.2 AND SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. WHERE EXISTING TOILET OR BATHING ROOMS DO NOT COMPLY WITH 603, THE TOILET OR BATHING ROOMS COMPLYING WITH 603 SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. WHERE CLUSTERED SINGLE USER TOILET OR BATHING FACILITIES ARE PERMITTED TO USE EXCEPTIONS TO STANDARDS, TOILET ROOMS OR BATHING FACILITIES COMPLYING WITH 603 SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF
- ACCESSIBILITY UNLESS ALL TOILET ROOMS AND BATHING FACILITIES COMPLY WITH 603. 1.9. TTY'S: PUBLIC TTY'S SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF TTY.
- 1.10.
 ASSISTIVE LISTENING SYSTEMS:
 SIGNS SHALL COMPLY WITH 703.2 AND INCLUDE THE INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS

 <u>GENERAL (703.1)</u>:
 ACCESSIBLE SIGNS SHALL COMPLY WITH 703. TACTILE SIGNS SHALL CONTAIN BOTH RAISED CHARACTERS
- AND BRAILLE. WHERE BOTH VISUAL AND TACTILE CHARACTERS ARE REQUIRED, EITHER ONE SIGN WITH BOTH VISUAL AND TACTILE CHARACTERS, OR TWO SIGNS, ONE WITH VISUAL, AND ONE WITH TACTILE CHARACTERS, SHALL BE PROVIDED. 3. <u>VISUAL CHARACTERS (703.2)</u>: VISUAL CHARACTERS SHALL COMPLY WITH 703.2.1 3.1. <u>CASE (703.2.2)</u>: CHARACTERS SHALL BE UPPERCASE OR LOWERCASE OR A COMBINATION OF BOTH.
- 3.1. <u>CASE (703.2.2)</u>: CHARACTERS SHALL BE UPPERCASE OR LOWERCASE OR A COMBINATION OF BOTH.
 3.2. <u>STYLE (703.2.3)</u>: CHARACTERS SHALL BE CONVENTIONAL IN FORM. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.





DOOR SCHEDULE								
MARK	LOCATION	SIZE	DOOR TYPE	LABEL	HARDWARE SET	REMARKS		
100	Parking Bays	3'-0" X 7'-0" X 1 3/4"	В		1			
100a	Wash Bay	16'-0" X 16'-0"	А					
100b	Wash Bay	16'-0" X 16'-0"	А					
100c	Parking Bays	16'-0" X 16'-0"	А					
100d	Parking Bays	16'-0" X 16'-0"	А					
100e	Parking Bays	16'-0" X 16'-0"	А					
100f	Parking Bays	16'-0" X 16'-0"	А					
100g	Parking Bays	3'-0" X 7'-0" X 1 3/4"	В		1			
100h	Parking Bays	3'-0" X 7'-0" X 1 3/4"	В		1			
101	Mechanical Room	3'-0" X 7'-0" X 1 3/4"	С		2			
102	Unisex Restroom	3'-0" X 7'-0" X 1 3/4"	С		3			

Upward-Acting Sectional Door: Basis of Design Wayne-Dalton Thermospan; 2" Insulated Door, R=17, Sheet Steel 20 Gauge Thickness

Bottom Seal, Edge Seals, Track, $\frac{1}{2}$ HP Motor, Photoelectric or Edge

(A)

Sensing Entrapment Protection

with Polyurethane Core; Rated 20 PSF Wind Load, Insulated Safety Glass,

18 Ga. Flush HM Door, Shop Primed, Field Painted, Polystyrene Core; 16 Ga. Shop Primed, Field Painted Frame

B

Primed, Field Painted, Polystyrene Core; 16 Ga. Shop Primed, Field Painted Frame

18 Ga. Flush HM Door, Shop

C

ROOM FINISH SCHEDULE														
		FLC	FLOOR		BASE		WALLS		CEILING			G		
										MA	TERIAL		HT.	
ROOM NO.	ROOM NAME	Concrete		None			Prefinished Metal Liner Panels	Painted CMU		Exposed Structure	Painted Moisture Resistant GWB			REMARKS
100	Parking Bays	0		\bigcirc			Ο			\bigcirc				
101	Mechanical	0		0				0			0			
102	Unisex Restroom	0		0				0			0			

803.13 Wall and Ceiling Finish Requirements Wall and ceiling finishes required by Section 803.13 to be of Class C for rooms or

enclosed space and Class B for corridors.

804.2 Classification

Interior floor finish and floor covering materials required by Section 804.4.2 to be of Class I or II materials shall be classified in accordance with ASTM E648 or NFPA 253. The classification referred to herein corresponds to the classifications determined by ASTM E648 or NFPA 253 as follows: Class I, 0.45 watts/cm2 or greater; Class II, 0.22 watts/cm2 or greater.

1210.2.1 Floors and wall bases. In other than dwelling units, toilet, bathing and shower room floor finish materials shall have a smooth, hard, nonabsorbent surface. The intersections of such floors with walls shall have a smooth, hard, nonabsorbent vertical base that extends upward onto the walls not less than 4 inches (102 mm).

1210.2.2 Walls and partitions. Walls and partitions within 2 feet (610 mm) of service sinks, urinals and water closets shall have a smooth, hard, nonabsorbent surface, to a height of not less than 4 feet (1219 mm) above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture.

	Hardware Schedule							
Set No.	Doors	Description All Hardware Finishes - 626						
1	100, 100g, 100h	3 Stainless Steel Non-Removable Pin 5 Ball Bearing Hinges 1 Closer 1 ADA-Compliant Lever Lockset, Entrance Function 1 A.D.A Compliant Threshold 1 Set Weatherstripping						
2	101	3 Stainless Steel Non-Removable Pin 5 Ball Bearing Hinges 1 Lever Lockset Storeroom Function 1 Closer 1 24" x 34" SS Kick Plate 1 Wall Stop						
3	102	3 Stainless Steel Non-Removable Pin 5 Ball Bearing Hinges 1 Lever Lockset Privacy Function 1 Wall Stop						
4	100a, 100b, 100c, 100d, 100e, 100f	Overhead Door Locks and Weatherstripping Pushbutton Power Operation Safety Sensor						

Basis of Design Products:HingesHLocksetsSClosersLFlush BoltsIrWall BumpersIrWeatherstrippingFThresholdFKick PlatesI

ts: Hager BB1191 Sargent 10 Line LCN 4010 Series Ives 261 Ives WS401 Pemko 285 Gasketing, 368 Sweep Pemko 252 Series Ives 8400 Series

East Elevation

South Elevation

Restroom Elevations

DESCRIPTION

\diamond	A.D.A FLOOR CLEARANCES
А	WATER CLOSET CLEARANCE AREA PER 604.3, 56" D X 60" W
В	CIRCULAR TURNING RADIUS PER 304.1, 60" DIAMETER
С	CLEAR FLOOR SPACE PER 305.3, 30"W X 48" D

BATHROOM ACCESSORY SCHEDULE								
	MANUFACTURER	ITEM#	EQUAL MANUFACTURERS	MTG. HT. A.F.F.	MEASURED TO			
	BOBRICK	B - 5806	BRADLEY, ASI	34"	TOP OF BAR			
	BOBRICK	B - 5806	BRADLEY, ASI	34"	TOP OF BAR			
	BOBRICK	B - 5806	BRADLEY, ASI	39"	BOTTOM OF BAR			

-						
1	42" S.S. GRAB BAR	BOBRICK	B - 5806	BRADLEY, ASI	34"	TOP OF BAR
2	36" S.S. GRAB BAR	BOBRICK	B - 5806	BRADLEY, ASI	34"	TOP OF BAR
3	18" S.S. GRAB BAR	BOBRICK	B - 5806	BRADLEY, ASI	39"	BOTTOM OF BAR
4	DOUBLE TOILET TISSUE DISPENSERS	BOBRICK	B-274	BRADLEY, ASI	18"	BOTTOM
5	18" x 36" MIRROR	BOBRICK	B-290	BRADLEY, ASI	39"	BOTTOM EDGE
6	PAPER TOWEL DISPENSER	BOBRICK	B-4262	BRADLEY, ASI	42"	BOTTOM EDGE
7	SOAP DISPENSER	BOBRICK	B-2111	BRADLEY, ASI	42"	BOTTOM EDGE
8	ROBE HOOK	BOBRICK	B-211	BRADLEY, ASI	42"	CENTER

—Ceiling —Primed and Painted CMU

DIST. FROM WALL MEASURED TO REMARKS 12" BACK WALL SIDE WALL 6" CENTER OF BAR 40" NOSE OF TOILET 9" CENTER ON LAV ---------

 1	Prefinished 24 Gauge Metal Gutter by PEMB Mfr	
)	Prefinished 24 or 26 Gauge Metal Siding by PEM	IB Mfr.
	———— Louver - See Mechanical	
20'-0"	Prefinished 6" x 6" 24 Gauge Metal D.S. Overhead Door - See Door Schedule PEMB Bracing - See PEMB Mfr's Drawings	
	——— Man Door - See Door Schedule	
	——————————————————————————————————————	tructural Drawing
ZTT-T	PVC D.S. Boot to Underground Drainage - See C Grade	ivil Drawings

3	4

Prefinished 24 Gauge Standing Seam Metal Roof
 Prefinished 24 Gauge Metal Gutter by PEMB Mfr.

— Prefinished 24 or 26 Gauge Metal Siding by PEMB Mfr.

Prefinished 6" x 6" 24 Gauge Metal D.S.
8" PEMB Girt
Vinyl-Faced Batt Insulation Min. R=19

— Column Beyond

Floor Slab - See Structural
 Over 10 Mil Reinforced Vapor Barrier
 Cast-In-Place Concrete Punishment Wall - See Structural Drawings

---- PVC D.S. Boot to Underground Drainage - See Civil Drawings ---- Grade

- Foundation - See Structural Drawings

Prefinished 24 Gauge Standing Seam Metal Roof
 PEMB Purlin (See PEMB Mfr's Drawings)

_ Double Layer Batt Insulation, Face Layer to be Vinyl Face, Min. R=30

PEMB Beam (See PEMB Mfr's Drawings)

Prefinished 24 Gauge Metal Gutter by PEMB Mfr.

Prefinished Metal Liner Panel

— Prefinished 6" x 6" 24 Gauge Metal D.S.

____ Vinyl-Faced Batt Insulation Min. R=19

— Column Beyond

— 8" PEMB Girt

— 3/4" Plywood Dust Cover — 8" 16 Gauge Joists @ 16" On Center

-Treated 2x8

------ Continuous Bond Beam

— Horizontal Reinforcement @ 16" On Center — 8" CMU

[—] Cast-In-Place Concrete Punishment Wall - See Structural Drawings

PVC D.S. Boot to Underground Drainage - See Civil Drawings
 Grade

Foundation - See Structural Drawings

A 3.1

3.4 MOISTURE AND MOLD CONTROL SECTION 014000 - QUALITY REQUIREMENTS A. Before installation of weather barriers, protect mat and organic materials from coming into prolong PART 1 - GENERAL 1. Protect stored and installed material from 2. Remove standing water from decks. 1.1 SECTION REQUIREMENTS 3. Keep deck openings covered or dammed. A. Testing and inspecting services are required to verify compliance with requirements specified or B. After installation of weather barriers but before full indicated. These services do not relieve Contractor of responsibility for compliance with the protect as follows: Contract Document requirements. Do not load or install drywall or porous mater B. Referenced Standards: If compliance with two or more standards is specified and the standards 2. Discard water-damaged material. establish different or conflicting requirements, comply with the most stringent requirement. 3. Do not install material that is wet. Refer uncertainties to Architect for a decision. 4. Discard, replace, or clean stored or installed 5. Perform work in a sequence that allows a C. Minimum Quantity or Quality Levels: The guantity or guality level shown or specified shall be enclosing the material in drywall or other the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of 3.5 OPERATION. TERMINATION. AND REMOVA requirements. Refer uncertainties to Architect for a decision. A. Supervision: Enforce strict discipline in use of t Special Tests and Inspections: Owner will engage a qualified testing agency and special abuse, limit availability of temporary facilities to inspector to conduct special tests and inspections required by authorities having jurisdiction. B. Remove each temporary facility when need for its by authorized use of a permanent facility, or no PART 2 - PRODUCTS (Not Used) C. At Substantial Completion, repair, renovate, and construction period. PART 3 - EXECUTION END OF SECTION 015000 3.1 REPAIR AND PROTECTION A. General: On completion of testing, inspecting, sample taking, and similar services, repair SECTION 017000 - EXECUTION AND CLOSEOUT RE damaged construction and restore substrates and finishes. PART 1 - GENERAL B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services. 1.1 EXECUTION REQUIREMENTS END OF SECTION 014000 A. Cutting and Patching: Structural Elements: When cutting and pa SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS locations and details of cutting and await Shore, brace, and support structural elem 2. Operational Elements: Do not cut and patch PART 1 - GENERAL in a manner that results in reducing their 014000 - 1 increased maintenance or decreased ope QUALITY REQUIREMENTS Visual Elements: Do not cut and patch const 1.1 SECTION REQUIREMENTS evidence of cutting and patching. Do not that would, in Architect's opinion, reduce A. Use Charges: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. B. Manufacturer's Installation Instructions: Obtain and recommendations and instructions for installation B. Water and Electric Power: Available from Owner's existing system without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations. 1.2 CLOSEOUT SUBMITTALS C. Accessible Temporary Egress: Comply with applicable provisions in ICC A117.1. A. Contractor's List of Incomplete Items: Initial submit B. Operation and Maintenance Data: Submit two (2) PART 2 - PRODUCTS C. PDF Electronic File: Assemble manual into a com digital media. 2.1 MATERIALS D. Record Drawings: Submit one set(s) of marked-up A. Plastic Mesh Fencing: minimum 4 feet high with posts. E. Record Product Data: Submit one paper copy of e 2.2 TEMPORARY FACILITIES 1.3 SUBSTANTIAL COMPLETION PROCEDURES A. Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Store combustible materials apart from building. A. Prepare a list of items to be completed and corr and reasons why the Work is not complete. 2.3 EQUIPMENT B. Submittals Prior to Substantial Completion: Before inspection, complete the following: A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures. 1. Obtain and submit releases from authorities unrestricted use of the Work and access permits, operating certificates, and similar PART 3 - EXECUTION Submit closeout submittals specified in ot documents, operation and maintenance i information, warranties, workmanship bor 3.1 TEMPORARY UTILITY INSTALLATION certifications, and similar documents. Submit maintenance material submittals A. General: Install temporary service or connect to existing service. parts, extra materials, and similar items, Submit test/adjust/balance records. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Β. 5. Submit changeover information related to Comply with regulations and health codes for type, number, location, operation, and maintenance. maintenance of fixtures and facilities. С Procedures Prior to Substantial Completion: Be C. Provide temporary lighting with local switching that provides adequate illumination for inspection, complete the following: construction operations, observations, inspections, and traffic conditions 1. Advise Owner of pending insurance changed 3.2 SUPPORT FACILITIES INSTALLATION 2. Make final changeover of permanent locks a Complete startup and testing of systems and A. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste 4. Perform preventive maintenance on equip from construction operations. Comply with requirements of authorities having jurisdiction. 5. Advise Owner of changeover in heat and oth 6. Participate with Owner in conducting insp responders. SECURITY AND PROTECTION FACILITIES INSTALLATION 3.3 7. Remove temporary facilities and controls. 8. Complete final cleaning requirements, include A. Provide protection, operate temporary facilities, and conduct construction as required to comply 9. Touch up and otherwise repair and restor with environmental regulations and that minimize possible air, waterway, and subsoil defects. contamination or pollution or other undesirable effects. D. Inspection: Submit a written request for inspecti B. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line request, Architect will proceed with inspection of trees to protect vegetation from damage from construction operations. Protect tree root Architect will prepare the Certificate of Substan systems from damage, flooding, and erosion. Contractor of items that must be completed or corrected before certificate will be issued. C. Furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates. 1.4 FINAL COMPLETION PROCEDURES D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting. completion, complete the following: E. Provide temporary enclosures for protection of construction, in progress and completed, from Submit a final Application for Payment. 1. exposure, foul weather, other construction operations, and similar activities. Provide temporary 2. weathertight enclosure for building exterior. Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise. complying with insurance requirements.

Install and maintain temporary fire-protection facilities. Comply with NFPA 241.

4. Submit pest-control final inspection report.

iterials from water damage and keep porous ged contact with concrete.	B. Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare final Certificate for Payment after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.	F. G. U
n flowing or standing water.	 Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. 	3.3
l an de anno an de an differeiro a f hasildir a	PART 2 - PRODUCTS	A.
i enclosure and conditioning of building,	2.1 MATERIALS	В.
erials into partially enclosed building.	A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent	C. W
d material that begins to grow mold. any wet materials adequate time to dry before r interior finishes.	possible. B. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous	D. Ci
AL	to health or property or that might damage finished surfaces.	
temporary facilities. To minimize waste and o essential and intended uses.	 Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels. 	E.
s service has ended, when it has been replaced o later than Substantial Completion.		
clean permanent facilities used during	A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.	
	B. Organization: Unless otherwise indicated, organize manual into separate sections for each system and subsystem, and separate sections for each piece of equipment not part of a system.	
	C. Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:	
	 Manufacturer's operation and maintenance documentation. Maintenance and service schedules 	3.4
	 Maintenance and service schedules. Maintenance service contracts. Include name and telephone number of service agent. Emergency instructions. 	A. C
	 Spare parts list and local sources of maintenance materials. Wiring diagrams. 	
atching structural elements, notify Architect of t directions from Architect before proceeding. nents during cutting and patching.	7. Copies of warranties. Include procedures to follow and required notifications for warranty claims	B. Co
capacity to perform as intended or that results in erational life or safety.	2.3 RECORD DRAWINGS	
truction in a manner that results in visual cut and patch exposed construction in a manner the building's aesthetic qualities.	A. Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show actual installation where installation varies from that shown originally. Accurately record information in an acceptable drawing technique	
d maintain on-site manufacturer's written ion of products and equipment.	 Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. 	
ittal at Substantial Completion	PART 3 - EXECUTION	
copies of manual	3.1 EXAMINATION AND PREPARATION	
posite electronically indexed file. Submit on	A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, and other construction affecting the Work.	3.5
p record prints.	B. Before proceeding with each component of the Work, examine substrates, areas, and conditions,	A. 0
each submittal.	with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.	
S rrected (punch list), the value of items on the list	 Verify compatibility with and suitability of substrates. Examine roughing-in for mechanical and electrical systems. Examine walls floors and roofs for suitable conditions 	B. M
	C. Proceed with installation only after unsatisfactory conditions have been corrected.	
e requesting Substantial Completion	D. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication	
to services and utilities. Include occupancy ar releases.	E. Verify space requirements and dimensions of items shown diagrammatically on Drawings.	C. D
other sections, including project record manuals, property surveys, similar final record nds, maintenance service agreements, final	F. Surface and Substrate Preparation: Comply with manufacturer's written recommendations for preparation of substrates to receive subsequent work.	
specified in other sections, including tools, spare and deliver to location designated by Architect.	3.2 INSTALLATION	3.6
o Owner's occupancy, use, operation, and	A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.	A.
efore requesting Substantial Completion	 Make vertical work plumb and make horizontal work level. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated. 	
over requirements.	B. Comply with manufacturer's written instructions and recommendations.	
and deliver keys to Owner. d equipment. inment used prior to Substantial Completion	C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.	END O
phen doed phen to outpetantial completion. There utilities. Dection and walkthrough with local emergency	D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.	
ding touchup painting. are marred exposed finishes to eliminate visual	E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.	
tion for Substantial Completion. On receipt of or advise Contractor of unfulfilled requirements. ntial Completion after inspection or will advise	 Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect. 	

A. Submittals Prior to Final Completion: Before requesting inspection for determining final

Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved. 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage

Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

Ise products, cleaners, and installation materials that are not considered hazardous.

CUTTING AND PATCHING

Provide temporary support of work to be cut.

Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

Vhere existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining construction.

1. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

- 1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
- 2. Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance.
- 3. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

CLEANING

Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.

- 1. Remove liquid spills promptly.
- 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- Remove debris from concealed spaces before enclosing the space

complete the following cleaning operations before requesting inspection for certification of Substantial Completion:

- 1. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- 2. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
- 3. Remove labels that are not permanent.
- 4. Clean transparent materials, including mirrors. Remove excess glazing compounds. 5. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean. 6. Vacuum carpeted surfaces and wax resilient flooring.
- 7. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and
- foreign substances. Clean plumbing fixtures. Clean light fixtures, lamps, globes, and reflectors.
- 8. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

OPERATION AND MAINTENANCE MANUAL PREPARATION

Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

Ianufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are unavailable and where the information is necessary for proper operation and maintenance of equipment or systems.

Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams.

DEMONSTRATION AND TRAINING

Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following:

1. Include instruction for basis of system design and operational requirements, review of documentation, emergency procedures, operations, adjustments, troubleshooting, maintenance, and repairs.

F SECTION 017000

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and color Samples.
- B. Environmental Limitations: Do not proceed with installation of joint sealants when ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.

PART 2 - PRODUCTS

- 2.1 JOINT SEALANTS
- A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under service and application conditions.
- B. Sealant for General Exterior Use Where Another Type Is Not Specified:
 - Single-component, neutral-curing silicone sealant, ASTM C 920, Type S; Grade NS; Class 25; for Use NT.
 - Single-component, nonsag urethane sealant, ASTM C 920, Type S; Grade NS; Class 25; and for Use NT.
 - Single-component, nonsag polysulfide sealant, ASTM C 920, Type S; Grade NS; 3. Class 25; for Use NT.
 - Single-component, nonsag urethane sealant, ASTM C 920, Type S; Grade NS; Class 25; for Use T.
- C. Sealant for Exterior Traffic-Bearing Joints, Where Slope Allows Use of Pourable Sealant:
 - Single-component, pourable urethane sealant, ASTM C 920, Type S; Grade P; Class 25; for Use T.
- D. Sealant for Interior Use at Perimeters of Door and Window Frames:
- 1. Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
- E. Acoustical Sealant:
 - 1. Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission as demonstrated by testing according to ASTM E 90.
- MISCELLANEOUS MATERIALS 2.2
- A. Provide sealant backings of materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.
- Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

PART 3 - EXECUTION

- 3.1 INSTALLATION
- A. Comply with ASTM C 1193.
- B. Install sealant backings to support sealants during application and to produce cross-sectional shapes and depths of installed sealants that allow optimum sealant movement capability.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Acoustical Sealant Installation: At sound-rated assemblies and elsewhere as indicated, seal perimeters, control joints, openings, and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions. Comply with ASTM C 919.

END OF SECTION 079200

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
- A. Submittals: Product Data and Shop Drawings.

PART 2 - PRODUCTS

2

HOLLOW METAL DOORS AND FRAMES 2.1

- A. Frames: ANSI A250.8; conceal fastenings unless otherwise indicated.
 - Steel Sheet for Interior Frames: 0.042-inch- minimum thickness.
 - Interior Frame Construction: Knocked down. 3. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement
 - plates from same material as frames. 4. Frame Anchors: Not less than 0.042 inch thick.
- B. Prepare doors and frames to receive mortised and concealed hardware according to SDI A250.6 and BHMA A156.115.

C. Reinforce doors and frames to receive surface-applied hardware.

D. Prime Finish: Manufacturer's standard, factory-applied coat of lead- and chromate-free primer complying with SDI A250.10 acceptance criteria.

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1
- B. Frame Anchors: ASTM A 879/A 879M, 42 1. For anchors built into exterior walls,
- or ASTM A 1011/A 1011M, hot-dip (Class B.

PART 3 - EXECUTION

3.1 INSTALLATION

- Install hollow metal frames to comply with
- 1. Fire-Rated Frames: Install accordin
- Install doors to provide clearances betwee Β.
- C. Prime-Coat Touchup: Immediately after prime coat and apply touchup of compatil

END OF SECTION 081113

SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS A. Submittals: Samples for factory-finished d

PART 2 - PRODUCTS

2.1 FLUSH WOOD DOORS

- 2.2 DOOR CONSTRUCTION, GENERAL
- A. Quality Standard: WDMA I.S.1-A. B. WDMA I.S.1-A Performance Grade:
- 1. Heavy duty unless otherwise indicate C. Particleboard-Core Doors: Provide stru cores for doors with protection plates.

2.3 FLUSH WOOD DOORS

A. Veneer-Faced Doors for Transparent Fini

1. Interior Solid-Core Doors: Premiu

Faces: Grade A rotary-cut b. Veneer Matching: Book and ba c. Continuous matching for doors

- FABRICATION AND FINISHING 2.4
- A. Factory-fit doors to suit frame-opening
- B. Factory-machine doors for hardware th with DHI-WDHS-3.
- C. Cut and trim openings to comply with refer
- D. Factory-finish doors indicated for transp finish complying with WDMA TR-6, cata

1. Sheen: Satin.

PART 3 - EXECUTION

3.1 INSTALLATION

- indicated.
 - Install fire-rated doors to comply with NFPA 80. Install smoke- and draft-control doors according to NFPA 105. 2

B. Align and fit doors in frames with uniform clearances and bevels.

C. Clearances: As follows unless otherwise indicated:

1/8 inch at heads, jambs, and between pairs of doors. 1/8 inch from bottom of door to top of decorative floor finish or covering. 3. 1/4 inch from bottom of door to top of threshold. 4. Comply with NFPA 80 for fire-rated doors.

END OF SECTION 081416

	SECT	DN 099113 - EXTERIOR PAINTING	END			
008M, suitable for exposed applications.	PART	- GENERAL	SECT			
Z coating designation; mill phosphatized.						
, sheet steel complying with ASTM A 1008/A 1008M	1.1	SECTION REQUIREMENTS	PAR1			
galvanized according to ASTM A 153/A 153M,	A. \$	ubmittals: 1. Samples.	1.1			
	В.	Extra Materials: Deliver to Owner 1 gal. of each color and type of finish-coat paint used on Project, in containers, properly labeled and sealed.	A.			
n SDI A250.11.	PART	- PRODUCTS	В.			
ng to NFPA 80.	2.1	PAINT				
een doors and frames as indicated in SDI A250.11.	A. I	aterial Compatibility: Provide materials that are compatible with one another and with	PARI			
erection, sand smooth rusted or damaged areas of		substrates.	2.1			
ible air-drying rust-inhibitive primer.		 For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated. 	A.			
	В. (olors: As selected.				
	PART	- EXECUTION	В.			
	3.1	PREPARATION				
	A. (omply with recommendations in MPI's "MPI Architectural Painting Specification Manual"	C.			
oors.	B. Remove hardware, lighting fixtures, and similar items that are not to be painted. Mask items					
	C. (lean and prepare surfaces in an area before beginning painting in that area. Schedule painting	3.1			
	0.	so cleaning operations will not damage newly painted surfaces.	A.			
	3.2	APPLICATION	B.			
	A. (omply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.	C			
	В.	Paint exposed surfaces, new, unless otherwise indicated.	0.			
		1. Do not paint prefinished items, items with an integral finish, operating parts, and labels unless otherwise indicated.	3.2			
ed.	C. A	oply paints according to manufacturer's written instructions.	A.			
uctural composite lumber cores instead of particleboard		1. Use brushes only where the use of other applicators is not practical.	B.			
	D. A	pply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.				
sh:		1. If undercoats or other conditions show through topcoat, apply additional coats until cured				
um grade, five-ply, particleboard cores.		film has a uniform paint finish, color, and appearance.				
select white birch.	3.3	EXTERIOR PAINT APPLICATION SCHEDULE	C			
alance match. s with transoms.	A.	Steel:				
		 Semigloss Water-Based, Light-Industrial Coating: Two coats over alkyd anticorrosive primer. 	D.			
sizes indicated and to comply with clearances specified.						
nat is not surface applied. Locate hardware to comply						
erenced standards.			2.0			
parent finish with stain and manufacturer's standard			3.3			
alyzed polyuretnane for grade specified for doors.			Α.			

A. Install doors to comply with manufacturer's written instructions and WDMA I.S.1-A, and as

OF SECTION 099113

TION 099123 - INTERIOR PAINTING

1 - GENERAL

SECTION REQUIREMENTS

Submittals:

1. Samples.

Extra Materials: Deliver to Owner 1 gal. of each color and type of finish-coat paint used on Project, in containers, properly labeled and sealed.

2 - PRODUCTS

PAINT

Material Compatibility: Provide materials that are compatible with one another and with substrates.

1. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

. Low-Emitting Materials: Comply with Section 018113.13 - Sustainable Design Requirements -LEED 2009 for New Construction and Major Renovations.

Colors: As selected.

3 - EXECUTION

PREPARATION

Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

Remove hardware, lighting fixtures, and similar items that are not to be painted. Mask items that cannot be removed. Reinstall items in each area after painting is complete.

Clean and prepare surfaces in an area before beginning painting in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.

APPLICATION

Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

Paint exposed surfaces, new and existing, unless otherwise indicated.

1. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces.

- 2. Paint surfaces behind permanently fixed equipment or furniture with prime coat only. Paint the back side of access panels.
- 4. Color-code mechanical piping in accessible ceiling spaces.
- 5. Do not paint prefinished items, items with an integral finish, operating parts, and labels unless otherwise indicated.

. Apply paints according to manufacturer's written instructions.

- 1. Use brushes only where the use of other applicators is not practical.
- 2. Use rollers for finish coat on interior walls and ceilings.
- Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- 1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

INTERIOR PAINT APPLICATION SCHEDULE

1. Semigloss, Quick-Dry Enamel: Two coats over quick-drying alkyd metal primer: MPI INT 5.1A.

B. Gypsum Board:

Eggshell Latex: Two coats over latex primer/sealer: MPI INT 9.2A. Eggshell Institutional Low-Odor/VOC Latex: Two coats over low-odor/VOC 2. primer/sealer: MPI INT 9.2M.

END OF SECTION 099123

SPECIAL INSPECTIONS: EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECI ING CONSTRUCTION FOR THE ITEMS IN THE SPECIAL INSPECTION TABLE BELOW IN TH THE BUILDING CODE CHAPTER 17. OWN ON ALL WORK ITEMS REQUIRING SPECIAL INSPECTION AND THE REQUIRED	IAL								DELEGATED DESIGN (PEMB): 1. ALL STRUCTURAL STEEL BUILDING ELEMENTS FROM THE COLUMN BASE PLATES UP, SHALL BE DESIGNED BY AN ENGINEER FAMILIAR WITH THE REQUIREMENTS OF THE CURRENT OHIO BUILDING CODE AND THE STANDARDS SET FORTH BY THE METAL BUILDING MANUFACTURER'S ASSOCIATION. ALL LOADS SHOWN ON THESE PLANS SHALL BE INTERPRETED AS MINIMUM STANDARDS. IF, THE DELEGATED ENGINEER'S CALCULATED LOADS DIFFER FROM WHAT IS SHOWN, THE HIGHER OF THE TWO SHALL GOVERN.
SPECTIONS FOR THIS PROJECT PER REQUIREMENTS IN CHAPTER 17 OF OBC.									2. THE DELEGATED ENGINEER SHALL SUBMIT FABRICATION AND INSTALLATION DRAWINGS BEARING THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER. THE SUBMITTAL SHALL INCLUDE THE
SCHEDULE OF	SPECIA	AL INSPECTION	S			1			FOLLOWING INFORMATION: A. DIMENSIONED PLAN LAYOUT B. SEQUENCING SCHEDULE
ITEM			F	REFERENCE	D STANDAR	D	OBC F	REFERENCE	C. STRUCTURAL CALCULATIONS D. ERECTION DRAWINGS
705.2 OBC)	X								E. BUILDING REACTIONS 3. THE MANUFACTURER SHALL IAS ACCREDITED FOR METAL BUILDING SYSTEMS AC 472.
ON AND NDE PER QUALITY ASSURANCE REQUIREMENTS OF AISC 360	-	X							4. THE PRE-ENGINEERED METAL BUILDING SHALL BE DESIGNED FOR THE FOLLOWING DEFLECTION AND DRIFT LIMITATIONS:
RAL LOAD BEARING MEMBERS	-	X X							 VERTICAL FRAME DEFLECTION: L/240 UNDER DESIGN SNOW LOAD OR ROOF LIVE LOAD, WHICHEVER IS MORE STRINGENT. HORIZONTAL FRAME DRIFT: H/100 LINDER 10 YEAR MRI WIND LOAD
TION: (1705.2 OBC)	Х								 PURLIN/OPEN WEB STEEL JOISTS VERTICAL DEFLECTION: L/240 UNDER DESIGN SNOW LOAD OR ROOF LIVE LOAD, WHICHEVER IS MORE STRINGENT.
ENGTH BOLTS	-	X X							- GIRT AND WIND POST HORIZONTAL DEFLECTION: L/240 UNDER WIND LOAD.
RAL STEEL MATERIALS		Х							
RAL STEEL WELDING	-	X							STRUCTURAL STEEL:
	Х	^							A. STRUCTURAL STEEL WIDE FLANGE SHAPES: ASTM A992, Fy = 50 KSI B. STRUCTURAL STEEL CHANNELS ANGLES PLATES ETC: ASTM A36 EV = 36 KSI MARION OHIO 43302
ATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE EARING CAPACITY		х							C. STRUCTURAL TUBING (INCLUDES SQUARE, RECTANGULAR AND ROUND SECTIONS): ASTM A500, GRADE C. Fy = 50 KSI
CAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER		х							D. HIGH STRENGTH BOLTS: ASTM A325 UNLESS NOTED OTHERWISE E. ANCHOR RODS: ASTM F1554, GRADE 36, UNLESS NOTED OTHER WISE. GALVANIZE IN EXTERIOR
CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		Х							WALLS AND EXTERIOR LOCATIONS. F. SHEAR STUDS: ASTM A108, Fy = 60 KSI
E OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT PACTION OF COMPACTED FILL.		x							G. DEFORMED BAR ACNHORS: ASTM A496, Fy = 70 KSI H. ELECTRODES: SERIES E70 H. ALL OTRIOTURAL OTEL QUALL DE DOMESTICATION DE DO
PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE PREPARED PROPERLY.		Х							ALL STRUCTURAL STEEL SHALL BE DOMESTICALLY PRODUCED AND COMPLY WITH ALL FEDERAL AND STATE REQUIREMENTS. SPECIFICATIONS
									A. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1. UNLESS SPECIFICALLY SHOWN OTHERWISE. THE DESIGN FABRICATION AND ERECTION IS TO BE GOVERNED
	R		NCRETE	:					BY THE LATEST REVISION OF: i. AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL
	1.	MATERIALS: A. SPECIFICATIO	NS: IN GEN	 IERAL, COM	PLY WITH AC	CI 301 "SPECIFIC	ATIONS FOR	STRUCTURAL	FOR BUILDINGS ii. AISC CODE OF STANDARD PRACTICE
		CONCRETE".]	iii. STRUCTURAL WELDING CODE, AWS D1.1 OF THE AMERICAN WELDING SOCIETY iv. SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS
				CAST-I	N PLACE		I		3. SUBMITTALS A. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL WHICH INCLUDE ERECTION PLANS,
(BASED UPON WIND VELOCITY V _{ULT} = 115 MPH)		LOCATION	CLASS	f'c (PSI)	MIN. CEMENT	MIN. AIR CONTENT	MAX. W/C RATIO	NOTES	CONNECTIONS, HOLES, THREADED FASTENER TYPES AND FINISHES. B. SUBMITTALS MUST BE THE ORIGINAL WORK OF THE FABRICATOR OR DETAILER. ELECTRONIC DEPRODUCTIONS OF THESE POCUMENTS WILL NOT BE REVIEWED. ANY DELAY OF ATED BY THE
EFFECTIVE POSITIVE NEGATIVE		FOOTINGS		3,000	(LBS) 517	ENTRAPPED	.50		FAILURE TO COMPLY WITH THIS PROVISION SHALL BE THE RESPONSIBILITY OF THE GENERAL
ZONE WIND PRESSURE PRESSURE AREA (SF) (PSF) (PSF)		PIERS	II	4,500	564	5% +/- 1%	.45		C. THE SUBMITTAL MUST INCLUDE ALL REQUIRED FIELD VERIFICATION OF DETAILS AND DIMENSIONS.
10 16.0 -31.1								PROVIDE 4 LBS PER CUBIC YARD OF	STATE AND FEDERAL REQUIREMENTS FOR DOMESTICALLY PRODUCED STEEL. RETAIN MILL CERTIFICATIONS AND DOMESTICALLY PRODUCED STEEL CERTIFICATIONS FOR ALL STRUCTURAL
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		GRADE		3,500	540	ENTRAPPED	.45	FIBERS SUCH AS	SHAPES FOR THE DURATION OF THE WARRANTY PERIOD OF THE STRUCTURE.
10 16.0 -52.3								EUCLID CHEMICAL	A. FIELD CONNECTIONS ARE TO BE BOLTED, EXCEPT AS INDICATED OTHERWISE. SHOP CONNECTIONS OF THE FUEL AND ADDRESS OF THE FUEL ADDRESS
O O SO SO <td></td> <td>GRADE</td> <td>IV</td> <td>4,500</td> <td>564</td> <td>6% +/- 1%</td> <td>.45</td> <td></td> <td>UNIFORM LOAD CAPACITY OF THE MEMBER OR THE FORCES SHOWN ON THE PLANS. THE MINIMUM</td>		GRADE	IV	4,500	564	6% +/- 1%	.45		UNIFORM LOAD CAPACITY OF THE MEMBER OR THE FORCES SHOWN ON THE PLANS. THE MINIMUM
100 16.0 -33.8		B. SUBMIT CONO	CRETE MIX I	DESIGN FOR	R APPROVAL		CE TO ACI 301	. MIX DESIGNS SHALL	ARRANGEMENT OF CONNECTIONS. 5. COATINGS:
3 50 16.0 -47.2		EXPERIENCE MUST INCLUE	OR TRIAL M	IX PER ACI	301. SUBMI	THREE (3) SET	S FOR REVIE	W. THE MIX DESIGNS FICATION FROM THE	A. DO NOT PAINT STEEL OR ANCHOR RODS WHICH WILL BE ENCASED IN 3" MINIMUM OF CONCRETE OR ANY STEEL WHICH IS TO RECEIVE SPRAY-APPLIED OR INTUMESCENT FIREPROOFING.
100 16.0 -33.8 10 28.5 -30.9		TABLE ABOVE MIX DESIGNS	E. FAILURE WITHOUT F	TO INCLUDE REVIEW.	E BOTH OF T	HESE ITEMS WI	LL RESULT IN	THE RETURN OF THE	B. PAINT ALL INTERIOR STEEL WITH TWO COATS OF RED-OXIDE PRIMER. C. HOT-DIP GALVANIZE ALL EXTERIOR STEEL INCLUDING LINTELS AND SHELF ANGLES.
4 50 25.6 -28.0	2.	FIELD MANUAL: FIELD OFFICE AT		LEAST ON		THE ACT FIELD R		IANUAL, SP-15, IN THE	D. PROVIDE A FIELD-APPLIED COAT OF ASPHALTIC MASTIC FOR ANY BELOW GRADE STEEL, NOT COVER BY 3" OF CONCRETE OR MASONRY GROUT, INCLUDING BASE PLATES AND ANCHOR RODS.
01 100 24.3 -26.7 V 10 28.5 -38.0	5.	REINFORCING. S	UCH SUPPO	ORTS ARE T	O BE REFLE	CTED IN THE BI	D. THE USE C	OF CLAY BRICK IS NOT	
$5 \frac{10}{5} \frac{200}{50} \frac{200}{25.6} \frac{32.1}{-32.1}$	4.	FOOTINGS: A. DOWELS IN F	DOTINGS T	O MATCH SI	ZE AND SPA	CING OF VERTIC	CAL WALL REI	NFORCING.	EPOXY ANCHORING SHALL NOT BE USED EXCEPT WHERE SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS, OR WHEN APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER.
100 24.3 -29.6		B. PROVIDE CON ACCIDENTAL		OW-STREN		IAL (CLSM) UNDI	ER FOUNDAT	IONS FOR	2. WHERE PERMITTED, EPOXY ANCHORING SHALL BE COMPLETED USING ONE OF THE FOLLOWING OPTIME OF THE FOLLOWING OPTIME O
	5.		JOINTS: JSTRUCTIO			RES.			FOR USE IN CONCRETE: A. HIT HY-200 ADHESIVE ANCHOR, BY HILTI, INC. (ICC-ES REPORT #3187)
		ARE TO BE DO ONE END OR	DWELED, US PROVIDE S	SE 3/4" SMO LEEVE, UNLI	OTH DOWEL	S 1'-0" LONG EN	IBEDDED 6" E WISE ON DRA	ACH SIDE GREASE WINGS.	A. HIT-70 WITH HAS ROD ANCHOR SYSTEM BY HILTI, INC. (ICC-ES REPORT #2682)
	<u></u>	EINFORCING FO		RETE:					C. SET-ADHESIVE SYSTEMS BY SIMPSON STRONG-TIE (ICC-ES REPORT #1772) D. CIA-GEL 7000 EPOXY BY USP STRUCTURAL CONNECTORS, INC. (ICC-ES REPORT #1702)
GENERAL:	1.		HALL CONF		TM A615, GR NG BARS SH	ADE 60 OR ASTN ALL CONFORM T	M A706, UNLE FO ASTM A706 OBM_NOT BC	SS NOTED	3. ANCHOR RODS USED FOR EPOXY ANCHORING SHALL BE THE TYPE SPECIFIED IN THE REFERENCED ICC-ES REPORT. THE ANCHOR SIZE SHALL BE AS INDICATED ON THE PLANS. THE ANCHOR ROD
TION HAS BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN	3.	MINIMUM CONCE A. UNFORMED S	RETE COVE	R, UNLESS N CONTACT W	NOTED OTH	ERWISE:	N.	(LLED)	EMBEDMENT SHALL BE AS INDICATED ON THE PLANS, OR APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER.
HNICAL REPORT (GCI PROJECT #23-G-28511) PREPARED BY GEOTECHNICAL S, INC., DATED JANUARY 31, 2024. FOOTINGS SHALL BEAR ON SOILS CAPABLE OF		B. FORMED SUR #6 BARS AN	FACES EXP D LARGER	OSED TO EA	ARTH OR WE	ATHER: 2 IN	٨.		ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE EPOXY MANUFACTORER'S SILL INC. RECOMMENDATIONS AND THE CURRENT ICC-ES REPORT. DRILLING SHALL BE PERFORMED WITH A ROTARY HAMMER DRILL AND CARBIDE TIPPED DRILL BIT IN
A NET ALLOWABLE BEARING PRESSURE OF <u>3.0</u> KSF UNDER SERVICE LIVE AND DEAD TED SPREAD FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUSTAINING A NET BEARING PRESSURE OF 3.0 KSF UNDER SERVICE LIVE AND DEAD LOAD - AUL FOOTIN	IGS	#5 BARS AN C. FORMED SUR	D SMALLER	R EXPOSED 1	TO EARTH O	1 1/ R WEATHER:	/2 IN.		ACCORDANCE WITH INSTRUCTOR'S ACCOMPANYING ADHESIVE CARTRIDGES AND APPLICABLE ICC-ESR (ALTERNATE METHODS OF DRILLING ARE PROHIBITED UNLESS APPROVED IN ADVANCE BY GENERAL
R ON FIRM AND STABLE, NON-ORGANIC NATURAL SOILS OR ON NEW, CONTROLLED F CTLY OVER STABLE, NATURAL NON-ORGANIC SOILS.	FILL	BEAMS, GIRD SLABS, WALL #11 BARS A	ERS, AND C S, AND JOIS ND SMALLE	STS R		1 1/ 3/4	/2 IN. IN		THE STRUCTURAL ENGINEER.)
AY BE POURED INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT. MATERIAL SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO) 4.	#14 AND #18 LAP SPLICES SH	BARS ALL BE IN A		E WITH THE	1 1/ FOLLOWING TA	/2 IN. BLE, UNLESS	NOTED OTHERWISE.	
LACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO ITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS)	CLASS B SF	LICE COM	IPRESSION	SPLICE	CLASS B S	SPLICE COM	IPRESSION SPLICE	
EXTERIOR FOOTINGS SHALL BEAR <u>36"</u> BELOW FINAL GRADE. THE GENERAL R SHALL BE RESPONSIBLE TO ADJUST BOTTOM OF FOOTING ELEVATIONS SHOWN IN		BAR LAP LENG SIZE (INCHES	STH S)	LAP LENGT (INCHES)	IH BA	R LAP LEN ZE (INCHE	NGTH ES)	LAP LENGTH (INCHES)	
NTS AS REQUIRED TO ENSURE MINIMUM FOOTING EMBEDMENT AND TO REACH THE ARING ELEVATION AS SHOWN IN THE GEOTECHNICAL ENGINEERING REPORT.	<u>.</u>	#3 22 #4 29 #5 36		12 15 19	#4 #1	9 81 0 89		30 34 38	SIGN SIGN
WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES SLABS AT TOP AND BOTTOM ARE IN PLACE AND CURED.		#6 43 #7 63		23 27	#1	1 98		42	
IDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL USLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL. CONCRETE SHALL HAVE BEACHED A MINIMUM COMPRESSIVE STRENGTH OF 2 000 F	5.	COMPRESSION I	DOWEL EME	BEDMENT: 2	2 BAR DIAM	ETERS, UNLESS	NOTED OTH	ERWISE.	DESCR SCHEM DESIGN
G LOADED. STRENGTHS SHALL BE VERIFIED BY TEST.	6.	BASE PLATES, A MINIMUM OF 3" (NCHOR ROI OF CONCRE	DS, SUPPOR TE.	(TANGLES, I	ETC., BELOW GF	RADE SHALL E	BE COVERED WITH A	ATE //12023
									DP
									ISSUE:
									PROJECT NO: 23-123
									CAD DWG FILE: 23-121 MWW1P DRAWN BY: DJP CHECKED RV: MDD
									SHEET 11 OF 22

<u>_ INSPECTIONS:</u> HE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIA	L				DELEGATED DESIGN (PEIVIB): 1. ALL STRUCTURAL STEEL BUILDING ELEMENTS FROM THE COLUMN BASE PLATES UP, SHALL BE 1. ALL STRUCTURAL STEEL BUILDING ELEMENTS FROM THE COLUMN BASE PLATES UP, SHALL BE	
TRUCTION FOR THE ITEMS IN THE SPECIAL INSPECTION TABLE BELOW IN LDING CODE CHAPTER 17.					DESIGNED BY AN ENGINEER FAMILIAR WITH THE REQUIREMENTS OF THE CURRENT OHIO BUILDING CODE AND THE STANDARDS SET FORTH BY THE METAL BUILDING MANUFACTURER'S ASSOCIATION. ALL LOADS SHOWN ON THESE PLANS SHALL BE INTERPRETED AS MINIMUM STANDARDS JE THE	SIGNATE OF OR
ALL WORK ITEMS REQUIRING SPECIAL INSPECTION AND THE REQUIRED					DELEGATED ENGINEER'S CALCULATED LOADS DIFFER FROM WHAT IS SHOWN, THE HIGHER OF THE TWO SHALL GOVERN.	
IS FUR THIS PROJECT PER REQUIREMENTS IN CHAPTER 17 OF OBC.					2. THE DELEGATED ENGINEER SHALL SUBMIT FABRICATION AND INSTALLATION DRAWINGS BEARING THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER. THE SUBMITTAL SHALL INCLUDE THE	E-68641
SCHEDULE OF		SPECTION	S		FOLLOWING INFORMATION: A. DIMENSIONED PLAN LAYOUT B. SEQUENCING SCHEDULE	ONAL ENTITI
ITEM			REFERENCED STANDARD	OBC REFERENCE	C. STRUCTURAL CALCULATIONS D. ERECTION DRAWINGS	02-08-2024
	X	FER.			 E. BUILDING REACTIONS 3. THE MANUFACTURER SHALL IAS ACCREDITED FOR METAL BUILDING SYSTEMS AC 472. 	
E PER QUALITY ASSURANCE REQUIREMENTS OF AISC 360		X			4. THE PRE-ENGINEERED METAL BUILDING SHALL BE DESIGNED FOR THE FOLLOWING DEFLECTION AND DRIFT LIMITATIONS:	
BEARING MEMBERS BEARING ASSEMBLIES		X X			 VERTICAL FRAME DEFLECTION: L/240 UNDER DESIGN SNOW LOAD OR ROOF LIVE LOAD, WHICHEVER IS MORE STRINGENT. HORIZONTAL FRAME DRIFT: H/400 UNDER 40 YEAR MRLWIND LOAD. 	
5.2 OBC)	X				 PURLIN/OPEN WEB STEEL JOISTS VERTICAL DEFLECTION: L/240 UNDER DESIGN SNOW LOAD OR ROOF LIVE LOAD, WHICHEVER IS MORE STRINGENT. 	
E PER QUALITY ASSURANCE REQUIREMENTS OF AISC 360		X X			- GIRT AND WIND POST HORIZONTAL DEFLECTION: L/240 UNDER WIND LOAD.	
MATERIALS		X				
WELDING FRAME JOINT DETAILS		X X			STRUCTURAL STEEL:	OMNESS DESIGN INC
	x	~			 A. STRUCTURAL STEEL WIDE FLANGE SHAPES: ASTM A992, Fy = 50 KSI B. STRUCTURAL STEEL CHANNELS, ANGLES, PLATES, ETC.: ASTM A36, Fy = 36 KSI 	1 4 0 F A I R F A X R O A I M A R I O N , O H I O 4 3 3 0 2
BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE PACITY		x			 C. STRUCTURAL TUBING (INCLUDES SQUARE, RECTANGULAR AND ROUND SECTIONS): ASTM A500, GRADE C, Fy = 50 KSI 	CONSULTANTS
IS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER		x			 D. HIGH STRENGTH BOLTS: ASTM A325 UNLESS NOTED OTHERWISE E. ANCHOR RODS: ASTM F1554, GRADE 36, UNLESS NOTED OTHER WISE. GALVANIZE IN EXTERIOR 	
CATION AND TESTING OF COMPACTED FILL MATERIALS		X			WALLS AND EXTERIOR LOCATIONS. F. SHEAR STUDS: ASTM A108, Fy = 60 KSI	DERWACTER & ASSOCIATES, LLC
F COMPACTED FILL	X				G. DEFORMED BAR ACNHORS: ASTM A496, FY = 70 KSI H. ELECTRODES: SERIES E70 L. ALL STRUCTURAL STEEL SHALL BE DOMESTICALLY PRODUCED AND COMPLY WITH ALL FEDERAL	5275 Milford Dr. Zanesville, OH 43701
D PROPERLY.		Х			AND STATE REQUIREMENTS. 2. SPECIFICATIONS	
					A. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1. UNLESS SPECIFICALLY SHOWN OTHERWISE, THE DESIGN FABRICATION AND ERECTION IS TO BE GOVERNED	
	REINFO	ORCED CO	DNCRETE:		BY THE LATEST REVISION OF: i. AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL	
	1. MA A.	TERIALS: SPECIFICATI	ONS: IN GENERAL, COMPLY WITH ACI 301 "SPEC	IFICATIONS FOR STRUCTURAL	FOR BUILDINGS ii. AISC CODE OF STANDARD PRACTICE iii. STRUCTURAL MEL DING CORE AND RELEASE THE AMERICAN STRUCTURAL MEL	
		CONCRETE".		TE	 III. STRUCTURAL WELDING CODE, AWS D1.1 OF THE AMERICAN WELDING SOCIETY iv. SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS 3 SUBMITTALS 	
COMPONENT AND CLADDING WIND PRESSURES					A. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL WHICH INCLUDE ERECTION PLANS, CONNECTIONS, HOLES, THREADED FASTENER TYPES AND FINISHES	302
(BASED UPON WIND VELOCITY V _{ULT} = 115 MPH)	LO	CATION	CLASS fc (PSI) CEMENT MIN. AIF	R MAX. W/C NOTES	 B. SUBMITTALS MUST BE THE ORIGINAL WORK OF THE FABRICATOR OR DETAILER. ELECTRONIC REPRODUCTIONS OF THESE DOCUMENTS WILL NOT BE REVIEWED. ANY DELAY CREATED BY THE 	atr 433
EFFECTIVE POSITIVE NEGATIVE	FO	OTINGS	I 3,000 517 ENTRAPP	ED .50	FAILURE TO COMPLY WITH THIS PROVISION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.	H e G
AREA (SF) (PSF) (PSF)	F	PIERS	II 4,500 564 5% +/- 1 ⁴	% .45	C. THE SUBMITTAL MUST INCLUDE ALL REQUIRED FIELD VERIFICATION OF DETAILS AND DIMENSIONS. D. INDICATE MATERIAL SPECIFICATIONS, STRENGTHS AND FINISHES. INDICATE COMPLIANCE WITH ALL	
	INTERI	OR SLAB ON		CUBIC YARD OF MACRO-SYNTHETIC	STATE AND FEDERAL REQUIREMENTS FOR DOMESTICALLY PRODUCED STEEL. RETAIN MILL CERTIFICATIONS AND DOMESTICALLY PRODUCED STEEL CERTIFICATIONS FOR ALL STRUCTURAL	at ing
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		GRADE	III 3,500 540 ENTRAPP	ED .45 FIBERS SUCH AS TUF-STRAND SF BY	4. CONNECTIONS:	je a je a iv E lari
10 16.0 -52.3	EXTERI	IOR SLAB ON		EUCLID CHEMICAL	 A. FIELD CONNECTIONS ARE TO BE BOLTED, EXCEPT AS INDICATED OTHERWISE. SHOP CONNECTIONS MAY BE EITHER WELDED OR BOLTED. B. CONNECTIONS ARE TO BE DESIGNED BY THE FABRICATOR TO DEVELOP FITHER 100% OF THE FULL 	rag ≥ Na
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		GRADE	IV 4,500 564 6% +/- 1	% .45	UNIFORM LOAD CAPACITY OF THE MEMBER OR THE FORCES SHOWN ON THE PLANS. THE MINIMUM CONNECTION CAPACITY SHALL BE 5.0 KIPS. DETAILS ARE PROVIDED SHOWING THE GENERAL	d Cou
10 16.0 -78.7	В.	SUBMIT CON	CRETE MIX DESIGN FOR APPROVAL IN ACCORD BACKUP DATA MATERIAL WITH COMPRESSIVE	ANCE TO ACI 301. MIX DESIGNS SHALL STRENGTH BREAKS BASED ON	ARRANGEMENT OF CONNECTIONS. 5. COATINGS:	ew bn (
3 50 16.0 -47.2		EXPERIENCE MUST INCLUI	OR TRIAL MIX PER ACI 301. SUBMIT THREE (3) DE THE BATCH IDENTIFICATION NUMBER AND T	SETS FOR REVIEW. THE MIX DESIGNS HE CLASS IDENTIFICATION FROM THE	A. DO NOT PAINT STEEL OR ANCHOR RODS WHICH WILL BE ENCASED IN 3" MINIMUM OF CONCRETE OR ANY STEEL WHICH IS TO RECEIVE SPRAY-APPLIED OR INTUMESCENT FIREPROOFING.	Ne Varia
100 16.0 -33.8 10 28.5 -30.9		TABLE ABOV MIX DESIGNS	E. FAILURE TO INCLUDE BOTH OF THESE ITEMS WITHOUT REVIEW.	S WILL RESULT IN THE RETURN OF THE	 B. PAINT ALL INTERIOR STEEL WITH TWO COATS OF RED-OXIDE PRIMER. C. HOT-DIP GALVANIZE ALL EXTERIOR STEEL INCLUDING LINTELS AND SHELF ANGLES. 	Mä <
4 50 25.6 -28.0	2. FIE FIE	LD MANUAL: LD OFFICE A	PROVIDE AT LEAST ONE COPY OF THE ACT FIEL T ALL TIMES.	LD REFERENCE MANUAL, SP-15, IN THE	D. PROVIDE A FIELD-APPLIED COAT OF ASPHALTIC MASTIC FOR ANY BELOW GRADE STEEL, NOT COVER BY 3" OF CONCRETE OR MASONRY GROUT, INCLUDING BASE PLATES AND ANCHOR RODS.	ich ich
OT 100 24.3 -26.7 V 10 28.5 -38.0	S. CO RE	INFORCING.	SUCH SUPPORTS ARE TO BE REFLECTED IN THI	E BID. THE USE OF CLAY BRICK IS NOT		
≤ 10 20.3 -50.0 5 50 25.6 -32.1	4. FO A.	OTINGS: DOWELS IN F	OOTINGS TO MATCH SIZE AND SPACING OF VE	RTICAL WALL REINFORCING.	EPOXY ANCHORS. EPOXY ANCHORING SHALL NOT BE USED EXCEPT WHERE SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS, OR WHEN APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER	OI
100 24.3 -29.6	В.	PROVIDE CO ACCIDENTAL	NTROLLED LOW-STRENGTH MATERIAL (CLSM) L	JNDER FOUNDATIONS FOR	 WHERE PERMITTED, EPOXY ANCHORING SHALL BE COMPLETED USING ONE OF THE FOLLOWING PRODUCTS: 	
	5. CO		CAVATION, SOFT SPOTS AND TRENCHES. I JOINTS:		FOR USE IN CONCRETE: A. HIT HY-200 ADHESIVE ANCHOR, BY HILTI, INC. (ICC-ES REPORT #3187)	
	А.	ARE TO BE D	NSTRUCTION JOINTS AT ALL POUR STOP LOCA OWELED, USE 3/4" SMOOTH DOWELS 1'-0" LONG PROVIDE SLEEVE JUNIESS WHERE NOTED OTH	GERWISE ON DRAWINGS	FOR USE IN SOLID GROUTED MASONRY: A. HIT-70 WITH HAS ROD ANCHOR SYSTEM BY HILTI, INC. (ICC-ES REPORT #2682)	9.]
			OR CONCRETE:	ILINWISE ON DIAWINGS.	B. HIT-70 WITH TZ ROD ANCHOR SYSTEM BY HILTI, INC. (ICC-ES REPORT #2682) C. SET-ADHESIVE SYSTEMS BY SIMPSON STRONG-TIE (ICC-ES REPORT #1772)	at
	1. RE OT	INFORCING S HERWISE. AI	HALL CONFORM TO ASTM A615, GRADE 60 OR A	ASTM A706, UNLESS NOTED RM TO ASTM A706.	 CIA-GEL 7000 EPOXY BY USP STRUCTURAL CONNECTORS, INC. (ICC-ES REPORT #1702) ANCHOR RODS USED FOR EPOXY ANCHORING SHALL BE THE TYPE SPECIFIED IN THE REFERENCED ICC-ES REPORT. THE ANCHOR SIZE SHALL BE AS INDICATED ON THE PLANS. THE ANCHOR ROD 	
	2. WE 3. MIN	ELDED WIRE I	FABRIC SHALL CONFORM TO ASTM A185 (SHEET RETE COVER, UNLESS NOTED OTHERWISE:	TS FORM, NOT ROLLED)	EMBEDMENT SHALL BE AS INDICATED ON THE PLANS, OR APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER.	
EPORT (GCI PROJECT #23-G-28511) PREPARED BY GEOTECHNICAL	A. I B. I	UNFORMED S	SURFACE IN CONTACT WITH THE GROUND: FACES EXPOSED TO EARTH OR WEATHER:	3 IN.	4. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE EPOXY MANUFACTURER'S RECOMMENDATIONS AND THE CURRENT ICC-ES REPORT.	SHEET TITLE
OWABLE BEARING PRESSURE OF <u>3.0</u> KSF UNDER SERVICE LIVE AND DEAD AD FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUSTAINING A NET	C	#6 BARS AN #5 BARS AN FORMED SUB	ND LARGER ND SMALLER REACES NOT EXPOSED TO EARTH OR WEATHER	2 IN. 1 1/2 IN.	5. DRILLING SHALL BE PERFORMED WITH A ROTARY HAMMER DRILL AND CARBIDE TIPPED DRILL BIT IN ACCORDANCE WITH INSTRUCTOR'S ACCOMPANYING ADHESIVE CARTRIDGES AND APPLICABLE	
PRESSURE OF <u>3.0</u> KSF UNDER SERVICE LIVE AND DEAD LOAD. ALL FOOTING AND STABLE, NON-ORGANIC NATURAL SOILS OR ON NEW, CONTROLLED FIL	iS L	BEAMS, GIRE SLABS, WALL	DERS, AND COLUMNS .S, AND JOISTS	 1 1/2 IN.	ICC-ESR (ALTERNATE METHODS OF DRILLING ARE PROHIBITED UNLESS APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER.)	GENERAL
R STABLE, NATURAL NON-ORGANIC SOILS. RED INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT.		#11 BARS A #14 AND #1	ND SMALLER 8 BARS	3/4 IN. 1 1/2 IN.		NUTES
SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO T. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO E BEARING MATERIAL ECOTING ELEVATIONS SHALL BE ADJUSTED AS	4. LAF	P SPLICES SH		G TABLE, UNLESS NOTED OTHERWISE.		
FOOTINGS SHALL BEAR 36" BELOW FINAL GRADE. THE GENERAL	BAR		PLICE COMPRESSION SPLICE CLASS GTH LAP LENGTH BAR LAP	LENGTH LAP LENGTH		
E RESPONSIBLE TO ADJUST BOTTOM OF FOOTING ELEVATIONS SHOWN IN EQUIRED TO ENSURE MINIMUM FOOTING EMBEDMENT AND TO REACH THE	#3 #4	(INCHE 22 29	12 #8 15 #9	72 30 81 34		
EVATION AS SHOWN IN THE GEOTECHNICAL ENGINEERING REPORT. IAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES	#5 #6	23 36 43	19 #10 23 #11	89 38 98 42		
TOP AND BOTTOM ARE IN PLACE AND CURED. /ALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL	#7	63	27			SCRIPTI IEMATII IGN DE VSTRUC
IS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL. TE SHALL HAVE REACHED A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PS	5. CO 6. BA	MPRESSION SE PLATES, A	DOWEL EMBEDMENT: 22 BAR DIAMETERS, UNL NCHOR RODS, SUPPORT ANGLES, ETC., BELOV	ESS NOTED OTHERWISE. V GRADE SHALL BE COVERED WITH A		DESI CON
2. STRENGTHS SHALL DE VERITED DT TEST.	MIN	NIMUM OF 3"	OF CONCRETE.			DATE /28/202
						MAF
						PROJECT NO: 23-123 CAD DWG FILE: 23-121 MWWTP
						DRAWN BY: DJP CHECKED BY: MDD
						SHEET <u>11</u> OF <u>22</u>

	FOUNDATION PLAN NOTES								
Α	SEE SHEETS 50.1 FOR GENERAL NOTES.								
В	ALL ELEVATIONS ARE RELATIVE TO A FINISH FLOOR SLAB ELEVATION OF 100'-0" (REFERENCE ONLY).								
С	COORDINATE DOOR OPENINGS WITH ARCHITECTURAL DRAWINGS.								
D	SEE DETAIL 55.1-01 FOR TYPICAL REINFORCING DETAILING.								
E	STEPS IN FOOTING AS REQUIRED TO MAINTAIN FROST DEPTH AND EMBEDMENT TO REQUIRED BEARING ELEVATION. SEE 55.1-03 FOR TYPICAL DETAIL.								
F	SEE DETAIL \$5.1-05 FOR RE-ENTRANT SLAB REINFORCING, TYP. AT SLAB PENETRATIONS, DOOR OPENINGS, ETC.								
G	SEE DETAIL 55.1-06 FOR TYPICAL PIPE PENETRATIONS THROUGH FOUNDATIONS.								
н	SEE DETAIL \$5.1-02 FOR REINFORCING AT INTERSECTING FOOTINGS.								
I	FOUNDATION AND PIER SIZES, LOCATIONS AND DETAILING ARE SUBJECT TO CHANGE PENDING THE FINAL DESIGN OF P.E.M.B. FABRICATION AND CONSTRUCTION SHALL NOT COMMENCE UNTIL THE FINAL SIGNED AND SEALED FOR CONSTRUCTION ANCHOR BOLT PLANS AND REACTIONS HAVE BEEN SUBMITTED TO THE ARCHITECT AND COORDINATED WITH THE ENGINEER FOR ISSUANCE OF COORDINATED FOUNDATION DRAWINGS.								

	KEYED NOTES							
1	6" CONCRETE SLAB, REINF. MACRO SYNTHETIC FIBERS PER 50.1 . ON 15MIL. VAPOR BARRIER OVER A 4" MIN. COMPACTED COARSE AGGREGATE BASE. TOP OF SLAB AT 100'-0".							
2	SLAB CONTRACTION OR CONSTRUCTION JOINT, SEE 55.1-04 .							
3	8" CAST-IN-PLACE PARTIAL HEIGHT CONCRETE WALL, REINF. WITH #5 AT 12"O.C., EACH WAY. SEE \$5.2-06 FOR REQUIRE JOINTS.							
4	RIGID FRAME P.E.M.B. COLUMN ON CONCRETE PIER AND FOOTING. SEE PIER AND FOOTING SCHEDULES FOR SIZES AND REINFORCING. FOR ANCHOR ROD INFORMATION SEE DETAIL 55.1-07 .							
5	P.E.M.B. END WALL COLUMN ON CONCRETE PIER AND FOOTING. SEE PIER AND FOOTING SCHEDULES FOR SIZES AND REINFORCING. FOR ANCHOR ROD INFORMATION SEE DETAIL S5.1-07 .							
6	P.E.M.B. PORTAL FRAME COLUMN ON CONCRETE PIER AND FOOTING. SEE PIER AND FOOTING SCHEDULES FOR SIZES AND REINFORCING. FOR ANCHOR ROD INFORMATION SEE DETAIL 35.1-07 .							

COLUMN FOOTING SCHEDULE						
MARK	SIZE	REINFORCING				
F1	5'-0" x 5'-0" x 1'-4"	(6) #5 BARS E.W. BOTTOM				
F2	8'-0" x 8'-0" x 1'-4"	(10) #6 BARS E.W. BOTTOM				
F3	6'-0" x 6'-0" x 1'-4"	(7) #6 BARS E.W. BOTTOM				

PIER SCHEDULE							
MARK	SIZE	DETAIL	REINFORCING				
P1	1'-6" x 2'-0"	S5.1-08	(6) #6 VERTICAL BARS w/ #4 TIES				
P2	2'-0" x 2'-0"	S5.1-08	(8) #6 VERTICAL BARS w/ #4 TIES				
P3	3'-0" x 2'-0"	S5.1-08	(10) #10 VERTICAL BARS w/ #4 TIES				

SHEET <u>12</u> OF <u>22</u>

U

_SEE PARTIAL FLOOR PLANS ON SHEET #M—2 FOR HVAC IN THIS AREA HVAC CODED NOTES

(M1.01) INSTALL RADIANT HEATER PER MFGR'S INSTRUCTIONS W/ CLEARANCE TO COMBUSTIBLES AS REQUIRED.

M1.02 INSTALL CARBON DIOXIDE DETECTOR PER MFGR.'S INSTRUCTIONS. INTERLOCK W/ "EF-1", "EF-2", "IL-1" & "IL-2" (SEE NOTE ON THIS SHEET)

DEMAND VENTILATION NOTE

 BRASCH MODEL NO. BGS-CD-STD CARBON DIOXIDE DETECTOR SHALL BE CALIBRATED AT 700 PPM.
 WHEN CARBON DIOXIDE DETECTOR SENSES QUANTITIES OF CARBON DIOXIDE IN EXCESS OF SETPOINT, IT SHALL TURN EXHAUST FANS "EF-1" & "EF-2" ON AND OPEN INTAKE LOUVERS "IF-1" & "IF-2".
 WHEN CONTAMINATION LEVELS HAVE BEEN DILLUTED SUFFICIENTLY TO RETURN CARBON DIOXIDE DETECTOR TO ORIGINAL SETPOINT (OR BELOW), EXH. FANS "EF-1" & "EF-2" SHALL SHUT OFF AND INTAKE LOUVERS "IF-1" & "IF-2".
 LOW VOLTAGE CONTROL WIRING SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR AS REQUIRED.

Ν	/IECHANICAL SP
GENERAL CONDITIONS	
 A. REFERENCE 1. For purposes of clearness and legibility, Drawings are diagrammtic	C. GRILLES AND DIFFUSERS
and although size and location of equipment are drawn to scale	1. Submittals
wherever possible, Contractor shall make use of all data in all of	a. Submit detailed Shop Drawings
the Contract Documents and shall verify this information at the	location, type, and size.
building site. Dimensions given in figures on the Drawings take	b. Eurnish and install where shown
precedence over scaled almensions. 2. Drawings and Specifications to be considered cooperative, and anything appearing in Specifications but not on Drawings or vice versa, shall be considered part of the Contract and must be executed	as manufactured by Price. c. Grilles and diffusers as man Carnes will be acceptable prov
 B. QUALITY ASSURANCE 1. Codes and Permits - Deliver official record of approval, by governing agencies, to Engineer to transmit to Owner. 	operating characteristics are e 2. All grilles and diffusers shall have unless otherwise noted on Plans.
C. OPERATING INSTRUCTIONS 1. Provide to Owner, after all equipment is in operation and at an agreeable time, competent instructors for the purpose of training	3. Ceiling Supply Diffusers: Fully adjust with full flow damper. Diffusers s frame to fit ceiling construction 4. Eac. Crate Return Crilles: Aluminur
Owner's personnel in all phases of operation and maintenance of	Egg crate grilles shall be surface
equipment and systems for both heating and cooling season.	to fit ceiling construction being
D. DAMAGE AND EMERGENCY REPAIRS	5. Refer to Architectural Reflected (
1. Contractor will be held responsible for any damage that may be	ceiling diffusers and ceiling cons
incurred on any installed work of other trades, by any workman	D. FILTERS
employed in the installation of work under this Contract. Provide	1 Eurrnish filters as manufactured
fitting of materials being installed, so as not to damage surrounding finished surfaces.	Media shall be reinforced glass fi grids formed to the configuration shall be sealed into a galvanized
1. Provide material and labor for that which is neither drawn nor	40% and an average synthetic a
specified but which is obviously a component part of and necessary	accordance with ASHRAE Stand
to complete work which is customarily a part of work of similar	capable of operating with variabl
character.	without impairing performance.
2. All materials, fixtures, and equipment shall be new, of the best	not to exceed the value selected
grade, and installed according to manufacturer's recommendations.	be classified by Underwriter Labo
Additionally, the installation shall be according to the best standards	2. Spare Filters: One original and t
of practices, complete with all accessories and connections necesary	supplied. One set is for use duri
for properceptration, and in compliance with effective State or Local	set shall be installed for testing
Code requirements.	of unused filters shall be turned
AIR DISTRIBUTION A. EXHAUST FANS	of the project. 3. Filters as manufactured by Cam Air Filter will be acceptable prov
 Submittals Submit detailed Shop Drawings clearly indicating	<u>DUCTWORK AND ACCESSORIES</u>
make, model, location, type, and size.	A. Provide all sheetmetal work, as show
 Furnish and install, where show on Drawings, exhaust fans as manufactured by Greenheck. Exhaust fans as manufactured by Loren Cook, Penn, or 	with the latest edition of the ASHRA Standards and this Specification, the be the minimum standard.
Carnes will be acceptable providing construction, capacity	B. Install ductwork indicated on Drawin
and operating characteristics are equal.	in cross sections and offsets, whe
B. LOW PRESSURE DUCTWORK	C. All changes in cross section shall
 Ductwork shall be constructed of the following gauges, where velocity	design area of the duct.
does not exceed 2500 FPM and static pressure does not excedd	D. Cap all open ends of ductwork un
2.0 WG. All is in accordance with ASHRAE and SMACNA Standards:	and equipment to prevent entrance
a. Rectangular Ducts: <u>U.S. Gauge</u> <u>Largest Dimension</u> <u>Galvanized Steel</u> To 10"	E. Make changes in direction of ductwo square elbows and double thickness having inside radius equal to width o or one-third radius elbows with inside width and a single vane radius of d
13" to 30" 24	F. No pipe or other obstructions shall
b. Round Ducts:	G. Ducts shall not be hung from other
<u>U.S. Gauge</u>	 H. Duct dimensions are gross except
Duct Diameter <u>Galvanized Steel</u>	are for net free area.
10 13 26	 All joints and seams in ducts shall
14" to 26" 24	splits, visible holes at corners, etc.
² All ductwork shall be constructed of galvanized steel complying	of ductwork installed. Where excessiv
with ASTM A527-71, lockforming quality. All toilet and shower room	housing is found, additional stiffene
exhaust ducts shall be aluminum construction, and all joints welded	in the coating around seams or jo
or sequed with 3M Company #EC-1792 sequent. Sheetmetal must	formed duct that is apparent upon
be fabricated so that the gauge of material being used is visible	J. Round duct joints in diameter thro
externally.	sealed as follows:
 Duct fasteners shall comply with SMACNA MF-1. Provide hot dipped galvanized steel fasteners, anchors, rods, straps, trim and angles for support of ductwork. Provide turning vanes in all mitered elbows and where otherwise 	1. Approved sealer is applied to the fittings. After the joint is slipped placed 1/2" from the joint beac is applied to the outside of the
indicated. Vanes shall be 2" galvanized steel for up to and including	or the joint bead and covering
18" ducts and 4-1/2" for ducts over 18". Construction of vanes	tape is immediately applied over
shall be double wall, fixed blade type for 90 degree elbows.	2. The duct sealer must be specil
6. All joints and seams shall be sealed to SMACNA Class B Standards	sealing the field joints for low-
(100% sealing) with Duro-Dyne SAS-UL-C siliconized acrylic water based duct sealer.	sealer shall be compatible with two shall cure and bond togethe

PECIFICATION

gs clearly indicating make, model, n on Drawings, grilles and diffusers nufactured by Titus, Krueger, or oviding construction, capacity, and equal.

e a factory applied off-white finish stable air pattern, round or square shall be surface mount or lay—in

being used. um frame with aluminum core grid. e mount, lay—in, or panel mounted used.

Ceiling Plan for exact location of struction being used.

d by Koch, model Multi-Pleat XL8. fiber supported by galvanized steel ion of the pleats. The media pack ed frame. Filter shall have a rated restance of 95% when tested in adards 52-76. The filter shall be able face velocities up to 600 FPM It shall have an initial resistance d from the capacity table and shall boratories as Class II.

two sets of spare filters shall be ing the construction phase and a and balancing. One complete set over to the Owner at completion

nbridge, Continental or American viding construction, capacity, and

own on the Drawings, in accordance IRAE guide and data book, SMACNA the most demanding of which shall

ngs making all neccesary changes ether or not specifically indicated. be made without reducing the

intil connected to grilles, diffusers, e of debris, dust, etc. work, unless otherwise specified with ss turning vanes; full radius elbows of duct measured in plane of turn; side radius equal to one-third duct two-thirds duct width.

pass through air ducts.

r ducts, pipe or conduit. of lined ducts where dimensions

all be air—tight; poorly made joints, c. shall be reworked or new pieces sive pulsating of ductwork or plenum ners shall be added. Any cracking, joints, or in any other part of the on inspection, shall be sufficient to

ough 60" shall be assembled and

he male end of the couplings and ed together, sheetmetal screws are ad for mechanical strength. Sealer e joint extending 1" on each side g the screw heads. Plastic backed r the wet sealer. ifically formulated for the job of —medium pressure systems. The plastic backed duct type so the

C. Install additional balancing dampers, where required by the Air Balance Contractor, to properly adjust the systems air volumes.

S									
<u>INSULA</u>	TION								
A. SUBMITTALS									
1. Submit detailed Shop Drawings or descriptive literature for all insulation products to be used.									
2. All insulation and accessories shall have composite (insulation, jacket, and adhesive) fire and smoke hazard ratings as tested under procedure ASTM E84, NFPA 255 and UL 723, not exceeding a flame spread of 25 and smoke developed 50. All calcium silicate shall be asbestos free to comply with OSHA regulations. The above requirements apply to pipe insulation and coverings used in plenums and shafts which act as active air ducts. All other areas shall have a 25 flame spread rating and 150 smoke developed as tested above, No polyethylene insulation is acceptable.									
3. N	Aaterials: All	insulat +	ion work	shall conform	to the following	schedule:			
Service	2	<u>lype</u>	Size	<u>Thickness</u>	Cons. & Exp.				
Liquid	& Suction	П	ALL	1/2	A.P.F.				
Expose Ductwo	ed ork	111	ALL	1"	A.S.J.				
Concec Ductwo	aled ork	IV	ALL	2"	F.S.K.				
<u>TYPES</u>	OF COVERI	NG							
A.S.J. F.S.K. A.P.F.	All Service Foil Scrim J.M. Aerot	: Jacket — Kra ube or	: ft Armstror	ng ArmaFlex A	P				
<u>TYPES</u>	OF INSULA	<u>TION</u>							
TYPE I	l								
A.P.F. Armstrong ArmaFlex AP Pipe Insulation K = .27, Density = 6.0#/ft₃									
TYPE I	II								
J.M.S. Johns-Manville Rigid "Spin-Glas" Duct Insulation Density = 4.25#/ft₃ with A.S.J. Facing.									
0.V.S. Owens—Corning Rigid Vapor Seal Duct Insulation Density = 6.0#/ft₃ with A.S.J. Facing.									
K.F.G. Knauf Insulation Board Density = 3.0#/ft₃ with A.S.J. Facing.									
TYPE I	V								
J.M.M.	Johns-Ma Density =	nville "N 0.6#/f	licrolite" t₃ with	Flexible Fiber F.S.K. Facing.	glass Duct Insul	ation,			
0.F.F.	Owens-Co Density =	rning F 0.6#/f	lexible Fi t with	berglass Duct F.S.K. Facing.	Insulation,				

K.F.G. Knauf Commercial Duct Wrapped Insulation Density = 3/4#/ft with A.S.J. Facing.

EXHAUST FAN SCHEDULE										
SAM			CA	PACITY	MOTOR		DR	DEMADING		
31M.	MF N.	MODEL NO.	CFM	S.P.	WATTS/HP	MCA	VOLTAGE	REMARKS		
EF-1	GREENHECK	SBE-1H24	2906	0.25	1/3 HP	9.0	120-1-60	WALL MOUNTING W/ LOUVER, BACKDRAFT DAMPER W/ BIRDSCREEN AS REQUIRED.		
EF-2	GREENHECK	SBE-1H24	2906	0.25	1/3 HP	9.0	120-1-60	WALL MOUNTING W/ LOUVER, BACKDRAFT DAMPER W/ BIRDSCREEN AS REQUIRED.		
EF-3	GREENHECK	SP-A110	75	0.25	19.4 W.	0.16	120-1-60	HORIZONTAL DISCHARGE WITH GREENHECK MODEL NO. RDC-6 ($6''$ Ø) ROUND DUCT ADAPTER, AND GREENHECK MODEL NO. WC-6 HOODED WALL CAP WITH BACKDRAFT DAMPER AND BIRDSCREEN		
EF-4	GREENHECK	SP-A200	200	0.25	26.1 W.	0.47	120-1-60	HORIZONTAL DISCHARGE WITH GREENHECK MODEL NO. RDC-8 ($8''\phi$) ROUND DUCT ADAPTER, AND GREENHECK MODEL NO. WC-8 HOODED WALL CAP WITH BACKDRAFT DAMPER AND BIRDSCREEN		

\square	INTAKE LOUVER SCHEDULE								
SYM.	MFR.	MODEL NO.	CFM	SIZE	REMARKS				
IL-1	GREENHECK	EAD-401	2906	32x44	WITH RUSKIN MOTOR-OPERATED DAMPER.				
IL-2	GREENHECK	EAD-401	2906	32x44	WITH RUSKIN MOTOR-OPERATED DAMPER.				

\bigcirc		ELECTRI	C BAS	SEBOARD	HEAT	
SYM.	MFR.	MODEL NO.	WATTS	VOLTAGE	AMPS	REMARKS
EBH-1	Q'MARK	QMKC2513W	750	120-1-60	6.5	WITH Q'MARK MODEL NO. TA1TPAW TAMPER PROOF THERMOSTAT
EBH-2	Q'MARK	QMKC2514W	1000	120-1-60	8.3	WITH Q'MARK MODEL NO. TA1TPAW TAMPER PROOF THERMOSTAT

\bigcirc		RA	DIANT	HEATE	R SCHEDULE
SYM.	MFR.	MODEL NO.	INPUT	VOLTAGE	REMARKS
RH-1	RE-VERBER-RAY	HL2-SB-40- 125	125,000 BTUH	120-1-60	COMPLETE WITH REFLECTORS, TUBE HANGERS, REFLECTOR CENTER SUPPORT, REFLECTOR END CAP, 1/2" FPT GAS INLET WITH SHUT-OFF VALVE, FLEXIBLE STAINLESS STEEL SUPPLY LINE AND BLOWER MOTOR, 4.8 AMPS © IGNITION
RH-2	RE-VERBER-RAY	HL2-SB-40- 125	125,000 BTUH	120-1-60	COMPLETE WITH REFLECTORS, TUBE HANGERS, REFLECTOR CENTER SUPPORT, REFLECTOR END CAP, 1/2" FPT GAS INLET WITH SHUT-OFF VALVE, FLEXIBLE STAINLESS STEEL SUPPLY LINE AND BLOWER MOTOR, 4.8 AMPS © IGNITION
RH-3	RE-VERBER-RAY	HL2-SB-40- 125	125,000 BTUH	120-1-60	COMPLETE WITH REFLECTORS, TUBE HANGERS, REFLECTOR CENTER SUPPORT, REFLECTOR END CAP, 1/2" FPT GAS INLET WITH SHUT-OFF VALVE, FLEXIBLE STAINLESS STEEL SUPPLY LINE AND BLOWER MOTOR, 4.8 AMPS © IGNITION

NOTE: INSTALL HEATERS PER MANUFACTURERS INSTRUCTIONS W/ REQUIRED CLEARANCE TO COMBUSTIBLES.

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_SEE PARTIAL FLOOR PLANS ON SHEET #P-2 FOR PIPING IN THIS AREA

PLUMBING CODED NOTES

P1.01 4" PROPANE GAS FROM CEILING SPACE DOWN TO RADIANT HEATER W/ GAS COCK, UNION, 6" DRIP LEG & REGULATOR AS REQUIRED.

PLUMBING SPECIFICATIONS 5. Insulating (Dielectric) Unions: Cor for installing unions. Install unio galvanic action and stop corrosio GENERAL CONDITIONS A. REFERENCE 1. For purposes of clearness and legibility, Drawings are essentially diagrammatic and although size and location of equipment are drawn non-ferrous piping" is indicated. CLEANING, FLUSHING, INSPECTION to scale wherever possible, Contractor shall make use of all data in 1. General: Clean exterior surfaces all of the Contract Documents and shall verify this information at the building site. Dimensions given in figures on the Drawings take superfluous materials and prepar (if any). Flush out piping syste precedence over scaled dimensions with required tests. Inspect ea 2. Drawings and Specifications to be considered cooperative, and anything of joints, supports and accessor appearing in Specifications but not on Drawings or vice versa, shall be considered part of the Contract and must be executed. PIPING TEST B. QUALITY ASSURANCE 1. Test pressure piping in accordance 1. Codes and Permits – Deliver official record of approval, by governing 2. Repair piping systems sections w agencies, to Engineer to transmit to Owner. disassembly and re-installation, required to overcome leakage. OPERATING INSTRUCTIONS compounds, mastics or other te Provide to Owner, after all equipment is in operation and at an agreeable time, competent instructors for the purpose of training 3. Drain test water from piping sys been completed. Owner's personnel in all phases of operation and maintenance o equipment and systems for both heating and cooling season. SCHEDULE OF PIPE MATERIALS, JOINTS D. DAMAGE AND EMERGENCY REPAIRS 1. Pipe and fittings for all services on the following schedule: 1. Contractor will be held responsible for any damage that may be incurred on any installed work of other trades, by any workman employed in the installation of work under this Contract. Provide SCHEDULE OF PIPE MATERIALS <u>Above</u> <u>Below</u> <u>Grade</u> <u>Grade</u> <u>Pipe</u> covering under workbench or under any work involving cutting and <u>Service</u> fitting of materials being installed, so as not to damage surrounding finished surfaces. Natural Gas Black S X Schedul MATERIALS PVC AS1 Sanitary Х X 1. Provide material and labor for that which is neither drawn nor specified and Vent Schedule but which is obviously a component part of and necessary to complete work which is customarily a part of work of similar character. Copper Type L Domestic Water 2. All materials, fixtures, and equipment shall be new, of the best grade, and installed according to manufacturer's recommendations. Additionally, the installation shall be according to the best standards Ductile Domestic Water 3" & Larger Х Water I of practices, complete with all accessories and connections necessary for proper operation, and in compliance with effective State or Local Domestic Water 2.5" & Smaller Copper, Type K Х Code requirements. 3. Where piping passes through floor, ceiling or wall, close space between pipe and construction with fire stop putty. PIPE HANGERS A. PRODUCTS <u>PIPE AND PIPE FITTINGS</u> 1. PIPE HANGERS A. QUALITY ASSURANCE a. Hangers: Pipe sizes 1/2" to 1. Welding Materials and Procedures: Conform to ASME Code, 1980 Standards of the American Welding Society, OBBC Chapter 4101:8 b. Hangers: Pipe sizes 2" to 4 Ohio Pressure Piping System Rules. 2. All piping systems in compliance with the Ohio Pressure Pressure System Rules must be performed by certified welders. Provide copies of welding certificate and mark all joints with certificate ID. c. Mutiple or Trapeze Hangers: and hanger rods. 2. HANGER RODS B. PRODUCTS a. Provide steel hanger rods, t 1. PIPE AND TUBE or continuous threaded. a. Steel Pipe: ASTM A53; Schedule 40 black. B. INSTALLATION b. Ductile Iron Water Pipe: ANSI A21.51. 1. Use side beam brackets for susp SPACING REQUIREMENTS c. Copper Water Tube: ASTM B88; type and temper as scheduled; seamless. 1. Support horizontal steel and copp d. PVC Plastic Pipe: ASTM D2665, Schedule 40. <u>Distance Betw</u> <u>Support (fee</u> <u>Nominal Pipe</u> <u>Size (inch)</u> 2. PIPE AND TUBE JOINTS AND FITTINGS 1/2 3/4 to 1 1/2 a. Malleable Iron Threaded Fittings: ASME B16.3. b. Malleable Iron Threaded Unions: Class 150. 2 and 2 1/2 3 and 4 c. Ductile Iron Fittings: ANSI A21.10. d. Wrought Copper/Bronze Solder Joint Fittings: ASME B16.22 (pressure fittings). 2. Install hangers to provide minimu covering and adjacent work. e. Solder: ASTM B32, Grade 95TA. Install a hanger within one foot f. PVC Pipe Fittings: ASTM D2665 for Schedule 40. 4. Use hangers which are vertically piping is erected. g. Solvent for PVC Jointing: ASTM D2564. Where several pipes can be insta . INSTALLATION provide multiple or trapeze hange General: Install pipe, tube and fittings in accordance with recognized PLUMBING industry practices which will achieve permanently-leakproof piping systems, capable of performing each indicated service without piping SUBMITTALS failure. Install each run with a minimum of joints and couplings, bu with adequate and accessible unions for disassembly and maintenance, 1. Furnish Shop Drawings for all wa drains, and cleanouts. replacement of valves and equipment. Reduce sizes (where indicated) by use of reduced fittings. Align piping accurately at connections, Submit detailed Shop Drawings c with 1/16" misalignment tolerance. type, and size. 2. Locate piping runs, except as otherwise indicated, vertically and horizontally (pitched to drain) and avoid diagonal runs wherever possible. Orient horizontal runs parallel with walls and column lines. DOMESTIC WATER HEATER 1. Provide water heaters shown on a. Factory insulated and steel Locate runs as shown or described by diagrams, details and notations or if not otherwise indicated, run piping in the shortest route which does not obstruct usable space or block access for servicing the on finish. b. Temperature/Pressure relief building and its equipment. Hold piping close to walls, overhead construction, columns and other structural members. Wherever possible c. Glass lined storage tank wit in finished and and occupied spaces, conceal piping from view. d. 150 psi working pressure. 3. Electrical Equipment Spaces: Do not run piping through transformer vaults and other electrical or electronic equipment spaces and e. 100% automatic shutoff upo f. Copper immersion heating ele enclosures. contactors. 4. Piping System Joints: Provide joints of the type indicated in each Adjustable immersion stat a piping system. a. Thread pipe and fittings shall have cut threads full and clean using sharp dies. Ream threaded ends to remove burns and restore full inside diameter. Apply pipe joint compound, or pipe joint tape (Teflon) where recommended by pipe/fitting manufacturer, on male threads at each joint and tighten joint U.L. approved. 2. Water Heater to be Bradford Whit A.O. Smith, Lochinvar, or Rheem are acceptable. 3. Warranty: to leave not more than three threads exposed. a. Water heater shall be cover Solder copper tube and fitting joints where indicated, in against tank failure due to accordance with recognized industry practice. Cut tube ends squarely, ream to full inside diameter, and clean outside of or overheating caused by b tube ends and inside of fittings. Apply solder flux to joint areas of both tubes and fittings. Insert tube full depth into SANITARY DRAINAGE SYSTEMS 1. Run all drainage and vent piping of drains, soil and waste piping fitting, and solder in a manner which will draw solder full depth and circumference of joint. Wipe excess solder from joint conditions. Do any work necess before it hardens. Slope branch soil and waste pipes foot of run. Make changes in d of "Y" branches and 1/4, 1/8, o "T's" and crosses may be used i Plastic Pipe/Tube Joints: Comply with manufacturer's instructions and recommendations and with applicable industry standards. Make solvent cemented joints ASTM D2865 and F402. 2.

b.

c.

man hu with many factor and a tradem with a sec		
ons in a manner which will prevent on where the "joining of ferrous and	3. Provide cleanouts at base of all stacks, at changes of direction and as shown on Drawings. Cleanouts on undergroundlines shall extend up flush with finished floor or grade. Provide cleanouts not over 50 ft. o.c. along straight runs. Cleanouts shall be size of pipe to which it is installed up to 4" in diameter. Pipe over 4" in diameter shall have a 4" cleanout.	A
of installed piping systems of re for application of specified coatings ms with clean water before proceeding ch run of each system for completion y items.	4. Terminate vent pipes at least 12" above roof. Make each vent terminal water-tight with the roof by using sheet lead (4 psf) with base not less than 24" in all directions from center of pipe and full height of pipe and turned down 2" inside of pipe. 5. Lay all sapitary severs with full length of each section resting on a	В
e with ANSI B31.	solid bed. Lay pipe starting at upgrade with spigot end of pipe pointing in direction of flow. All sanitary sewers shall be collected separately as shown on Drawings	
using new materials to the extent Do not use chemicals, stop-leak morary repair methods.	D. DOMESTIC WATER SUPPLY SYSTEMS 1. Install water system as shown on Drawings with hot and cold water	
ems after testing and repair work has	2. Provide unions at all equipment valves, strainer, etc., to facilitate removal for repair or replacement without disturbing adjacent piping.	
AND FITTINGS shall be as indicated	3. Provide temporary water service to area of construction for use of all trades. Plumbing Contractor shall be responsible for maintaining uninterrupted temporary water service throughout construction.	С
JOINTS AND FITTINGS Joints & Fittings teel Malleable Iron	 Chlorinate all domestic water systems. Flush out domestic system then hold a solution mixture of 50 ppm of chlorine in the system for a period of 24 hours. Drain and flush system until chlorine residual of .5 ppm. Chlorination shall be repeated if necessary and conform to AWWA Specifications C601-54 and be accepted by Local Health Dept. 	
40 Class 150 M D2665 ASTM D2665 With	E. NATURAL GAS PIPING SYSTEM	D
e 40 Solvent Weld (ASTM D2564) Cement) PVC Fittings Hard Soldered (Grade 95TA)	and shut-off cock at each connection. F. PLUMBING FIXTURES AND EQUIPMENT	
Iron Push On Joints	1. Provide plumbing fixtures shown on Drawings and listed in Fixture Schedule. Fixtures as manufactured by Mansfield, Kohler, or Eljer are approved equal.	Ŀ
Soft Soldered (Grade 95TA)	2. All countertop sinks to be individually valved under sinks using Wolverine Ball Valves.	F
	3. Faucets and Flush Valves to have renewable seats and discs and chrome plated trim. Delany and Watrous flush valves and Delta Faucets are acceptable on Base Bid.	Ľ
1 1/2", adjustable wrought steel	 All fixtures to be supported as indicated on Fixture Schedule. 5. After installation, all connecting piping to be flushed and valves properly adjusted. Labels, plaster, stains and other foreign material 	
", adjustable wrought steel clevis. Steel channels with welded spacers	to be removed from all fixtures so they are acceptable in and operation. Caulk all Fixtures at wall and floors. 6. Fixtures set to height as shown in schedule and in location shown on	\bigtriangleup
nreaded both ends, threaded one end,	Drawings, plumb, level and substantially supported. Immediately after the setting of any fixture, fitting or piping, protect it adequately without extra cost to the Owner. At all stages of the installation, pipe openings must be protected against the entrance of foreign material.	<u>SYM.</u> 1
ending hangers from wood trusses.	 Exposed piping to plumbing fixtures shall be chromium plated, iron pipe size, brass pipe and chromium plated stop valves where exposed and brass where concealed. 	2
per piping as follows: <u>een Hanger Rod</u> 2) <u>Diameter (inch)</u>	8. All fixtures shall be furnished and installed according to schedules on the Drawings. However, the Plumbing Contractor shall ascertain the correct amount of fixtures required by the plans as he will be held strictly responsible for furnishing and installing all items shown.	
3/8 3/8 3/8 5/8 m 1/2" clear space between finished	9. Contractor shall inform himself fully regarding peculiarities and limitations of space available for installation of all material and equipment to be installed under this Contract, and see that all equipment to be reached periodically for operation and maintenance is made easily accessible.	<u>SYM.</u> 1
of each horizontal elbow.	G. TESTS 1. Sanitary, Waste, and Vent Piping: All sanitary, storm, and water piping shall be tested per State Plumbing Code and/or requirements	
adjustable 1 1/2 minimum after lled in parallel and at same elevation,	of Local Authority.	
ers.	A. SUBMITTALS 1. Submit detailed Shop Drawings or descriptive literature for all insulation products to be used.	SYM. WH-1
ter heaters, plumbing fixtures, floor	2. All insulation and accessories shall have composite (insulation, jacket, and adhesive) fire and smoke hazard ratings as tested under procedure	
early indicating make, model, location,	25 and smoke developed 50. All calcium silicate shall be asbestos free to comply with OSHA regulations. The above requirements apply to pipe insulation and coverings used in plenums and shafts which act as active air ducts. All other areas shall have a 25 flame spread	
Drawings: jacketed storage tank with baked	rating and 150 smoke developed as tested above. No polyethylene insulation acceptable. 3. Materials: All insulation work shall conform to the following schedule:	SYM.
valve, ASME rated. n anode rod.	<u>Service Type Size Thickness Cons. & Exp.</u> Domestic Hot I 2" and 1" VB A.S.J.	
n pilot failure.	Water II under 1-1/2″ VB A.S.J. Domestic Cold I ALL 1″ VB A.S.J. Water II	
nd high temperature cutout.	<u>TYPES OF COVERING</u> ASJ – All Service Jacket VB – Vapor Barrier	
e as described on Drawings.	TYPES OF INSULATION	
not water neaters or equal size	OFG — Owens—Corning One Piece Fiberglass Pipe Insulation, K = .23, Density = 4.0#/ft ³ .	
ed by a 5—year limited warranty corrosion or due to metal failure uildup of sand, sediment, or sludge.	JFG — Johns—Manville "Micro—Lok" Fiberglass Pipe Insulation, K = .23, Density = 4.0#/ft ³ . KFG — Knauf Fiberglass Pipe Insulation, K = .23, Heavy Density. TYPE II	
as direct as possible. Actual location shall meet the various building ary to conceal piping.	APF — Armstrong Armaflex AP Pipe Insulation, K = .27 (1/2" on Domestic Hot and Cold Water Piping).	
s at an incline of at least 1/4" per irection of drainage piping by means or 1/16 bends except that sanitary		

\bigcirc			WATER HEATER SCHEDULE
SYM.	MFR.	MODEL NO.	DESCRIPTION
WH-1	Bradford white	LE230S3-3	ELECTRIC, GLASS LINED WATER HEATER, 30 GALLON CAPACITY, 4500 WATT ELEMENTS, VOLTAGE 240-1-60, 18 GALLON RECOVERY AT 90'F RISE, 3/4" HOT AND COLD WATER CONNECTIONS, 5-YEAR WARRANTY WEIGHT: 85 LBS. (SHIPPING)

\bigcirc			EXPANSION TANK SCHEDULE
SYM.	MFR.	MODEL NO.	DESCRIPTION
ET-1	WATTS	PLT-5-M1 (ORDER NO. 0067370)	THERMAL DIAPHRAGM EXPANSION TANK, 2.1 GAL. VOLUME, 1.5 GAL. ACCEPTANCE @ 20 PSI, 8" DIA. x 11" HIGH TANK, 150 PSI MAXIMUM WORKING PRESSURE, 200'F MAXIMUM ALLOWABLE WORKING TEMPERATURE, 3/4" SYSTEM CONNECTION WEIGHT: 6 LBS. (SHIPPING)

FIXTURE SCHED	ULE				0		
DESCRIPTION		CONNECTIONS (IN INCHES)					
	HW	CW	TRAP	SAN	MT. HT.		
LL NO. 215AA.004.020 "CADEL PRO" WAIER CLOSET (AMERICAN 88A.004.020 TANK WITH TRIP LEVER ON LEFT SIDE AND AMERICAN 17A.101.020 ELONGATED BOWL WITH AMERICAN STANDARD MODEL FRONT SEAT), HANDICAPPED, WATERSAVER (1.6 GPF), VITREOUS SIPHON JET, KEENEY MODEL NO. 2780PCLF (3/8") ANGLED Y MODEL NO. K20288 ESCUTCHEON PLATE, KEENEY MODEL NO. 3") BRAIDED STAINLESS STEEL SUPPLY LINE, HERCULES MODEL " EXTRA THICK WAX RING, AND HERCULES MODEL NO. 90124 LET BOLTS		1/2	3	3	FLOOR (16½" RIM)		
L NO. 0356.015.020 "LUCERNE" (20x18) LAVATORY, HANDICAPPED, JNG (WALL HANGERS FURNISHED), 3-HOLE CAST FOR AMERICAN 540.177.002 "MONTERREY" GOOSENECK FAUCET WITH VANDAL HANDLES AND VANDAL RESISTANT (0.5 GPM) AERATOR, KEENEY -1/4") CAST BRASS OPEN GRID STRAINER WITH OFFSET TAILPIECE, 3PC (1-1/4") CAST BRASS P-TRAP WITH CLEANOUT, KEENEY /8") ANGLED HANDWHEEL STOP (QTY. 2), KEENEY MODEL NO. TE (QTY. 2), KEENEY MODEL NO. PP23809LF 12" LONG (3/8") SUPPLY LINE (QTY. 2), WATTS MODEL NO. LFUSG-B-M2 (ORDER ATIC MIXING VALVE (ASSE 1070 CERTIFIED), KEENEY MODEL NO. 3/8") BRAIDED STAINLESS STEEL SUPPLY LINE (QTY. 2), AND 8-AS-L "LAV-SHIELD" LAVATORY PROTECTIVE ENCLOSURE WITH VS	1/2	1/2	1–1/4	1–1/2	WALL (34" RIM)		
"UTILATUB" SINGLE COMPARTMENT UTILITY SINK WITH STEEL LEGS, AMERICAN STANDARD MODEL NO. 7500.170.002 "MONTERREY" VANDAL RESISTANT WRIST BLADE HANDLES AND VANDAL RESISTANT EY MODEL NO. 140PC $(1-1/2")$ CAST BRASS STRAIGHT TAILPIECE, VEY MODEL NO. 5307PC $(1-1/2")$ CAST BRASS P-TRAP WITH EL NO. 2780PCLF $(3/8")$ ANGLED HANDWHEEL STOP (QTY. 2), 288 ESCUTCHEON PLATE (QTY. 2), AND KEENEY MODEL NO. (8") BRAIDED STAINLESS STEEL SUPPLY LINE (QTY. 2)	1/2	1/2	1-1/2	1-1/2	Floor (36" RIM)		
NO. HAC8SS-WF ELECTRIC (VOLTAGE 120–1–60, FULL LOAD ER, HANDICAPPED, WALL HUNG (WALL HANGERS FURNISHED), PC (1–1/4") CAST BRASS P-TRAP WITH CLEANOUT, AND KEENEY /8") ANGLED HANDWHEEL STOP. W/ BOTTLE FILLER.		1/2	1–1/4	1-1/2	WALL (32" RIM)		
-314 STAINLESS STEEL WALL MOUNTED EMERGENCY EYEWASH THERMOSTATIC MIXING VALVE, TWIN SOFT-FLOW EYEWASH HEADS AYHEAD COVERS, SAFETY YELLOW.	3/4	3/4	1-3/4	2	WALL		
-e27CP sill faucet with vacuum breaker, t-handle, and JTLet		3/4			WALL (30")		
QT-SE-WC NON-FREEZE HOSE BIBB WITH VACUUM BREAKER, ND 3/4" HOSE THREADED OUTLET		3/4			WALL (30")		

FLOOR DRAIN SCHEDULE					
DESCRIPTION	GRATE TYPE	DRAIN TYPE			
D3-NB CAST IRON FLOOR DRAIN WITH FLASHING COLLAR, SPEEDI IECTION, AND SMITH MODEL NO. 2692–03 INLINE TRAP SEALER	NICKEL BRONZE	GENERAL			
L03–A06NB CAST IRON FLOOR DRAIN WITH FLASHING COLLAR, ITH ROUND TOP, SPEEDI–SET (PVC) OUTLET CONNECTION, AND -03 INLINE TRAP SEALER (ASSE 1072 CERTIFIED)	NICKEL BRONZE	TOILET AND SHOWER			

CLEANOUT SCHEDULE								
DESCRIPTION	COVER TYPE	CLEANOUT TYPE						
log—NB Cast Iron cleanout with Bronze plug and speedi Iection	NICKEL BRONZE	INTERIOR						
L04—CI CAST IRON CLEANOUT WITH BRONZE PLUG AND SPEEDI IECTION	CAST IRON	EXTERIOR						

		GENERAL NOTES	
1	10.	ALL WIRING TO BE A MINIMUM OF #12 AWG COPPER CONDUCTOR FOR POWER AND LIGHTING CIRCUITS UNLESS NOTED OTHERWISE. ALL WIRING TO BE COPPER TYPE THHN, XHHW, OR THWN, 600-V (75° C). ALUMINUM CONDUCTORS MAY BE USED FOR FEEDERS #1 SIZE AND LARGER.	
	11.	MINIMUM 14 AWG CONDUCTOR FOR CONTROL CIRCUITS.	
	12.	MINIMUM 10 AWG FOR HOME RUN CONDUCTORS AND 20 AMP 120-V BRANCH CIRCUITS LONGER THAN 150 FEET.	
	13.	PULL ALL CONDUCTORS INTO RACEWAY AT SAME TIME.	
G	14.	IDENTIFICATION TAGGING IS REQUIRED ON ALL PANELBOARD, JUNCTION BOXES, RELAYS, DISCONNECT SWITCHES, STARTERS, CONTROL PANELS, PUSHBUTTONS, AND MISC. ELECTRICAL DEVICES INSTALLED BY CONTRACTOR. USE ENGRAVED LAMACOID LABEL, 1" WIDE BY 2" LONG MINIMUM, BLACK WITH WHITE LETTERS, MINIMUM 3/4" HIGH.	
	15.	CONTRACTOR SHALL COORDINATE THE PROPER INSTALLATION OF ALL POWER WIRING AND TEMPERATURE CONTROL WIRING (INCLUDING INTERLOCKS AND STARTERS) WITH PROPER SUBCONTRACTORS AS REQUIRED FOR A COMPLETE WORKING SYSTEM.	
ΪN	16.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING A PROPERLY-RATED LOCAL DISCONNECT SWITCH ON ALL ITEMS OF ELECTRICAL EQUIPMENT WHICH DO NOT HAVE AN INTEGRAL LOCAL DISCONNECTING MEANS, WHETHER OR NOT SPECIFICALLY SHOWN ON THE DRAWINGS. WHERE REQUIRED BY N.E.C. LOCAL DISCONNECT SHALL BE FUSIBLE OR HACR-RATED.	
	17.	PANEL AND ELECTRICAL EQUIPMENT LOCATIONS SHALL BE COORDINATED WITH ALL CONTRACTORS PRIOR TO INSTALLATION TO INSURE THE INSTALLATION IS IN STRICT ACCORDANCE WITH ALL WORKING SPACE & DEDICATED ELECTRICAL SPACE REQUIREMENTS PER N.F.C. ART. 110	

- 18. EC SHALL SEAL AROUND ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED FLOORS AND WALLS.
- 19. CONNECT ALL BATTERY-POWER EXIT AND EMERGENCY LIGHTS AHEAD OF SWITCH ON LIGHTING CIRCUIT IN AREA LOCATED.
- 20. EC TO PROVIDE 1/2EMT CONDUIT FOR ALL OVERHEAD DOOR'S LOW VOLTAGE DEVICES AS DIRECTED BY OVERHEAD DOOR SUPPLIER. EC TO PROVIDE 1/2EMT EACH OVERHEAD DOOR LOW VOLTAGE DEVICE TO 10'-0"AFF AS DIRECTED BY OVERHEAD DOOR SUPPLIER. TERMINATE EACH END WITH PLASTIC BUSHINGS.
- 21. ALL FIRE ALARM SYSTEM WORK AND DESIGN, IF REQUIRED, TO BE DONE BY OWNER'S FIRE ALARM SYSTEM CONTRACTOR.
- 22. ALL TELEPHONE/DATA/CATV SYSTEM WORK AND DESIGN TO BE DONE BY OWNER'S TECHNOLOGY SYSTEM CONTRACTOR.
- 23. ALL SECURITY, CCTV, & ACCESS CONTROL SYSTEM WORK AND DESIGN TO BE DONE BY OWNER'S SECURITY SYSTEM CONTRACTOR.
- 24. ALL PUBLIC ADDRESS SYSTEM WORK AND DESIGN TO BE DONE BY OWNER'S PUBLIC ADDRESS SYSTEM CONTRACTOR.

SYMBOL	DESCRIPTION
\$	SINGLE POLE SWITCH WITH STAINLESS STEEL COVERPLATE. MOUNT AT 48"AFF TO CENTERLINE UNLESS OTHERWISE NOTED.
\$ 3,4	3-WAY, 4-WAY SINGLE POLE SWITCH WITH STAINLESS STEEL COVERPLATE. MOUNT AT 48"AFF TO CENTERLINE UNLESS OTHERWISE NOTED.
\$os	SENSORWORX #SWX-123-WH OR EQUIVALENT DUAL TECHNOLOGY WALL PASSIVE OCCUPANCY SENSOR SWITCH WITH STAINLESS STEEL COVERPLATE. (3-WAY AND 4-WAY SHALL BE SIMILAR USING LINK WIRING). MOUNT T 48"AFF TO CENTERLINE UNLESS NOTED OTHERWISE.
\$ ^{WP} EF	MANUAL MOTOR STARTER WITH "HAND-OFF-AUTO" SELECTOR SWITCH FOR EXHAUST FAN. MOUNT NEXT TO EXHAUST FAN MOTOR AS DIRECTED MC. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. (WP-INDICATES TO PROVIDE A WEATHERPROOF SWITCH.)
\$ ^M IL	MANUAL MOTOR STARTER WITH "HAND-OFF-AUTO" SELECTOR SWITCH FOR INTAKE LOUVER. MOUNT NEXT TO INTAKE LOUVER MOTOR AS DIRECTED MC. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
\$ _{OD}	SINGLE POLE SWITCH FOR OVERHEAD DOOR INTAKE LOUVER. MOUNT NEXT TO OVERHEAD DOOR MOTOR AS DIRECTED OVERHEAD DOOR SUPPLIER. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. (WP-PROVIDE A WEATHERPROOF SINGLE POLE SWITCH.)
ф	20A, 125V, DUPLEX RECEPTACLE WITH STAINLESS STEEL COVERPLATE. MOUNT AT 24"AFF TO CENTERLINE UNLESS OTHERWISE NOTED. <u>GFI</u> - HEAVY DUTY TYPE GROUND FAULT INTERRUPTING <u>WP</u> - WEATHERPROOF COVER <u>AC</u> - ABOVE COUNTERTOP <u>EWC</u> - MOUNT BEHIND ELECTRIC WATER COOLER. <u>WH2</u> - MOUNT NEXT TO TANKLESS GAS WATER HEATER "WH-2" (4.0FLA, 120V, 1PH) <u>RH/CLG</u> - CEILING MOUNT NEXT TO RADIANT HEATER (4.8FLA, 120V, 1PH) AS DIRECTED BY MC. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. <u>OD</u> - WALL MOUNT NEXT TO
⊕ GFI	TWO (2) 20A, 125V, DUPLEX RECEPTACLES MOUNTED IN THE SAME BOX WITH COMMON STAINLESS STEEL COVERPLATE. MOUNT AT 24"AFF TO CENTERLINE UNLESS OTHERWISE NOTED. (GFI - INDICATES BOTH DUPLEX RECEPTACLES TO BE HEAVY DUTY "GFI" TYPE RECEPTACLES.)
EF-3	EXHAUST FAN EF-1 (19.4W, 120V, 1PH). EXHAUST FAN CONTAINS A FACTORY INSTALLED DISCONNECT SWITCH.
EF-4 M	EXHAUST FAN EF-1 (26.0W, 120V, 1PH). EXHAUST FAN CONTAINS A FACTORY INSTALLED DISCONNECT SWITCH.
Ū	120V THERMOSTAT FURNISHED BY MC AND INTALLED AND WIRED BY EC AS DIRECTED BY MC.
₩	POINT OF CONNECTION TO ELECTRICAL EQUIPMENT. VERIFY EXACT LOCATION WITH RESPECTIVE EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
EBH1,2	POINT OF CONNECTION TO ELECTRIC BASEBOARD HEATER EBH-1,2 (1.5KW, 120V, 1PH). HEATER CONTAINS AN INTEGRAL DISCONNECT SWITCH. CONNECT AS DIRECTED BY MC.
🔀 EF-1,2	POINT OF CONNECTION TO EXHAUST FAN EF-1,2 (1/3HP, 120V, 1PH) CONNECT AS DIRECTED BY MC. INTERLOCK WITH RESPECTIVE "IL" THROUGH 120V "CO" DETECTOR AS
88 II -1 2	SHOWN, AS DIRECTED BY MC, AND AS REQUIRED FOR A COMPLETE WORKING SYSTEM. POINT OF CONNECTION TO INTAKE LOUVER (120W, 120V, 1PH). CONNECT AS DIRECTED
	BY MC. POINT OF CONNECTION TO WATER HEATER AIR COMPRESSOR (22.0FLA, 240V, 1PH).
	CONNECT AS DIRECTED BY AIR COMPRESSOR SUPPLIER.
	DIRECTED BY PRESSURE WASHER SUPPLIER.
WH1	DIRECTED BY PC.
EBH1	CONNECT AS DIRECTED BY MC. HEATER HAS AN INTEGRAL DISCONNECT SWITCH.
EBH2	CONNECT AS DIRECTED BY MC. HEATER HAS AN INTEGRAL DISCONNECT SWITCH.
XX OD	AS DIRECTED BY OVERHEAD DOOR SUPPLIER.
	POINT OF CONNECTION TO OVERHEAD DOOR MOTOR CONTROL. CONNECT AS DIRECTED BY OVERHEAD DOOR SUPPLIER.
4	DISCONNECT SWITCH. FRAME SIZE/# OF POLES/# OF FUSES/VOLTAGE RATING/ ENCLOSURE TYPE.
ЧШWH	30A/2P/NF/250V/NEMA 1 DISCONNECT SWITCH FOR WATER HEATER. MOUNT NEXT TO WATER HEATER AS DIRECTED BY PC.
└ AC	60A/2P/NF/250V/NEMA 1 DISCONNECT SWITCH FOR AIR COMPRESSOR
ЧРW	100A/3P/NF/600V/NEMA 3R DISCONNECT SWITCH FOR POWER WASHER.
WP	RAISE, LOWER, STOP OVERHEAD DOOR PUSHBUTTON. (WP=INDICATES A WEATHERPROOF PUSHBUTTON).
\odot	120V CARBON MONOXIDE DETECTOR TO BE FURNISHED BY MC AND INSTALLED AND WIRE BY EC AS DIRECTED BY MC. INTERLOCK DETECTOR WITH RESPECTIVE EXHAUST FAN AND INTAKE LOUVER AS REQUIRED WHEN DETECTOR IS ACTIVATED THE EXHAUST FAN TURNS "ON" AND THE INTAKE LOUVER OPENS. COORDINATE ALL WORK WITH MC AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
0	JUNCTION BOX.
	POWER PANEL
A3	
<u> </u>	HOI, NEUIRAL, GROUND
	2-#10CU, 1-#10CU GND, 3/4"C.
	2-#8CU 1-#10CU GND 1"C
	3-#8CU, 1-#10CU GND, 1"C
<u> </u>	2-#6CU, 1-#10CU GND, 1"C
<u> </u>	3-#6CU, 1-#10CU GND, 1"C
<u> </u>	4-#6CU, 1-#10CU GND, 1"C
	4-#4CU, 1-#8CU GND, 1-1/4"C
<u> </u>	4-#1CU, 1-#6CU GND, 1-1/2"C
BFG AFF	BELOW FINISHED GRADE ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFC	BELOW FINISHED CEILING
EC	ELECTRICAL CONTRACTOR
MC	
РС GC	PLUMBING CONTRACTOR GENERAL CONTRACTOR

	LUMINAIRE SCHEDULE							
TYPE	MFG	CAT NO.	VOLT	AMPS	MTG			
A	DAYBRITE - 14,000/21,000 LUMEN WET LOCATION LED HIGH BAY LUMINAIRE	HCY-1421L-8CST-UN3-4000K	UNV	(1) 136.3W LED, 4000K	CEILING SUSPEND AT 17'-0" TO BOTTOM OF LUMINAIRE AS DIRECTED BY LUMINAIRE SUPPLIER.			
В	DAY-BRITE - 4'-0" LONG LED SWITCHABLE STRIP LUMINAIRE	SDS84998L8CST-UNV-DIM	UNV	(1) 21/31/41W LED 3500K/4000K/5000K	CEILING SURFACE			
С	DAY-BRITE - 8'-0" LONG LED SWITCHABLE STRIP LUMINAIRE	SDS84998L8CST-UNV-DIM	UNV	(1) 40/60/80W LED 3500K/4000K/5000K	CEILING SURFACE			
D	CHLORIDE - LED EMERGENCY LIGHT WITH 90 MINUTE BATTERY	CLU3-N-W	120-277	INTEGRAL	WALL SURFACE AT HEIGHT AFF AS DIRECTED BY LUMINAIRE SUPPLIER. SEE NOTE #4			
D1	CHLORIDE - WET LOCATION LED EMERGENCY LIGHT WITH 90 MINUTE BATTERY	65X6N24W12	120-277	INTEGRAL	WALL SURFACE AT HEIGHT AFF AS DIRECTED BY LUMINAIRE SUPPLIER. SEE NOTE #4			
E	CHLORIDE - COMBINATION LED EXIT SIGN/ EMERGENCY LIGHT WITH REMOTE CAPABILITY & 90 MINUTE BATTERY BACK-UP	VLTCR3R	120/277	INTEGRAL	UNIVERSAL			
F	CHLORIDE - LED REMOTE EMERGENCY LIGHT WITH TWIN HEADS	VLL2RGO	3.6V	INTEGRAL	WALL SURFACE ABOVE DOOR			
G	GARDCO - 12,500 LUMEN WEDGE WALL PACK WITH INTEGRAL PHOTOCELL	GWM-A14-840-T3M-UNV-PCB-XXX	120	(1) 77.0W LED, 4000K	WALL SURFACE AT HEIGHT TO CENTERLINE OF LUMINAIRE AS INDICATED ON DRAWINGS			
G1	GARDCO - 5,000 LUMEN WEDGE WALL PACK WITH INTEGRAL PHOTOCELL	GWM-A08-840-T3M-UNV-PCB-XXX	120	(1) 30.0W LED, 4000K	WALL SURFACE ABOVE DOOR			

NOTES:
 SUBSCRIPT "NL" INDICATES LUMINAIRE TO BE CONNECTED AHEAD OF SWITCH TO ACT AS A "NIGHT LIGHT".
 CONNECT ALL BATTERY-POWER EXIT AND EMERGENCY LIGHTS AHEAD OF SWITCH ON LIGHTING CIRCUIT IN AREA LOCATED.
 VERIFY LED LAMP COLORS OF ALL LUMINAIRE WITH OWNER & ARCHITECT PRIOR TO ORDERING.
 WERE TO CETTING MOUNT EMERGENCY LIGHT AS DIRECTED BY LUMINAIRE SUPPLIER.

ELECTRICAL EXISTING MOTOR (1000A,						
LOAD NO.	DESC					
1	THE EXISTIN DEMAND PI FOR EXISTIN CENTER "M WHICH IS 1 3PH, 4W. TH ELECTRICAL IS 187 X 1.2 = 234AMPS					
2	NEW PANEL					
THE TOTAL LO EXISTING 100 HANDLE THE	DAD AS SHO 0AMP, 277/4 ELECTRICAL I					

CLG" INDICATES TO CEILING MOUNT EMERGENCY LIGHT AS DIRECTED BY LUMINAIRE SUPPLIER.
 EQUIVALENT LUMINAIRES AS MANUFACTURED BY BARON, LITHONIA & COOPER. EQUIVALENT MANUFACTURER SHALL PROVIDE LIGHTING CALCULATION FOR EACH SPACE.

SINGLE LINE DIAGRAM N.T.S.

DISTRIBUTION PANEL SCHEDULE									
PANEL: PANEL "GHA" TYPE: NEMA 3R MOUNTING: SURFACE									
FEATURES: X GROUND BUS X SOLID NEUTRAL X MAIN CIRCUIT BREAKER									
SERVICE: 200 AMPS	277/480) VC	LTS -	3 PH	ASE	<u>4</u> V	VIRE 6	0 HZ 22,000	A.I.C.
LOAD	WIRE SIZE	CB/P	CIRC. NO.	АВС	CIRC. NO.	CB/P	WIRE SIZE	LOAD	
1176 SOUTH OD, 100	12	20/1	1	│∲│	2	80/3	4	• XFMR "T-LA"	18750
1176 WEST OD, 100	12	20/1	3] ♦	4	80/3	4	XFMR "T-LA"	18750
1176 WEST OD, 100	12	20/1	5] ∳	6	20/1	12	LTG., 100 SOUTH	2453
1176 WEST OD, 100	12	20/1	7]♦[]	8	20/1	12	LTG., 100 NORTH	1909
1176 WEST OD, 100	12	20/1	9] ♦	10	20/1	12	LTG., EXTERIOR BLDG	706
1176 NORTH OD, 100	12	20/1	11] •	12	75/3	4	• POWER WASHER, 100a	16232
- SPARE	12	20/1	13]	14	75/3	4	• POWER WASHER, 100a	16232
- SPARE	12	20/1	15	││∳│	16	75/3	4	POWER WASHER, 100a	16232
- SPARE	12	20/1	17	│││∳	18	20/1	-	SPARE	-
- SPARE	12	20/1	19	 	20	20/1	-	SPARE	-
- SPACE	-	-	21	1 ↓	22	-	-	SPACE	-
- SPACE	-	-	23	111∳	24	-	-	SPACE	-
- SPACE	-	-	25	┤┥ ┃┃	26	-	-	SPACE	-
- SPACE	-	-	27	1 ∳ 	28	-	-	SPACE	-
- SPACE	-	-	29	111∳	30	-	-	SPACE	-
- SPACE	-	-	31	141	32	-	-	SPACE	-
- SPACE	-	-	33	1 ∳ 	34	-	-	SPACE	-
- SPACE	-	-	35	1114	36	-	-	SPACE	-
- SPACE	-	-	37	141	38	-	-	SPACE	-
- SPACE	-	-	39	││∳│	40	-	-	SPACE	-
- SPACE	-	-	41	1114	42	-	-	SPACE	-
LOADS: A = 39,243W			В	= 38,040	W.		C	= 21,037W	
TOTAL LOAD: <u>3 X PHA = 117,729W</u> = 142 AMPS @ 277/480VO				H, 4W					
<u>NOTES:</u> 1.									

									vio o i vini			
FEA	TURES: X GR	OUND BUS	Х	SOLID N	IEUTRAL	Х	MAIN	CIRCUIT I	BREAKER			
SER	/ICE: 200	AMPS	120/240) vc	OLTS -	1 Pł	HASE	<u>3</u> W	VIRE <u>6</u>	0 HZ 22,000	A.I.C.	
	LOAD		WIRE SIZE	CB/P	CIRC. NO.	АВ	CIRC. NO.	CB/P	WIRE SIZE	SPARE		
141	141 LTG., 101,102		12	20/1	1	•	2	50/2	-	• FUTURE WELDER	3768	
864	EF-1 & IL-1, 100		12	20/1	3	1 ∳	4	50/2	-	• FUTURE WELDER	3768	
864	864 EF-2 & IL-2, 100		12	20/1	5	│ ∳ │	6	40/2	8	• AIR COMPRESSOR, 100	2640	
26	26 EF-4, 101 576 RH, 100 576 RH, 100 576 RH, 100 576 EBH-1, 102 1000 EBH-2, 101			20/1	7	│ 	8	40/2	8	• AIR COMPRESSOR, 100	2640	
576				20/1	9	│ ∳ │	10	30/2	12	• WH-1, 101	2250	
576				20/1	11]	12	30/2	12	♦ WH-1, 101	2250	
576				20/1	13]	14	20/1	12	REC., 100 (SOUTH)	720	
750				20/1	15]	16	20/1	12	REC., 100 (SOUTH)	720	
1000				20/1	17]	18	20/1	10	REC., 100 (WEST)	900	
720	REC., 101		10	20/1	19]	20	20/1	10	REC., 100 (NORTH)	720	
720	REC., 101A,102	C., 101A,102		20/1	21]	22	20/1	-	SPARE	-	
1500	REC., 100 (EWC)		12	20/1	23]	24	20/1	-	SPARE	-	
-	SPARE		-	20/1	25]	26	20/1	-	SPARE	-	
-	SPARE		-	20/1	27]	28	20/1	-	SPARE	-	
-	SPARE		-	20/1	29]	30	30/1	-	SPARE	-	
-	SPARE		-	20/1	31	│ │∳	32	20/1	-	SPARE	-	
-	SPARE		-	20/1	33	│ ∳ │	34	20/1	-	SPARE	-	
-	SPARE		-	20/1	35	│ │ ∳ │	36	20/1	-	SPARE	-	
-	SPARE		-	20/1	37	│ ∳ │	38	20/1	-	SPARE	-	
-	SPARE		-	20/1	39] ∳	40	20/1	-	SPARE	-	
-	SPARE		-	20/1	41	│ ∳ │	42	20/1	-	SPARE	-	
LOA	LOADS: A = 14,155W B = 14,534W											
тот	AL LOAD:	2 X PHB =	29,068	V								
		= 121 AM	PS @ 12	0/240VC	DLTS, 1PH	1, 3W						

- WORK INCLUDED: WORK INCLUDED IS SUBJECT TO THE GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS OF THE ENTIRE OPERATION. THE CONTRACTORS AND/OR SUBCONTRACTORS FOR THIS PORTION OF THE WORK ARE REQUIRED TO REFER ESPECIALLY THERETO.
- 1.a. THE WORK COVERED UNDER THIS SPECIFICATION SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUI AND SERVICES NECESSARY FOR, OR INCIDENTAL TO PROPER INSTALLATION AND COMPLETION OF ELEC WORK AS INDICATED ON THE DRAWINGS OR HEREIN SPECIFIED, OR BOTH.
- 1.b. THE CONTRACT DOCUMENTS ARE COMPLIMENTARY AND WHAT IS CALLED FOR BY ONE SHALL BE AS BI IF CALL FOR BY ALL. IF THE DRAWINGS AND SPECIFICATIONS ARE IN CONFLICT, THE MOST COMPREHEN OF WORK AND BETTER QUALITY MATERIAL AS CALLED FOR IN ONE DOCUMENT SHALL BE USED FOR BID PURPOSED. CONFLICT IN THE DRAWINGS AND SPECIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT-ENGINEER FOR CLARIFICATION. MISUNDERSTANDING OF DRAWINGS AND SPECIFICATIONS CLARIFIED BY THE ARCHITECT/ENGINEER WHOSE DECISION SHALL BE FINAL.
- 1.c. ALL PORTIONS OF OTHER SECTIONS OF SPECIFICATIONS AND DRAWINGS WHICH CAN BE MADE TO APP BE CONSIDERED A PART OF THE SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL REVIEW OTHER OF THE SPECIFICATIONS AND DRAWINGS AND INCLUDE IN HIS BID ALL ELECTRICAL WORK REQUIRED TO COMPLETE ALL WORK.
- 1.d. WHERE THE LETTER "EC" IS USED IN THESE SPECIFICATIONS IT IS RELATIVE TO THE ELECTRICAL CONTRACT1.e. ANY APPARATUS, APPLIANCE, MATERIAL, OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED
- SPECIFICATIONS, OR VICE-VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK O AND PERFECT ON ALL RESPECTS AND REDO FOR OPERATION EVEN IF NOT PARTICULARLY SPECIFIED, SH FURNISHED, DELIVERED AND INSTALLED BY THE EC WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- 1.f. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION AND OPERATION, SHALL BE INCLUDED IN THE EC'S ESTIMATE, THE SAME AS IF HEREIN SPECIFIED OR SHOWN.
- 1.g. WITH SUBMISSION OF BID, THE EC SHALL GIVE WRITTEN NOTICE TO THE ARCHITECT OF ANY MATERIALS APPARATUS BELIEVED INADEQUATE OR UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES, ANI NECESSARY ITEMS OR WORK OMITTED. IN THE ABSENCE OF SUCH WRITTEN NOTICE, IT IS MUTUALLY AG THE EC HAS INCLUDED THE COST OF ALL REQUIRED ITEMS IN HIS PROPOSAL, AND THAT HE WILL BE RES FOR THE APPROVED SATISFACTORY FUNCTIONING OF OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPEN
- 2. <u>ELECTRICAL DRAWINGS:</u> THE DRAWINGS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS. T DRAWINGS INDICATE THE GENERAL LAYOUT OF EQUIPMENT AND ALL DIMENSIONS AND CLEARANCES SHO VERIFIED IN THE FIELD. ALL DISCREPANCIES OF DIMENSIONS TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT-ENGINEER FOR DISPOSITION.
- 3. <u>ELECTRICAL DRAWINGS</u>: THE ARCHITECT/ENGINEER SHALL RESERVE THE RIGHT TO MAKE MINOR ADJUST LOCATIONS OF OUTLETS, SWITCHES, FIXTURES, CONDUIT, ETC., AND EQUIPMENT WHERE HE CONSIDERS SU ADJUSTMENTS DESIRABLE IN THE INTEREST OF CONCEALING WORK OR PRESENTING A BETTER APPEARANCE EXPOSED. ANY SUCH CHANGES SHALL BE ANTICIPATED AND REQUESTED SUFFICIENTLY IN ADVANCE AS TO CAUSE EXTRA WORK ON THE PART OF THE CONTRACTOR, OR UNDULY DELAY THE WORK. COORDINATE WO ADVANCE WITH ALL OTHER TRADES AND REPORT IMMEDIATELY AND ANY DIFFICULTIES WHICH CAN BE AN
- 4. ADDENDA: THE DRAWINGS MAY BE SUPERSEDED BY LATER REVISED OR DETAILED DRAWINGS OR SPECIFICATION ADDENDA. REFER TO GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS.
- 5. SHOP DRAWINGS: BEFORE WORK IS DONE ON ANY ITEM OF EQUIPMENT, SUBMIT SIX (6) COPIES OF EACH OF THE FOLLOWING: SHOP DRAWINGS, CATALOG CUTS, MANUFACTURER'S CATALOG NUMBERS AND FULL AND COMPLETE INFORMATION FOR REVIEW. SUBMIT SHOP DRAWINGS CONTAINING OR MARKED WITH IDENTIFICATION AND INFORMATION DESCRIBED BELOW. ANY SHOP DRAWINGS NOT IN COMPLIANCE WITH THESE REQUIREMENTS WILL BE RETURNED, WITHOUT REVIEW, FOR CORRECTION AND RESUBMITTAL. ASSEMBLE AND SUBMIT IN LOGICALLY ARRANGED FOLDERS, ALL INSTRUCTION BULLETINS, LUBRICATION SCHEDULES, OPERATION INSTRUCTIONS, PARTS LISTS, PAMPHLETS FOR ELECTRICAL EQUIPMENT AND APPARATUS FURNISHED.
- 5.a. SHOP DRAWING IDENTIFICATION: INCLUDE PROJECT NAME AND ARCHITECT-ENGINEER'S JOB NUMBER, AND BY NAME, NUMBER AND INTENDED USE AS DESIGNATED BY THE CONTRACT DRAWINGS AND SPECIFICATION, SUCH AS "LIGHTING PANEL "LP-6".
- 5.b. SHOP DRAWING INFORMATION: INCLUDE FOLLOWING DATA: MANUFACTURER'S MODEL NUMBER OR CATALOG NUMBER, SIZE AND PERFORMANCE CURVES AND DATA. INDICATE OPERATING POINT ON CURVES AND TABULAR DATA FOR EACH PIECE OF EQUIPMENT THAT CURVES OR DATA REPRESENT. INDICATION OF ALL PERFORMANCE DATA, CONSTRUCTION MATERIAL FINISHES AND MODIFICATIONS TO MANUFACTURER'S STANDARD DESIGN SPECIFIED. ROUGHING-IN, FOUNDATION, AND SUPPORT POINTS DIMENSIONS IF APPLICABLE.
- 6. OPERATING MANUALS AND PARTS LISTS: IN ADDITION TO REQUIREMENTS OF GENERAL CONDITIONS, INCLUDE THE FOLLOWING: NAME, ADDRESS, AND TELEPHONE NUMBER OF LOCAL SUPPLIER OR MANUFACTURER'S REPRESENTATIVE FOR EACH PIECE OF EQUIPMENT. ASSEMBLE MANUALS IN SEPARATE BINDER OR BINDERS FOR EACH SYSTEM. INCLUDE CHARTS OR DIAGRAMS SHOWING ESSENTIAL FEATURES OF THE SYSTEM, AND INCLUDE A BRIEF DESCRIPTION OF THE SYSTEM. SUBMIT TWO (2) COPIES OF ABOVE BEFORE BINDING IN OPERATING MANUAL TO THE ARCHITECT-ENGINEER FOR APPROVAL.
- 7. <u>RECORD DRAWINGS</u>: RECEIVE FROM THE ARCHITECT-ENGINEER A COMPLETE SET OF DRAWINGS. NOTE IN RED PENCIL ON THIS SET ANY DEVIATIONS OF INSTALLATION. SUBMIT MARKED SET OF DRAWINGS TO THE ARCHITECT-ENGINEER.
- B. <u>COORDINATION AND SCHEDULING:</u> ALL PHASES AND SCHEDULING OF WORK TO BE CLOSELY COORDINATED WITH THE OWNER AND AUTHORIZED IN WRITING BY THE OWNER AT LEAST ONE WEEK PRIOR TO THE EXECUTION OF ANY WORK.
- **SUPERVISION:** THE CONTRACTOR SHALL HAVE AN EXPERIENCED SUPERINTENDENT CONSTANTLY ON THE SITE TO SUPERVISE ALL WORK OF ELECTRICAL CONTRACT.
- **10. <u>TEMPORARY ELECTRICAL SERVICE:</u>** TEMPORARY ELECTRIC SERVICE SHALL BE PROVIDED AS REQUIRED.

SPECIFICATIONS

11. MATERIALS: PROVIDE MATERIALS AND EQUIPMENT BEARING CERTIFICATION OF UL WHERE SUCH LABELS OR STAMPS

		ARE CUSTOMARY, REQUIRED, OR SPECIFIED.										
IPMENT CTRICAL	12.	LICENSES AND PERMITS: OBTAIN ALL REQUIRED LICE CERTIFICATES OF FINAL INSPECTION BY AUTHORITIES F EXPENSES IN CONNECTION THEREWITH. DELIVER INSP	NSES AND PERMITS AND, AT COMPLETION OF WORK, HAVING LOCAL JURISDICTION. PAY ALL CHARGES ANI PECTION CERTIFICATES AS DIRECTED.	, D								
INDING AS ISIVE SCOPE DDING SHALL BE	13.	CABLE TEST: MAKE MEGGER TESTS ON CABLES BETWER CONDUCTORS IN A CABLE OR CONDUIT TIED TO GROU AND 120 VOLT RECEPTACLE CIRCUITS. PERFORM CON CABLES FOR 208 VOLT SERVICE WITH A 500 VOLT MEG MAINTAINED UNTIL READINGS ARE STEADY FOR 3 MIN	EN EACH CONDUCTOR AND GROUND WITH OTHER JND. PERFORM OPERATIONAL TESTS ONLY ON ALL LI TINUITY TESTS ON ALL POWER AND CONTROL CIRCUI GER BETWEEN EACH PHASE AND GROUND, WITH TEST JUTES.	GHTING TS. TEST Г								
PLY SHALL SECTIONS O	14.	<u>GROUND TEST:</u> INSPECT ALL GROUND CONNECTIONS CONNECTIONS. TEST RESISTANCE AT VARIOUS POINTS METHOD. MAXIMUM PERMISSIBLE GROUND RESISTAN AHEAD OF MAIN.	S FOR CONTINUITY AND TIGHT ELECTRICAL AND MECH USING BIDDLE GROUND OHMER, OR OTHER STANDA ICE IS 5 OHMS. CONNECT SYSTEM GROUND TO WATE	HANICAL IRD ER METER								
CTOR. D IN THE COMPLETE HALL BE	15.	GUARANTEE: THIS CONTRACTOR SHALL GUARANTEE I INSTALLATION, PIPING, EQUIPMENT, MOTORS, WIRING DATE OF FINAL ACCEPTANCE AND LEAVE HIS WORK IN WITHIN THE GUARANTEE PERIOD, THIS CONTRACTOR HAVE ALL DAMAGES TO OTHER WORK OR FURNISHING REPAIRED AND/OR REPLACED AT HIS EXPENSE, TO THE ACCEPTANCE IS DEFINED AS THE DATE OF SIGNATURE	HIS WORKMANSHIP AND MATERIALS INCLUDING: AND CONTROLS FOR A PERIOD OF ONE (1) YEAR FRC PERFECT ORDER AT COMPLETION. SHOULD DEFECTS SHALL, UPON NOTICE OF SAME, REMEDY THE DEFECT CAUSED BY THE DEFECTS OR THE WORK CORRECTIN CONDITION BEFORE SUCH DAMAGE. THE DATE OF FI OF THE OWNER ON THE FINAL PAYMENT OF THIS CO	DM THE DEVELOP S AND G SAME INAL NTRACT.								
D I. S OR ID ANY	16. 17. 18.	RACEWAY AND FITTINGS: USE ELECTRIC METALLIC TU CONDUIT SIZE: MINIMUM CONDUIT SIZE 1/2 INCH, EX MOUNTING HEIGHTS: UNLESS OTHERWISE INDICATE	JBING (EMT) CONDUIT EXCEPT AS OTHERWISE INDICA XCEPT WHERE OTHER SIZES ARE SPECIFICALLY INDICA D. THE FOLLOWING OUTLET HEIGHTS APPLY.	TED. ATED.								
GREED THAT SPONSIBLE												
INSATION.												
THE OULD BE E TMENTS IN UCH CE WHERE O NOT 'ORK IN NTICIPATED.		LIGHTING SWITCHES	4'-0" ABOVE FINISHED FLOOR TO CENTERLINE									
		RECEPTACLE OUTLETS IN OFFICES AND FINISHED AREAS	2'-0" ABOVE FLOOR TO CENTERLINE. COORDINATE MOUNTED HEIGHTS WITH OWNER PRIOR TO ROUGH-IN.									
		LIGHTING PANELBOARDS	6'-8" FROM TOP OF PANEL TO ABOVE FINISHED FLOOR.									
		FIRE ALARM PULL STATION	4'-0" ABOVE FINISHED FLOOR TO CENTERLINE									

ROUGH-IN.LIGHTING PANELBOARDS6'-8" FROM TOP OF PANEL TO ABOVE FINISHED
FLOOR.FIRE ALARM PULL STATION4'-0" ABOVE FINISHED FLOOR TO CENTERLINEFIRE ALARM HORN/STROBE OR STROBE ONLY
DEVICES6'-8" ABOVE FINISHED FLOOR OR 6" BELOW
FINISHED CEILING TO CENTERLINE.EMERGENCY LIGHT OUTLETS8'-0" ABOVE FINISHED FLOOR TO CENTERLINEEXIT LIGHT OUTLETS0'-9" BELOW FINISHED CEILING TO CENTERLINE

BRACKET AND SPECIAL OUTLETS AS INDICATED ON DRAWINGS

- 19. <u>CONDUCTOR TYPES</u>: TYPE THHN 75 DEGREES "C" RATING, FOR LIGHTING, POWER AND CONTROL, NO. 8 AWG AND SMALLER. USE STRANDED WIRE FOR NO. 10 AWG AND LARGER.
- **20.** <u>GROUNDING:</u> GROUND RODS-COPPERWELD STEEL COMPANY. CONNECT-ORS-BURNDY, THOMAS & BETTS OR O.Z. THERMITE WELDING-CADWELD OR THERMOWELD. GROUND THE FOLLOWING: RECEPTACLES, SWITCH BOXES, LUMINARIES AND OTHER ELECTRICAL DEVICES AS REQUIRED BY NEC.
- 21. POWER DISTRIBUTION PANELBOARDS: MANUFACTURERS SHALL BE G.E., SIEMENS/I-T-E, SQUARE D OR CUTLER HAMMER. COMPLETELY FACTORY BUILT AND TESTED, TOTALLY ENCLOSED, DEAD FRONT TYPE PANELBOARDS. NEATLY TYPED DIRECTORY, WITH A CLEAR PLASTIC COVER, IN FRAME INSIDE EACH PANELBOARD DOOR. FULL-CAPACITY INSULATED SOLID NEUTRAL. SEPARATE GROUND BUS WITH LUGS AS REQUIRED IN ADDITION TO NEUTRAL BUS.
- 22. <u>CIRCUIT BREAKER PANELBAORD</u>: MANUFACTURERS SHALL BE GE, SIEMENS/ITE, SQUARE D OR CUTLER HAMMER. MOLDED CASE CIRCUIT BREAKERS, THERMAL MAGNETIC, QUICK-MAKE, QUICK-BREAK, AMBIENT COMPENSATED OR FACTORY-CALIBRATED FOR PANELBOARD INSTALLATION. HANDLES ARRANGED FOR PADLOCKING IN OFF POSITION. ALL MULTIPOLE BREAKERS TO BE COMMON TRIP. HANDLE TIES WILL NOT BE ACCEPTED. SPACES TO BE COMPLETE WITH BUSES AND HARDWARE READY FOR CIRCUIT BREAKER
- 23. SAFETY AND DISCONNECT SWITCHES:
GENERAL ELECTRIC, SQUARE D, SIEMENS/ITE OR CUTLER HAMMER. FRONT-OPERATED, TYPE HD, SINGLE THROW,
QUICK-MAKE, QUICK-BREAK, HP RATED, VISIBLE BLADE, SWITCHING UNIT. FUSIBLE TYPE TO BE PROVIDED WITH FUSE
TERMINALS TO ACCOMMODATE TYPE OF FUSES INDICATED.
- 24. FUSES: PROVIDE FUSES AS FOLLOWS: FUSES 600 VOLTS AND LOWER. FOR MOTOR CIRCUITS, UL CLASS K-5, DUAL ELEMENT, 200,000 AIC SYMMETRICAL BUSS FRS FUSETRON, 600 VOLT RATING, BUS FRN FUSETRON, 250 VOLT RATING, OR SHAWMUT EQUIVALENT. FOR PANELBOARD SERVICES, UL CLASS RK-5, 200,000AIC SYMMETRICAL. OR BUSS LPN LOW PEAK, 250 VOLT RATING, OR SHAWMUT EQUIVALENT, AS INDICATED ON THE DRAWINGS. FURNISH ONE SET OF SPARE FUSES FOR EACH SIZE REQUIRED.

- 25. <u>WIRING DEVICES:</u> PROVIDE SPECIFICATION GRADE DEVICES AS INDICATED, OR EQUIVALENT, HUBBELL, PASS AND SEYMOUR, OR GENERAL ELECTRIC. SWITCHES TO BE RATED AT 20 AMPERES, 120 TO 277VOLTS, AC, WITH SHALLOW PLASTIC BODY, SCREW OR PRESSURE TERMINALS SUITABLE FOR NO. 12 AND NO. 10 WIRES, UNLESS OTHERWISE NOTED. ALL WALL SWITCHES AND 20 AMPERE CONVENIENCE RECEPTACLES TO HAVE AN IVORY FINISH. VERIFY COLOR OF ALL DEVICES AND COVERPLATES WITH OWNER PRIOR TO ORDERING. ELECTRICAL CONTRACTOR TO VERIFY THE TYPES AND STYLES OF PARTITIONS TO INSURE PROPER DEVICES BEFORE INSTALLATION. WIRE DEVICES AND COVERPLATES TO BE AS FOLLOWS:
- **25.a.** WALL SWITCHES: STANDARD TYPE, PASS & SEYMOUR NO. CS20AC1-W, CS20AC3-W, OR CS20AC4-1 OR EQUIVALENT WHITE QUIET FLUSH TYPE TOGGLE SWITCH. VERIFY COLOR WITH OWNER PRIOR TO ORDERING.
- **25.b.** <u>RECEPTACLES:</u> 25.b.1. DUPLEX TYPE - PASS & SEYMOUR CR20-W, 20 AMPERES, 125 VOLTS, 3-WIRE, OR EQUIVALENT WHITE GROUNDING TYPE, NEMA CONFIGURATION 5-20R. VERIFY COLOR WITH OWNER PRIOR TO ORDERING.
- 25.b.2. GROUND FAULT INTERRUPTING TYPE PASS & SEYMOUR 2091-W 20 AMPERES, OR EQUIVALENT 125 VOLTS, 3-WIRE, WHITE, GROUND FAULT INTERRUPTING TYPE, NEMA CONFIGURATION 5-20R. VERIFY COLOR WITH OWNER PRIOR TO ORDERING.

25.c. <u>COVERPLATES:</u>

- 25.c.1. ALL COVERPLATES FOR INDOORS AND SIMILAR FINISHED AREA WIRING DEVICES TO BE #302 STAINLESS STEEL WITH BRUSHED SATIN FINISH AND FACE OPENINGS FOR THE INTENDED DEVICE.
- 26. ALL **FIRE ALARM SYSTEM** WORK AND DESIGN, IF REQUIRED, TO BE DONE BY OWNER'S FIRE ALARM SYSTEM CONTRACTOR.
- 27. ALL **TELEPHONE/DATA/CATV SYSTEM** WORK AND DESIGN TO BE DONE BY OWNER'S TECHNOLOGY SYSTEM CONTRACTOR.
- 28. ALL <u>SECURITY, CCTV, & ACCESS CONTROL SYSTEM</u> WORK AND DESIGN TO BE DONE BY OWNER'S SECURITY SYSTEM CONTRACTOR.
- **29.** <u>ALLOWANCES</u>: ALLOWANCE FOR \$5,000 TO BE INCLUDED IN BASE BID FOR SERVICE WORK BEYOND THE SCOPE SHOWN. USE ALLOWANCE TO BE AUTHORIZED OWNER IN WRITING. UNUSED PORTION TO REVERT TO OWNER.

