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PROJECT DATA

GENERAL SITE INFORMATION

ZONING:	C-6
HISTORIC DISTRICT:	NO
BUSINESS DISTRICT:	NO
PERMITTED USE:	YES
LOT AREA - OWNER:	±205,487 S.F. (±4.72 ACRES)

SETBACK REQUIREMENTS

FRONT YARD:	20'-0" (16th Avenue)
SIDE YARD(S):	20'-0" (21st Street) 0'-0" (East side yard)
REAR YARD:	0'-0"

PARKING REQUIREMENTS

SHOWROOM (RETAIL): See Ordinance section 37-149(6)a. Provide 1 space per 250 S.F. floor area.

OFFICE: See Ordinance section (37-149(6)o. Provide 1 space per 250 S.F. floor area.

SERVICE & REPAIR SHOP: See Ordinance section 37-149(6)n. Provide 1 space per 600 S.F. & 1 space per 2 employees.

CAR WASH: See Ordinance 37-149(6)c. See Ordinance section 37-146(6)c). Provide 5 times the capacity of the car wash.

SHOWROOM (RETAIL):	10
OFFICE:	11
SERVICE & REPAIR SHOP:	40
CAR WASH:	5
TOTAL:	66 (revised)
ACCESSIBLE SPACES:	3 (revised)

LANDSCAPING REQUIREMENTS

PERIMETER: 5'-0" required

INTERIOR: Not required per Lewiston Ordinance Sec. 37-153.j.2. Properly licensed auto & vehicle dealers are exempt from providing landscaping within interior of the sales & display area.

Required paved employee parking area is approximately 29,000 s.f. (includes traffic lanes for employee parking access). Interior landscaping equal to 5% (or 1,450 s.f.) of paved employee parking area is required. Required interior landscaping to be provided is shown on Phase 1 drawings.

BUILDING INFORMATION - EXISTING

OCCUPANCY GROUPS:	B, S1	
OCCUPANT LOAD:	366	

Occupancies are not separated per IBC Section 302.3.1

CONSTRUCTION TYPE: VB

BUILDING AREAS - EXISTING

EXIST. SERVICE SHOP:	MIXED	10,106 S.F.
MAIN FLOOR:	S1	9,740 S.F.
UPPER FLOOR:	B	366 S.F.
EXIST. LUBE SHOP:	S1	3,619 S.F.

BUILDING AREAS - ADDITION PHASE 1

DEALERSHIP/SHOWROOM:	B	13,047 S.F.
MAIN FLOOR:	B	10,620 S.F.
UPPER FLOOR:	B	2,427 S.F.
PARTS RECEIVING/STORAGE:	S1	2,281 S.F.
MAIN FLOOR:	S1	1,124 S.F.
UPPER FLOOR:	S1	1,157 S.F.

BUILDING 1 AREA - TOTAL 29,053 S.F.

OCCUPANCY B	46%	13,413 S.F.
OCCUPANCY S1	54%	15,640 S.F.

BUILDING 2 AREA - ADDITION PHASE 2 (SEPARATE BUILDING)

CAR WASH	S1	1,109 S.F.

Building 1 & building 2 are separated by a 3 hour fire wall with no openings between buildings. Wall construction meets provisions of IBC Table 720.1(2) Item 3. Existing wall construction is 8" CMU. No 30" parapet is required per Sec. 705.6 exception 3.

ALLOWED BUILDING LIMITS

Allowed building limits are based on S1 occupancy, Type VB construction per IBC Table 503.

FRONTAGE INCREASE:	150%
SPRINKLER INCREASE:	200% (2 story building)
HEIGHT:	45'-0"
(maximum allowed per Lewiston Ordinance)	
NO. OF STORIES:	2

ADJUSTED BUILDING LIMITS

ALLOWABLE BUILDING AREA:	9,000 S.F. PER STORY
ADJUSTED BUILDING AREA:	40,500 S.F. PER STORY

ACTUAL BUILDING INFORMATION

BUILDING 1 AREA:	29,053 S.F.
NO. OF STORIES:	2
HEIGHT:	35'-0"
BUILDING 2 AREA:	1,109 S.F.
NO. OF STORIES:	1
HEIGHT:	14'-0"

BUILDING DESIGN LOADS

See Structural Engineer's drawing sheets for Design Load information.

BUILDING PROTECTION SYSTEMS

BUILDING 1

SPRINKLERED:	YES
MONITORED FIRE ALARM:	YES
SMOKE DETECTORS:	NO
HEAT DETECTORS:	NO

BUILDING 2

SPRINKLERED:	NO
MONITORED FIRE ALARM:	NO
SMOKE DETECTORS:	NO
HEAT DETECTORS:	NO

FIRE FLOW INFORMATION

The fire area includes all exterior covered areas & building overhangs for Building Area 1 (most restrictive).

All covered areas shall be sprinklered.

FIRE AREA:	36,747 S.F.
REQUIRED FIRE FLOW:	5,250 G.P.M.
REQUIRED DURATION:	4 hours

ALLOWED REDUCTIONS:

Building is sprinklered throughout. 50% allowed reduction per Ordinance Sec. 15-S.

Building has a monitored fire alarm system. 25% allowed reduction per Ordinance Sec. 15-S.

Fire flow cannot be less than 1,500 GPM per Lewiston Ordinance Sec. 15-1.1(s)

ADJUSTED FIRE FLOW:	1,500 G.P.M.
REQUIRED DURATION:	2 hours

FIRE HYDRANT INFORMATION

MINMUM NO. HYDRANTS:	1
AVERAGE SPACING:	500 L.F.
SPACING ON R.O.W.:	250 L.F.
PERMITTED USE:	YES
REQUIRED REACH:	500 L.F.

A new on site hydrant is required to meet the reach requirements.

See Sheet T2 for more fire department requirements.

HIGH PILED STORAGE

COMMODITY CLASSIFICATION:	HIGH HAZARD
HIGH PILED STORAGE:	YES
SOLID PILED/SHELF STORAGE:	NO
RACK STORAGE:	YES

Rubber tires stored on prefabricated metal racks

Pallet racks are not solid.

Maximum height of product on a rack is 8'-0".

See Phase 1 drawings Sheet A2.4 Main Floor- Enlarged for rack layout.

Distance from top of product to bottom of roof structure is approx. 7'-0".

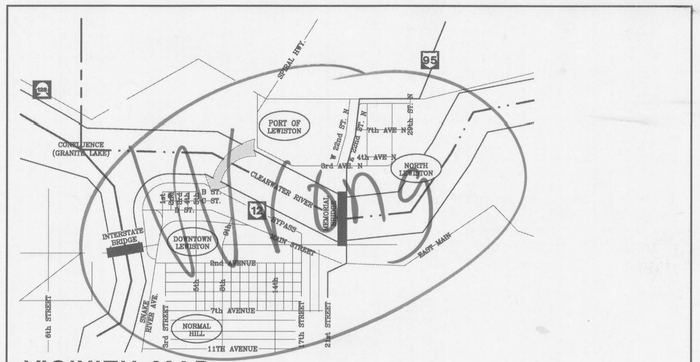
Maintain minimum 1'-6" from top of product to bottom of sprinkler head(s) or other ceiling mounted fixutures.

VOLUME OF STORED MATERIAL:	±1,728 C.F.
AVAILABLE SHELF AREA: (includes floor area under racks)	864 S.F.

PARTS STORAGE

COMMODITY CLASSIFICATION:	CLASS 1
HIGH PILED STORAGE:	NO
SOLID PILED/SHELF STORAGE:	NO
RACK STORAGE:	YES

Car parts.



VICINITY MAP

N.T.S.

CONTACT INFORMATION

PROJECT ADDRESS:	2203 16th Avenue Lewiston, Idaho
OWNER: CONTACT NAME:	Rogers Toyota Scion Rich Rogers 2203 16th Avenue Lewiston, Id. 83501 P (208) 743-5577 F (208) 798-4973
ARCHITECT: CONTACT NAME:	Bott & Associates Michell Radamaker 0309 2nd Street Lewiston, Idaho 83501 P (208) 746-9871 F (208) 746-3523 mradamaker@microwavedsl.com
STRUCTURAL: CONTACT NAME:	TDH Engineering Paul Hopkins 2517 17th StreeT Suite B Lewiston, Id. 83501 P (208) 746-0938 F (208) 746-3511 Paul.Hopkins@tdhlewiston.com
CIVIL: CONTACT NAME:	Anacline Engineering Ryan Fiske 4025 Eagle Ct. Drive Lewiston, Idaho 83501 P (208) 791-8055 F (208) 750-1082 anacline@aol.com
MECHANICAL: CONTACT NAME:	Musgrove Engineering Charles Paulin or Jason McDonald 410 S. Orchard Street Boise, Idaho 83705 P (208) 384-0585 F (208) 384-0765 charlespa@musgrovepa.com
ELECTRICAL CONTACT NAME:	E2Co. Jon Van Stone or Shawn Meador 545 N. Benjamin Ln. Suite 175 Boise, Idaho 83704 P (208) 378-4450 F (208) 378-4451 jvanstone@e2co.com

RECEIVED JUN 25 2008

LICENSED ARCHITECT JEFFREY D. BOTT 9844 DUAL STATE BUSINESS CERTIFICATE

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho
PROJECT INFORMATION

ENGINEERING DEPT. COPY

Car wash addition

Bott & Associates
ARCHITECTS
LEWISTON
0309 2nd Street Lewiston, Idaho 83501
Ph: (208) 746-9871 FAX: (208) 746-3523
COTTONWOOD
402-B King Street Cottonwood, Idaho 83522
Ph: (208) 962-5458 Fax: (208) 962-7178

2203 16th Ave

ENGINEERING DEPT. COPY

DRAWN BY: MR
CHECKED BY: DLB
DATE: 6/20/08
JOB NO.: 080429
REVISION DATE:

SHEET: T1.1

B08-000400

Set #17

ARCHITECT'S GENERAL NOTES

THIS OFFICE ASSUMES NO RESPONSIBILITY AS TO THE PHYSICAL CHARACTERISTICS OF THE SOIL, NOR DOES THIS OFFICE VERIFY THE ACCURACY OF THE ENGINEERING DATA SUPPLIED BY OTHERS.

ALL CONSTRUCTION TO CONFORM TO THE 2003 EDITION OF THE I.B.C. & ALL OTHER APPLICABLE CODES & REGULATIONS.

DRAWINGS ARE IN PART DIAGRAMMATIC & DO NOT NECESSARILY SHOW ALL CONSTRUCTION METHODS & MATERIALS.

THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS & EXISTING CONDITIONS BEFORE PROCEEDING WITH ORDERING OR INSTALLATION OF MATERIALS OR MANUFACTURED PRODUCTS.

ANY CLARIFICATION OR DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. WORK DONE WITHOUT THE APPROVAL OF THE ARCHITECT/OWNER, WHICH IS FOUND TO BE UNACCEPTABLE, SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

DESIGN LOADS & PARAMETERS ARE SPECIFIED ON THE STRUCTURAL DRAWINGS.

THIS BUILDING, AS A COMPLETED WHOLE, IS DESIGNED AS A STABLE STRUCTURE IN RESISTING THE ABOVE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO COMPLETION. THIS SHALL INCLUDE ALL NECESSARY BRACING & TEMPORARY SUPPORTS REQUIRED TO PROVIDE STABILITY UNTIL THE ENTIRE STRUCTURE IS COMPLETE.

CONSTRUCTION LOADS SHALL NOT OVERLOAD THE STRUCTURE, NOR SHALL THEY BE IN EXCESS OF THE DESIGN LOADS INDICATED.

WARRANTY

CONTRACTOR SHALL WARRANT ALL WORKMANSHIP FOR A PERIOD OF ONE YEAR FOLLOWING COMPLETION OF THE PROJECT.

ALL MATERIALS SHALL BE INSTALLED SUCH THAT THE STANDARD MANUFACTURER'S WARRANTY IS IN EFFECT. SEE SPECIFICATION'S THIS SHEET FOR DETAILED MATERIAL WARRANTY REQUIREMENTS.

DESCRIPTION OF MATERIALS & SCOPE OF WORK

PERMITS & SPECIAL INSPECTION FEES

BUILDING PERMIT: SHALL BE PAID FOR BY OWNER.

OTHER PERMITS: SHALL BE PROVIDED BY CONTRACTOR AND/OR THE SUB-CONTRACTORS.

SPECIAL INSPECTION: SEE STRUCTURAL DRAWINGS FOR REQUIRED SPECIAL INSPECTIONS. OWNER SHALL CONTRACT WITH AN INDEPENDANT CONSULTANT TO PROVIDE REQUIRED SERVICES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH OWNER'S SELECTED CONSULTANT FOR SCHEDULING.

SCHEDULING

SEQUENCE OF WORK: PROJECT IS TO BE COMPLETED IN TWO PHASES. THE EXISTING SHOWROOM/DEALERSHIP IS NOT TO BE DISTURBED UNTIL THE NEW SHOWROOM ADDITION IS COMPLETED & THE OWNER HAS MOVED INTO THE FACILITY. PHASE 1 WORK IS SCHEDULED TO BE COMPLETED IN OCTOBER 2008.

OWNERS OPERATIONS/PROTECTION: THE EXISTING LUBE SHOP & SERVICE SHOP ARE NOT TO BE DISTURBED. ALL WORK IN THESE AREAS IS RELATED TO CUTTING AND/OR INFILLING OPENINGS. SHOPS ARE TO REMAIN IN SERVICE DURING CONSTRUCTION. COORDINATE WITH OWNER TO SCHEDULE & PROTECT CONSTRUCTION AREAS.

PHASE 1: NOT IN CONTRACT (N.I.C.). NEW, 2 STORY DEALERSHIP ADDITION LOCATED ON THE WEST SIDE OF THE EXISTING LUBE SHOP. INCLUDE ALL SITE WORK WEST OF THE EXISTING LUBE SHOP IN PHASE 1. EXISTING LIGHT STANDARDS ARE TO REMAIN IN THE SAME LOCATIONS BUT MUST BE RESET TO NEW, HIGHER ELEVATIONS. NEW, ON SITE HYDRANT IS TO BE INSTALLED. PHASE 1 WORK IS A SEPARATE CONTRACT.

PHASE 2: DEMOLISH THE EXISTING SHOWROOM/STORAGE AREA. CONSTRUCT NEW CAR WASH. THE LUBE & SERVICE & REPAIR SHOPS ARE TO REMAIN OPEN DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER 24 HOURS PRIOR TO SHUTTING OFF ACCESS TO ANY SHOP AREA. EXISTING & NEW EXPOSED CMU WALL SHALL BE CLEANED, PREPPED & PAINTED. EXISTING & NEW HOLLOW METAL DOORS, FRAMES, GUTTERS, DOWNSPOUTS, FASCIAS & BOLLARDS SHALL BE PAINTED. SEE DRAWINGS FOR CLARIFICATIONS.

DEMOLITION

CONDUCT DEMOLITION OPERATIONS & REMOVAL OF DEBRIS AS PART OF THE WORK OF THIS PROJECT.

THE CONTRACTOR SHALL SURVEY THE SITE PRIOR TO COMMENCING WORK & SHALL PERFORM ALL DEMOLITION WORK NECESSARY FOR THE PROPER EXECUTION OF THE WORK UNDER THIS CONTRACT.

NOTIFY UTILITY COMPANIES AT LEAST 24 HOURS PRIOR TO ANY INTERRUPTION OF THE SERVICE.

DEMOLITION WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- SEE ARCHITECTS DEMOLITION PLANS (PHASE 2 DRAWINGS)
- SEE CIVIL DEMOLITION PLANS (PHASE 2 DRAWINGS)

SHORING & BRACING

PROVIDE SUITABLE SHORING & BRACING MATERIALS WHICH WILL SUPPORT LOADS IMPOSED.

MAINTAIN BRACING UNTIL STRUCTURAL ELEMENTS UNTIL PERMANENT CONSTRUCTION IS ABLE TO WITHSTAND LATERAL EARTH & HYDROSTATRIC PREASSURES.

SITE WORK

SEE DRAWINGS FROM ARCHITECT & ALL CONSULTANT'S FOR FULL EXTENT OF SITE WORK.

EXCAVATION

STRUCTURE EXCAVATION, BACK FILL & COMPACTION. THIS INCLUDES BACK FILLING & COMPACTION FOR EXTERIOR SLABS. BACK FILL SHALL BE PLACED IN 6 INCH LIFTS & COMPACTED TO 90% UNDER SLABS & 90% ELSEWHERE OF MAXIMUM DRY DENSITY.

CAULKING & SEALANTS

CAULK AND/OR SEAL ALL JOINTS, ABOVE & BELOW GRADE, TO PROVIDE A WATERTIGHT & AIRTIGHT SEAL. APPLY PER MANUFACTURER'S INSTRUCTIONS.

IF EXPOSED TO VIEW, MATCH COLOR TO ABUTTING MATERIAL.

THERMAL & MOISTURE PROTECTION

APPLY ASPHALTIC FOUNDATION WATERPROOFING ON ALL BACK FILL FACES OF WALLS BELOW GRADE WHERE THE INTERIOR FACE IS TOWARD AN OCCUPIED SPACE.

APPLY DAMP-PROOF COATING (SEAL) ON ALL EXPOSED CONCRETE WALLS & FLATWORK NOT COVERED BY FINISH FLOORING.

INSTALL 3/8" DIAMETER x 4" LONG MEDIUM DENSITY POLYETHYLENE PLASTIC TUBING AT 16" o.c. FOR WEEP HOLES IN NEW CMU WALL CONSTRUCTION. INSTALL FLASHING AS REQUIRED TO KEEP WEEP HOLES FROM BEING CLOGGED BY GROUT AND/OR INSULATION.

INSULATION

PROVIDE THICKNESS OF INSULATION AS REQUIRED TO MEET MINIMUM R VALUES SPECIFED ON DRAWINGS.

BLOWN-IN INSULATION: BLOWN-IN INSULATION TO BE NON-COMBUSTIBLE, FIBER GLASS BLOWING WOOL WITH A THERMAL RESISTANCE FACTOR OF R=4.23/INCH. INSULATION BINDER MATERIAL, NETTING, FABRIC & ALL ACCESSORIES TO INSTALL A COMPLETE SYSTEM SHALL BE FROM A SINGLE SOURCE SUPPLIER. ALL VOIDS IN ROOF STRUCTURE SHALL BE FILLED WITH INSULATION.

LOOSE GRANULAR VERMICULITE INSULATION: EXPANDED VERMICULITE, SURFACE TREATED FOR WATER REPELLANCY & LIMITED MOISTURE ABSORBTION.

EXTERIOR & INTERIOR FINISH MATERIALS-GENERAL NOTE

ALL FINISH MATERIALS SHALL BE APPROVED BY THE ARCHITECT & OWNER PRIOR TO CONSTRUCTION.

ALL PROPOSED SUBSTITUTIONS MUST BE SUBMITTED FOR REVIEW & APPROVAL. THERE IS AN ESTIMATED 4 WEEK TURN AROUND ON ALL PROPOSED SUBSTITUTION REQUESTS.

EXTERIOR FINISH MATERIALS

ROOFING: INSTALL "METAL SALES" MAGNA-LOC, STRIATED, 22 GA. METAL ROOFING, OR PRE-APPROVED EQUAL. SUBSTITUTION REQUESTS FOR ROOFING MUST BE APPROVED PRIOR TO BIDDING. COLOR TO BE SELECTED FROM MANUFACTURER'S STANDARD COLORS. PROVIDE ROOFING MANUFACTURER'S SCULPTURED GUTTER & RAKE TRIM.

DOWNSPOUTS: PAINT DOWNSPOUTS TO MATCH PAINTED, CMU BUILDING.

MISC. FLASHING: COLOR TO MATCH ADJACENT MATERIALS.

EXTERIOR WALLS - NEW CMU: APPLY (1) COAT OF "COLUMBIA" 05-055PP BLOCKFILLER OR EQUAL. FINISH WITH (2) COATS OF "COLUMBIA" 01-224 PAINT, OR EQUAL. BLOCKFILLER & FINISH COAT(S) TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. COLOR TO MATCH EXISTING.

EXTERIOR WALLS - EXISTING CMU: EXTENT OF EXISTING EXTERIOR WALL AREA IS SHOWN ON DRAWINGS. ALL WALLS SHALL BE POWER WASHED/SCRUBBED TO KNOCK OFF ALL DEBRIS & LOOSE PAINT. ALLOW DRYING TIME PER PAINT MANUFACTURER'S RECOMMENDATIONS. APPLY "COLUMBIA" 05-208 PRIMER/SEALER AS REQUIRED ON ALL EXPOSED CMU WALL. APPLY (2) COATS OF "COLUMBIA" 01-224 ACRYLIC PAINT TO FINISH. COLOR TO MATCH EXISTING.

HOLLOW METAL DOORS/FRAMES-NEW: DOORS & FRAMES TO BE SHOP PRIMED. APPLY (2) COATS "COLUMBIA" 40-400 SERIES POLYURETHANE TO FINISH.

PAINTED METAL SURFACES-EXISTING: CLEAN SURFACES OF ALL LOOSE PAINT AND/OR DEBRIS. TOUCH UP BARE METAL WITH "COLUMBIA" 05-550 PRIMER AS REQUIRED. APPLY (2) COATS OF "COLUMBIA" 40-400 SERIES POLYURETHANE TO FINISH.

DOWNSPOUTS-NEW: APPLY (1) COAT "COLUMBIA" 05-550 PRIMER. APPLY (2) COATS OF "COLUMBIA" 40-400 SERIES POLYURETHANE TO FINISH.

DOORS & DOOR FRAMES

HOLLOW METAL (HM): MANUFACTURER TO BE "AMWELD" 15LE FULL FLUSH SERIES, OR EQUAL. DOOR TO BE 1 3/4" x 7'-0", COLD-ROLLED STEEL, 18 GAUGE MINIMUM. FRAME TO BE 16 GAUGE MINIMUM, HOT-DIPPED GALVANIZED STEEL WITH MITERED CORNERS & CONCEALED FASTENERS. DOOR & FRAME SHALL BE DRILLED FOR HARDWARE. PROVIDE FOR 3 SILENCERS ON THE STRIKE SIDE OF JAMB. DOOR & FRAME SHALL BE FACTORY PRIMED.

CAR WASH DOORS (PLEXI): "WAYNE-DALTON" POLYCARBONATE SECTIONAL DOORS, OR APPROVED EQUAL (CONTRACTOR SHALL VERIFY DOOR IS APPROVEDF FOR WET ENVIRONMENT). ALL RAILS & STILES SHALL BE EXTRUDED ALUMINIUM WITH CLEAR FINISH. PROVIDE HOT DIPPED GALVANIZED STEEL TRACK. PROVIDE WEATHER STRIPPING & DOOR BOTTOM FOR WEATHER TIGHT SEAL. DOORS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATION. MOTOR SHALL BE SIZED BY DOOR SUPPLIER. PROVIDE A HIGH LIFE CYCLE SPRINGS (50,000). DOOR SUPPLIER SHALL SIZE MOTOR. PROVIDE A COMMERICAL / INDUSTRIAL RATED MOTOR WITH 3 BUTTON CONTROL. DOOR TO BE MOUNTED IN CMU OPENING.

DOOR HARDWARE

SUBMITTALS: SCHEDULE HARDWARE ITEMS FOR EACH DOOR SEPARATELY IN TYPED VERTICAL FORM. DESCRIBE EACH PIECE OF HARDWARE WITH SPECIFIED MANUFACTURER'S NUMBERS OR THEIR EQUIVALENTS AS APPROVED FOR EACH ITEM. FURNISH TEMPLATES TO EACH FABRICATOR OF DOORS AND FRAMES AS REQUIRED FOR PREPARATION TO RECEIVE THE HARDWARE.

GENERAL NOTE: PROVIDE FOLLOWING OR APPROVED EQUAL.

FINISH AND BASE MATERIAL DESIGNATIONS: PROVIDE HARDWARE RATED FOR A MEDIUM DUTY COMMERCIAL APPLICATION. TYPICAL HARDWARE FINISH TO BE 626, (US 26D) "SATIN CHROMIUM PLATED", UNLESS NOTED OTHERWISE (U.N.O.). WHERE BASE MATERIAL AND QUALITY OF THE FINISH ARE NOT OTHERWISE INDICATED, PROVIDE THE COMMERCIALLY RECOGNIZED QUALITY SPECIFIED ON APPLICABLE FEDERAL SPECIFICATIONS.

HINGES AND PIVOTS: ACCEPTABLE MANUFACTURERS ARE HAGER, LAWRENCE, MCKINNEY, STANLEY, OR EQUAL. PROVIDE FULL-MORTISE TYPE, STEEL HINGES ON EACH DOOR, EXCEPT AS OTHERWISE INDICATED AND EXCEPT AS OTHERWISE NEEDED FOR PROPER SUPPORT AND OPERATION OF DOORS. PROVIDE STAINLESS STEEL, NON-REMOVABLE PINS AND FLAT BUTTON WITH MATCHING PLUGS.

LOCKS, LATCHES AND BOLTS: ACCEPTABLE MANUFACTURERS ARE SCHLAGE, OR EQUAL. PROVIDE CYLINDRICAL CHASSIS LOCK OR LATCH SETS AT ALL LOCATIONS, UNLESS NOTED OTHERWISE. KEYING SCHEDULE TO BE APPROVED BY OWNER. DOOR(S) MUST BE KEYED TO OPEN WITH GRAND MASTER KEY USED FOR EXISTING BUILDING.

DOOR CONTROL DEVICES: ACCEPTABLE MANUFACTURER'S ARE NORTON, OR EQUAL. FINISH OF EXPOSED METAL TO MATCH HARDWARE. SIZE AND MOUNT UNITS INDICATED OR, IF NOT INDICATED, TO COMPLY WITH THE MANUFACTURER'S RECOMMENDATION FOR THE EXPOSURE CONDITION. REINFORCE THE SUBSTRATE AS REQUIRED. WHERE PARALLEL ARM CLOSURE ARE INDICATED PROVIDE UNITS ONE SIZE LARGER THAN RECOMMENDED FOR STANDARD UNITS.

MISCELLANEOUS DOOR HARDWARE: ACCEPTABLE MANUFACTURERS ARE BUILDER BRASS WORKS, OR EQUAL. PROVIDE GRAY RUBBER EXPOSED RESILIENT PARTS.

INSTALLATION: INSTALL EACH HARDWARE ITEM TO COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

FINISH HARDWARE SCHEDULE: SEE DRAWINGS FOR SCHEDULE. PRODUCTS DESIGNATED ARE TO ESTABLISH A LEVEL OF QUALITY AND/OR OPERATION DESIRED. FURNISH THE DESIGNATED PRODUCT OR ONE WHICH IS THE EQUIVALENT (AS JUDGED BY ARCHITECT) TO THE INDICATED PRODUCT.

INTERIOR FINISH MATERIAL

OWNER/ARCHITECT TO APPROVE ALL FINAL FINISH MATERIAL SELECTIONS, COLOR & INSTALLATION METHODS PRIOR TO CONSTRUCTION.

SEE DRAWINGS, FINISH SCHEDULE & FINISH SPECIFICATIONS SHEETS FOR "TOYOTA" APPROVED FINISH MATERIALS. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE OWNER/ARCHITECT IN WRITING.

FLOOR - CONCRETE SLAB ON GRADE: HORIZONTAL FLAT SLAB TO HAVE A BROOM FINISH. APPLY (2) COATS "COLUMBIA" 11-067 CLEAR CONCRETE SEALER, OR EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS. ALLOW CONCRETE TO CURE PER MANUFACTURER'S RECOMENDATIONS PRIOR TO APPLYING FIRST COAT.

CEILING - PLASTIC PANELING: INSTALL "EXTRUTECH PLASTICS, INC." P1300 PVC CEILING PANELING, OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS. USE ALL MANUFACTURER RECOMMENED TRIMS & ACCESSORIES. PROJECT CONTACT INFORMATION IS PHONE 1 (888) 818-0118.

INTERIOR WALLS - NEW CMU: APPLY (1) COAT OF "COLUMBIA" 05-055PP BLOCKFILLER. APPLY (2) COATS OF "COLUMBIA" 05-930 HEAVY DUTY WATERBASE EPOXY PAINT. ALL EXPOSED CMU SHALL BE SEALED WITH PAINT.

INTERIOR WALLS - EXISTING CMU: POWER WASH/SCRUB WALL TO KNOCK OFF ALL DEBRIS AND LOOSE PAINT. ALLOW DRYING TIME PER PAINT MANUFACTURER'S RECOMMENDATIONS. APPLY "COLUMBIA" 05-208 PRIMER/SEALER AS REQUIRED TO COVER EXPOSED CMU WALL SURFACES. APPLY (2) COATS OF "COLUMBIA" 05-930 HEAVY DUTY WATERBASE EPOXY PAINT TO FINISH.

LICENSED ARCHITECT JAY D. BOTT STATE OF IDAHO

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho
ARCHITECT'S NOTES / MINIMUM SPECIFICATIONS

Bott & Associates
ARCHITECTS
LEWISTON
0309 2nd Street Lewiston, Idaho 83501
Ph: (208) 746-9871 Fax: (208) 746-3523
COTTONWOOD
402-B King Street Cottonwood, Idaho 83522
Ph: (208) 962-5458 Fax: (208) 962-7178

DRAWN BY: MR
CHECKED BY: DLB
DATE: 6/20/08
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REVISION DATE:

SHEET:
T1.2

THESE NOTES ARE PROVIDED AS REQUIRED BY THE LEWISTON FIRE DEPARTMENT FOR APPROVAL OF A BUILDING PERMIT FROM THE CITY OF LEWISTON COMMUNITY DEVELOPMENT. SEPARATE PERMITS & FEES MAY BE REQUIRED.

THESE NOTES ARE A MINIMUM SPECIFICATION. ERRORS & OMISSIONS FOR SPECIFICATIONS FOR FIRE PROTECTION SYSTEM REQUIREMENTS ARE NOT THE RESPONSIBILITY OF THE OWNER OR ARCHITECT. QUESTIONS REGARDING THESE MINIMUM SPECIFICATIONS SHALL BE DIRECTED TO THE CITY OF LEWISTON FIRE DEPARTMENT AT (208) 743-3554.

FIRE PROTECTION SYSTEMS SHALL BE DESIGNED BY THE SYSTEM INSTALLERS &/OR QUALIFIED ENGINEER. FIRE PROTECTION SYSTEM CONSTRUCTION DOCUMENTS ARE TO BE SUBMITTED BY THE SYSTEM INSTALLER.

CHECKED BOXES INDICATE NOTES THA MAY BE APPLICABLE TO THIS PROJECT. BOXES THAT ARE NOT CHECKED MAY NOT APPLY TO THIS PROJECT. REFER TO CITIES STAMPED APPROVED DRAWING SET FOR APPROVED LIST OF FIRE DEPARTMENT NOTES. THIS SHEET OF "FIRE DEPARTMENT MINIMUM SPECIFICATIONS" BEING SUBMITTED BY THE ARCHITECT FOR PLAN REVIEW IS PRELIMINARY ONLY, NOT FOR CONSTRUCTION.

THE FIRE DEPARTMENT SHALL SUBMIT A REVISED & APPROVED COPY OF THIS LIST TO THE ARCHITECT WITH PLAN REVIEWERS ADDED NOTATIONS.

(LIST OF NOTES PROVIDED BY THE FIRE DEPARTMENT 5/2007)

FOOTNOTES:

1. FIRE DEPARTMENT SHALL WRITE IN APPLICATION NUMBER. (SEE NOTE 8).
2. WORK DESCRIBED HEREIN APPLIES TO PHASE 2 CONTRACT FOR CAR WASH ONLY. WORK OF PHASE 1 IS DESCRIBED IN PHASE 1 CONSTRUCTION DRAWINGS.
3. THE FIRE SPRINKLER SYSTEM IN THE EXISTING BUILDING (PHASE 1) IS NOT REQUIRED TO BE EXTENDED INTO THE CAR WASH. THE EXISTING BUILDING & CAR WASH BUILDING ARE SEPARATED BY A 3 HOUR FIRE WALL WITHOUT OPENINGS BETWEEN BUILDINGS.
4. WORK IS PART OF PHASE 1 WORK. NOT PART OF PHASE 2 CONTRACT.
5. THE DUMPSTER LOCATION IS SHOWN ON THE ARCHITECT'S SITE PLAN. THE DUMPSTER SHALL BE LOCATED A MINIMUM OF 20'-0" FROM THE BUILDING TO MAINTAIN A CLEAR FIRE ACCESS LANE ON THE NORTH SIDE OF THE BUILDING.
6. SEE ARCHITECT'S FLOOR PLAN DRAWINGS FOR FIRE EXTINGUISHER LOCATIONS.

FIRE DEPARTMENT ACCESS ◇2

☐ (2) IF COMBUSTIBLE BUILDING MATERIALS ARE USED (INCLUDING FRAMING) ALL REQUIRED ACCESS ROADWAYS SHALL BE COMPLETED TO A MINIMUM WIDTH OF 20 FEET, CAPABLE OF SUPPORTING 78,000 LBS. WITH AN ALL-WEATHER SURFACE, TO WITHIN 150 FEET OF ALL STOCKPILES & ALL SIDES OF BUILDING. ACCESS ROADWAYS TO BE POSTED "NO STOPPING/FIRE LANE" & SHALL NOT BE USED FOR THE STORAGE OF MATERIALS. (IFC 501.4 & 503.4)

☐ (3) "FIRE LANE" SIGNS ARE REQUIRED TO BE INSTALLED ALONG INTERIOR ACCESS ROADWAYS IN LOCATIONS WHERE VEHICLE PARKING WOULD ENCROACH ON THE REQUIRED 20 FOOT CLEAR WIDTH OF ROADWAY. ALL RAISED CURBS SHALL BE PAINTED RED WITH "FIRE LANE" STENCILED 4 INCHES AT 30 FOOT INTERVALS. (IFC 503.3)

■ (4) DUE TO THE LIMITED WIDTH OF ON-SITE ROADWAYS, IT IS REQUIRED THAT NO TREES OR HIGH-GROWING SHRUBS SHALL BE CLOSER THAN 6' FROM ANY OF THE REQUIRED ACCESS ROADWAYS & SHALL BE MAINTAIN CLEAR UP TO 13'-6". (IFC 503.2.1.)

☐ (5) IF SECURITY GATES ARE DESIRED AT ANY ENTRANCES TO THE SITE, THEY SHALL BE PROVIDED WITH A FIRE DEPARTMENT APPROVED KEY ENTRY SYSTEM. THE COMPLETED GATES SHALL REMAIN OPEN & NOT OBSTRUCT THE FIRE DEPARTMENT ACCESS UNTIL INSPECTED & APPROVED BY THE FIRE PREVENTION BUREAU. BEGIN APPLICATION PROCESSING WITH THE FIRE DEPARTMENT PRIOR TO THE BUILDING PERMIT BEING ISSUED. FURTHER WRITTEN INFORMATION AVAILABLE FROM THE FIRE DEPARTMENT OFFICE. (IFC 503.6)

■ (6) THIS PROJECT REQUIRES __0__ EMERGENCY KEY BOX(S) AS APPROVED BY THE FIRE DEPARTMENT. KEY BOX SHALL BE MOUNTED BETWEEN 5 & 7 FEET ABOVE THE GROUND (FLOOR) LEVEL, READILY VISIBLE & NOT MORE THAN 12 FEET FROM THE MAIN ENTRY TO THE PREMISES. ALL TENANT KEYS SHALL CONFORM TO A MASTER KEY SYSTEM. MASTER KEYS SHALL BE PERMANENTLY TAGGED & LABELED. (IFC 506) BEGIN APPLICATION PROCESS FOR KNOX BOX WITH THE FIRE DEPARTMENT PRIOR TO THE BUILDING PERMIT BEING ISSUED. THE FOLLOWING KEYS SHALL BE PROVIDED IN THE KNOX BOX: ◇2

☐ GRAND MASTER KEY ☐ ELEVATOR KEY ☐ FIRE ALARM CABINET KEY
☐ OTHER: _____

FIRE PROTECTION SYSTEM REQUIREMENTS ◇2

☐ (7) NOTICE TO CONTRACTORS: INSTALLATION OF FIRE SERVICES MAINS, FIRE SPRINKLER SYSTEMS, FIRE ALARM SYSTEMS OR OTHER FIRE PROTECTION SYSTEMS IS NOT ALLOWED PRIOR TO PLAN APPROVAL BY THE LEWISTON FIRE DEPARTMENT. FIRE SPRINKLER SYSTEMS REQUIRE APPROVAL BY THE STATE FIRE MARSHAL'S OFFICE PRIOR TO BEING SUBMITTED TO THE LEWISTON FIRE DEPARTMENT. CONTRACTORS WHO ENGAGE IN INSTALLATION PRIOR TO APPROPRIATE APPROVALS MAY BE CITED & THE PROJECT WILL BE RED TAGGED. (IFC 111,105.4,105.7.1, 105.7.3, 105.7.11, 901.2) ◇2◇3

☐ (8) ALL UNDERGROUND FIRE SERVICE, FIRE SPRINKLER SYSTEMS, FIRE ALARM SYSTEMS & COMMERCIAL HOOD & DUCT SYSTEMS REQUIRE SEPARATE PLANS, APPLICATION, REVIEW, PERMIT & FEE. ANY OF THE ABOVE NAMED SYSTEMS SHOWN OR NOTED ON THESE PLANS SUBMITTED WITH BUILDING PERMIT APPLICATION NO. _____ & SHOWN OR NOTED ON THESE PLANS ARE TO BE USED FOR BID PURPOSES ONLY. FIRE DEPARTMENT APPROVAL OF THE ABOVE NAMED APPLICATION DOES NOT INCLUDE ANY OF THE ABOVE NAMED SYSTEMS. (IFC 105.4, 105.7.1, 105.7.3, 105.7.11, 901.2, 111) ◇2◇3

☐ (9) SYSTEM INSTALLERS SHALL PROVIDE CONSTRUCTION DOCUMENTS FOR THE FOLLOWING SYSTEMS TO THE ADDRESS BELOW:

☐ UNDERGROUND FIRE SERVICE PLANS ☐ FIRE SPRINKLER SYSTEM PLANS
☐ FIRE ALARM SYSTEM PLANS ☐ COMMERCIAL HOOD & DUCT SYSTEM PLANS

TO BE SENT TO:
FIRE PLAN CHECK
C/O CITY PERMIT CENTER
215 D STREET
LEWISTON, ID 83501

UNDERGROUND FIRE SERVICE ◇2

☐ (10) ADDITIONAL FIRE HYDRANT(S) IS/ARE REQUIRED. (IFC 508) SEE SITE PLAN FOR PROPOSED HYDRANT LOCATION.

☐ LOCATION OF FIRE HYDRANT(S) APPROVED ON SITE PLAN
☐ PROVIDE____HYDRANT(S) IN THE STREET RIGHT-OF-WAY
☐ PROVIDE____HYDRANT(S) ON SITE

☐ (11) UNDERGROUND FIRE SERVICE MAINS & ALL COMPONENTS SHALL CONFORM TO NFPA 24 MINIMUM STANDARD. THE PLANS SHALL BE REVIEWED & APPROVED BY THE FIRE DEPARTMENT PRIOR TO INSTALLATION. STAMPED APPROVED PLANS MUST BE KEPT ON SITE FOR THE FIRE INSPECTOR. (IFC 105.3.5)

☐ (12) PROVIDE THE FIRE DEPARTMENT WITH ONE 8 1/2" X 11" PLAN INDICATING UNDERGROUND SYSTEM." THIS MUST BE A CLEAR, EASILY READ COPY FOR USE BY SUPPRESSION CREWS.

☐ (13) ALL NEW FIRE HYDRANTS SHALL MEET THE FOLLOWING REQUIREMENTS:

(13a) NEW HYDRANT(S) WILL BE "WATEROUS PACER" OR "MEULLER CENTURIAN" WITH "STORZ" ADAPTER
(13b) A 6" MINIMUM SUPPLY IS REQUIRED FOR FIRE HYDRANTS.
(13c) IF COMBUSTIBLE BUILDING MATERIALS ARE USED (INCLUDING FRAMING) THE WATER SUPPLY (INCLUDING MAINS & HYDRANTS) SHALL BE DESIGNED, INSTALLED, TESTED & APPROVED BY THE FIRE DEPARTMENT PRIOR TO STOCKPILING COMBUSTIBLE BUILDING MATERIALS.
(13d) WATER SUPPLY SYSTEMS FOR PHASED CONSTRUCTION SHALL PROVIDE REQUIRED FIRE FLOWS AT ALL PHASES.
(13e)FIRE HYDRANTS SHALL BE PROVIDED WITH AN INTEGRAL 5" HARRINGTON HIHS "STORZ" ADAPTER WITH APPROVED ATTACHED SEAL CAP & AIRCRAFT CABLE.
(13f) ALL NEW & EXISTING HYDRANTS SHALL BE INSTALLED AND/OR MODIFIED SO THE 5" PORT IS FACING TOWARD THE FIRE DEPARTMENT VEHICULAR ACCESS ROUTE (ROAD).
(13g) THE FOLLOWING EXISTING FIRE HYDRANTS SHALL BE PROVIDED WITH 5" "STORZ" ADAPTERS WITH THE APPROVED ATTACHED SEAL CAP & AIRCRAFT CABLE:

☐ (15) SIZE & TYPE OF FIRE SERVICE MAINS SHALL BE APPROVED BY THE FIRE DEPARTMENT PRIOR TO INSTALLATION. UNDERGROUND SUPPLY LINES FOR FIRE SPRINKLER SERVICE LESS THAN 6" IN DIAMETER SHALL BE MINIMUM SCHEDULE 80. (NFPA 13 & 24)

FIRE SPRINKLER SYSTEMS ◇3

☐ (16) A FULLY AUTOMATIC FIRE SPRINKLER SYSTEM IS REQUIRED DUE TO:

☐ FIRE FLOW IN EXCESS OF 3,000 GPM (LEWISTON ORD. SEC. 15-1.1.j)
☐ LIMITED ACCESS ON SIDES OF BUILDING (IFC 901.4.3)
☐ INTERNATIONAL BUILDING CODE REQ. PER SEC. _____
☐ MINIMUM FIRE FLOW IS NOT AVAILABLE (IFC B105)
☐ BASEMENT OVER 1,500 SQ FT (IFC 903.2.10.1)

■ (17) IF PROJECT CURRENTLY HAS FIRE SPRINKLER PROTECTION, INCLUDE THE LOCATION OF THE RISER & THE DESIGN DATA FROM THE DATA PLATE ON THE RISER. ◇2

☐ (18) FIRE SPRINKLER SYSTEMS & ALTERATIONS OF AN EXISTING SYSTEM & ALL COMPONENTS SHALL CONFORM TO NFPA 13 MINIMUM STANDARD & SHALL BE REVIEWED BY THE FIRE DEPARTMENT PRIOR TO INSTALLATION. STAMPED, APPROVED PLANS MUST BE KEPT ON SITE FOR FIRE INSPECTOR. (IFC 105.3.5.)

(18a) FDC/PIV LOCATION IS APPROVED ON THE SITE PLAN
(18b) SUBMITTAL TO INCLUDE A MINIMUM OF TWO SETS OF PLANS & CALCULATIONS WITH ALL DETAILS PER NFPA 13.
(18c) CONTRACTOR IS REQUIRED TO SUBMIT A SET OF "AS BUILT DOCUMENTS/DRAWINGS FOR APPROVAL PRIOR TO FINAL INSPECTION WHEN NOT INSTALLED PER PLAN.
(18d) FOLLOWING CHECK TESTS ARE REQUIRED:
☐ NEW SYSTEM, 200 PSI FOR 2 HOURS
☐ ADDITION/ALTERATION, 150 PSI FOR 2 HOURS
☐ ADDITION/ALTERATION, PER NFPA 13, PROVIDE CURRENT 5-YEAR DOCUMENTATION

☐ (19) FIRE DEPARTMENT CONNECTION (FDC) THREADS SHALL BE PROTECTED WITH APPROVED KNOX FDC PLUGS. BEGIN APPLICATION PROCESS WITH THE FIRE DEPARTMENT PRIOR TO THE BUILDING PERMIT BEING ISSUED. (IFC 912.3.1)

☐ (20) A LIST CHECK VALVE SHALL BE INSTALLED IN EACH FIRE DEPARTMENT CONNECTION. (NFPA 13 SEC. 8.16.2.5.1.)

☐ (21) ALL CONTROL VALVES SHALL BE LISTED INDICATING OR LISTED NON-INDICATING TYPE (NFPA 13 SEC. 8.15.1.1.4.1). PIV TO BE LOCATED A MINIMUM OF 40 FEET FROM BUILDING (NFPA 24 SEC. 6.3.3.1). ACCESS TO RISER EQUIPPED WITH VALVES SHALL BE PROVIDED BY A 3'-0" x 6'-8" or 7'-0" DOOR DIRECTLY ACCESSIBLE FROM THE EXTERIOR. (IFC 510)

☐ (22) A METAL SIGN WITH RAISED LETTERS AT LEAST 1" IN SIZE SHALL BE MOUNTED ON ALL FIRE DEPARTMENT CONNECTIONS SERVING FIRE SPRINKLERS, STANDPIPES OR FIRE PUMP CONNECTIONS. PROVIDE THE FOLLOWING:

☐ AUTOMATIC SPRINKLERS ☐ STANDPIPE
☐ INSPECTORS TEST (IFC 912.4, NFPA 13 SEC. 8.16.2.4.7.1)

☐ (23) OPEN

■ (24) LARGE TRASH RECEPTACLES, COMMONLY KNOWN AS DUMPSTERS, THAT ARE PLACE ADJACENT TO STRUCTURES OR IN AREAS WHERE HEAVY ACCUMULATION OF COMBUSTIBLES ARE EXPECTED, SHALL BE PROTECTED WITH AT LEAST ONE AUTOMATIC FIRE SPRINKLER HEAD. IF THE BUILDING IS NOT EQUIPPED WITH A FIRE SPRINKLER SYSTEM, THE DUMPSTER SHALL NOT BE STORED IN THE BUILDING OR PLACED WITHIN 5 FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF EAVE LINES. (IFC 304.3.3) ◇5

FIRE ALARM SYSTEMS

☐ (25) A FIRE ALARM SYSTEM IS REQUIRED DUE TO:

☐ 20 OR MORE SPRINKLER HEADS (IFC 903.4 EXCEPTION 2)
☐ AS PER I.F.C. SECTION _____

☐ (26) THE FOLLOWING COMPONENTS ARE REQUIRED FOR SPRINKLER SYSTEMS WITH 20 OR MORE HEADS INSTALLED PER IFC 903.4:

(26a) CENTRAL STATION MONITORING OF FIRE CONTROL UNIT (ALARM PANEL). (IFC 903.4)
(26b) AUTOMATIC SMOKE DETECTION AT FIRE CONTROL UNIT WHEN LOCATED IN AN AREA THAT IS NOT CONTINUOUSLY OCCUPIED (I.E. 24/7 OR WHEN LOCATED IN A STORAGE CLOSET). (NFPA 7 SEC. 2.4.4.5)
(26c) DUCT DETECTORS WHEN REQUIRED BY IMC 606.2.2 WITH REMOTE RESET AT ALARM PANEL. (NFPA 72.5.14.5.8, IFC 907.12)
(26d) APPROVED AUDIBLE DEVICES SHALL BE CONNECTED TO EVERY AUTOMATIC SPRINKLER SYSTEM. SUCH SPRINKLER WATER-FLOW DEVICES SHALL BE ACTIVATED BY WATER FLOW EQUIVALENT TO THE FLOW OF A SINGLE SPRINKLER OF THE SMALLEST ORIFICE SIZE INSTALLED IN THE SYSTEM. (IFC 903.4.2) APPROVED DEVICES INCLUDE HORN/STROBES FOR INTERIOR USE, MINIMUM OF 6" BELL FOR EXTERIOR USE. EXAMPLES ON LOCATION OF INTERIOR AUDIBLE DEVICES: A MINIMUM OF ONE PER FLOOR IN MULTISTORY BUILDINGS, OR ONE PER TENANT SPACE IN A MULTI TENANT STRIP MALL. WHERE THE MAJORITY OF THE OCCUPANTS CAN HEAR &/OR SEE THE ALARM.
(26e) TEMPORAL 3 NOTIFICATION PATTERN IS REQUIRED. (NFPA 72. 6.8.6.4.1)
(26f) WHEN TWO OR MORE AUDIBLE &/OR VISIBLE APPLIANCES CAN BE HEARD &/OR SEEN, SYNCHRONIZATION IS REQUIRED. (NFPA 7 SEC. 2.6.8.6.4.3)
(26g) AUDIBILITY & VISIBILITY OF NOTIFICATION APPLIANCES WILL BE FIELD VERIFIED AT TIME OF ACCEPTANCE TESTING TO ENSURE THEY ARE LOCATED PER SECTION ABOVE.

☐ (27) FIRE ALARM SYSTEM & ALL COMPONENTS SHALL CONFORM TO NFPA 72 MINIMUM STANDARDS & SHALL BE REVIEWED & APPROVED BY THE FIRE DEPARTMENT PRIOR TO INSTALLATION. STAMPED, APPROVED PLANS MUST BE KEPT ON SITE FOR THE FIRE INSPECTOR. (IFC 105.3.5 & 907.1.1)

(27a) FIRE ALARM CONTRACTOR MUST PICK UP SUBMITTAL PACKET PRIOR TO SUBMITTAL.
(27b) COMPLETED PACKET MUST BE INCLUDED WITH ALL FIRE ALARM PLAN SUBMITTALS.
(27c) FIRE ALARM TO BE MONITORED BY AN APPROVED UL LISTED CENTERAL STATION.

☐ (28) DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEANUP OF ALL TRADES IS COMPLETE & FINAL. (NFPA 72 SEC. 5.7.1.11)

☐ (30) A HEAT DETECTOR IS REQUIRED IN THE ELEVATOR SHAFT. SHAFT CONSTRUCTION TO ACCOMMODATE FOR HEAT DETECTOR MAINTENANCE, WHILE MAINTAINING INTEGRITY OF RATED SHAFT. (NFPA 72 SEC. 6.15.4)

☐ (31) DUCT DETECTOR REQUIRED IN RETURN AIR SUPPLY FOR ALL SYSTEMS OVER 2000 CFM. (IMC 606.2.2) SMOKE DUCT DETECTORS SHALL BE CONNECTED TO THE BUILDING'S FIRE ALARM CONTROL PANEL WHEN A FIRE ALARM SYSTEM IS PROVIDED. ACTUATION OF A SMOKE DETECTOR SHALL ACTIVATE A VISIBLE & AN AUDIBLE SIGNAL IN AN APPROVED LOCATION. (IFC 907.12). REMOTE RESET FOR DUCT DETECTORS REQUIRED IN ALL BUILDINGS WITH AN ALARM PANEL. (NFPA 72 SEC. 5.14.5.8)

☐ (32) ON/OFF/AUTO SWITCH REQUIRED FOR ATRIUM VENTILATION. (IBC 909.8 & 909.16)

☐ (33) INSTALL SMOKE DETECTOR(S) PER IBC, IFC & APPLICABLE NFPA 72. DETECTORS SHALL BE INTERCONNECTED IN ALL RESIDENTIAL OCCUPANCIES. NFPA 72 SEC. 11.5.1.2.B, IFC 907.2.10.3)

☐ (34) IN ADDITIONS TO R-3 OCCUPANCIES, SMOKE DETECTORS MAY BE 9 VOLT BATTERY OPERATED, SINGLE STATION IN EXISTING BEDROOMS. (IFC 907.2.10.2)

OTHER FIRE PROTECTION SYSTEMS

■ (35) INDICATE HAND PORTABLE FIRE EXTINGUISHER RATING & LOCATION ON PLAN. INSTALL ONE PER 3000 SQUARE FEET OR FRACTION THEREOF. THE MAXIMUM TRAVEL DISTANCE BETWEEN FIRE EXTINGUISHERS IS 75'-0". MOUNT ON WALL 3-5 FEET ABOVE FINISHED FLOOR (NFPA 10). ◇6

■ FIRE EXTINGUISHER(S) RATED 2A:10BC.
☐ PROVIDE FIRE EXTINGUISHER RATED "K" FOR COMMERCIAL KITCHEN. (IFC 904.11.5)
☐ PROVIDE FIRE EXTINGUISHER RATED 40BC LOCATED FOR USE AT GAS STATION PUMPS.
☐ OTHER: _____

☐ (36) A TYPE I HOOD IS REQUIRED. AN AUTOMATIC FIRE EXTINGUISHING SYSTEM IS REQUIRED FOR THE PROTECTION OF COMMERCIAL COOKING EQUIPMENT & ALL HOOD, DUCT, PLENUM & COOKING SURFACES (IFC 609).

(36a) HOOD & DUCT REQUIRES SEPARATE APPLICATION, PLANS, SPECS, APPROVAL, FEE & PERMIT.
(36b) SYSTEM SHALL COMPLY WITH U.L. 300 1994 STANDARDS PER MANUFACTURER'S INSTALLATION REQUIREMENTS & SPECIFICATIONS
(36c) SYSTEM SHALL MEET ALL NFPA 17A, IFC, IBC & IMC REQUIREMENTS. (36d) SYSTEM SHALL MEET NFPA 13 SEC. 7.9 REQUIREMENTS, IF THIS APPLICATION OPTION IS UTILIZED.

☐ (37) HOOD SYSTEM SHALL INITIATE A ZONE ALARM AT THE FIRE ALARM PANEL IN ALL SPRINKLERED AND/OR ALARMED BUILDINGS. (NFPA 72, SECTION 5.11, IFC 907.14).

OTHER FIRE DEPARTMENT REQUIREMENTS

☐ (38) EMERGENCY ESCAPE & RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. MINIMUM NET CLEAR OPENING HEIGHT 24", MINIMUM NET CLEAR OPENING WIDTH 20". BOTTOM OF CLEAR OPENING SHALL NOT BE GREATER THAN 44" FROM THE FLOOR. (IFC 1009.2, 1009.2.1, 1009.3)

☐ (39) APPROVED NUMBERS &/OR LETTERS SHALL BE PLACED ON ALL BUILDINGS TO BE VISIBLE FROM THE STREET, COLOR CONTRASTING TO BACKGROUND. ADDRESS POSTING IS REQUIRED ON BUILDING, FIRE DEPARTMENT ACCESS & ON ALL REAR DOORS. (IFC 505.1)

☐ PROJECT REQUIRES AN ILLUMINATED DIRECTORY AT MAIN ENTRANCE.
☐ INDIVIDUAL ROOM/SUITE NUMERALS TO BE MINIMUM 4 INCHES HIGH x 1/2" STROKE
☐ 6 INCHES HIGH X 3/4" STROKE
☐ 9 INCHES HIGH X 1 1/4" STROKE WHEN 36-50 FEET FROM ACCESS
☐ 12 INCHES HIGH X 1 1/2" STROKE WHEN OVER 50 FEET FROM ACCESS

☐ (40) OPEN

☐ (41) "ELECTRICAL ROOM" SIGN REQUIRED ON ELECTRICAL ROOM DOOR. (IFC 605.30.1) ◇2

☐ (42) "F.A.C.P." ROOM SIGN REQUIRED ON ALARM CONTROL PANEL ROOM DOOR. (IFC 510.1) ◇2

☐ (43) "SPRINKLER RISER ROOM" SIGN REQUIRED ON RISER ROOM DOOR. (IFC 510.1) ◇2

☐ (44) OCCUPANT LOAD SIGN SHALL BE POSTED IN EVERY ROOM/SPACE THAT IS AN ASSEMBLY OCCUPANCY. THE SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT FROM THE ROOM OR SPACE. APPROVED OCCUPANT LOAD SIGNS ARE AVAILABLE FROM THE LEWISTON FIRE DEPARTMENT FIRE PREVENTION DIVISION. (IFC 1003.2.2.5).

☐ (45) ATTIC, UNDERFLOOR (INCLUDING BASEMENTS) & CONCEALED SPACES USED FOR STORAGE OF COMBUSTIBLE MATERIALS SHALL BE PROTECTED ON THE STORAGE SIDE AS REQUIRED FOR 1 HOUR FIRE RESISTANT RATED CONSTRUCTION. OPENINGS SHALL BE PROTECTED BY ASSEMBLIES THAT ARE SELF-CLOSING & ARE OF NONCOMBUSTIBLE CONSTRUCTION OR SOLID WOOD CORE NOT LESS THAN 1.75" THICK (IFC 315.2.4).

☐ (46) PROVIDE A HAZARDOUS MATERIALS MANAGEMENT PLAN (HMMP) PER IFC 2701.4.1, & A HAZARDOUS MATERIALS INVENTORY STATEMENT (HMIS) PER IFC 2701.4.2. EXAMPLES OF QUALIFIED PREPARER MAY BE A FIRE PROTECTION ENGINEER, PROFESSIONAL ENGINEER OF RELATED FIELD, CHEMIST, FIRM OR CORPORATION APPROVED BY THE FIRE MARSHAL.

☐ (47) THIS PROJECT REQUIRES A "HAZ MAT DATA" & KEY CONTROL STORAGE CABINET AS LOCATED BY THE FIRE DEPARTMENT. DATA CABINETS SHALL BE MOUNTED BETWEEN 4 & 6 FEET ABOVE GROUND (FLOOR) LEVEL, READILY VISIBLE & NOT MORE THAN 12 FEET FROM THE MAIN ENTRY TO THE PREMISES. ALL BUILDING KEYS SHALL CONFORM TO A MASTER KEY SYSTEM. MASTER KEYS SHALL BE PERMANENTLY TAGGED & LABELED. BEGIN APPLICATION PROCESSING WITH FIRE DEPARTMENT PRIOR TO THE ISSUANCE OF A BUILDING PERMIT (IFC 2703.4). THE FOLLOWING ITEMS SHALL BE PROVIDED: ALL MATERIAL SAFETY DATA SHEETS, GENERAL FACILITY SITE PLAN, BUILDING FLOOR PLAN(S) INDICATING EXIT LOCATIONS, FIRE SYSTEM CONTROLS, FIRE EXTINGUISHERS, HAZARDOUS MATERIALS & STORAGE AREAS, HAZARDOUS MATERIALS MANAGEMENT PLAN
☐ OTHER _____

■ (48) ALL SITE INSPECTIONS REQUIRE A MINIMUM 24 HOURS NOTICE. ALL FIRE DEPARTMENT INSPECTIONS ARE TO BE REQUESTED THROUGH THE PERMIT CENTER, PLEASE BE SPECIFIC AS TO TYPE OF INSPECTION REQUESTED."

LICENSED ARCHITECT AR-944 BOISE, IDAHO STATE OF IDAHO

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho
FIRE DEPARTMENT MINIMUM SPECIFICATIONS

Bott & Associates
ARCHITECTS
LEWISTON
0309 2nd Street Lewiston, Idaho 83501
Ph: (208) 746-9871 Fax: (208) 746-3523
COTTONWOOD
402-B King Street Cottonwood, Idaho 83522
Ph: (208) 962-5458 Fax: (208) 962-7178

DRAWN BY: MR
CHECKED BY: DLB
DATE: 6/20/08
JOB NO.: 080429
REVISION DATE:

SHEET:
T2

ROGERS MOTORS TOYOTA

2203 16TH AVENUE, LEWISTON, ID.

6/13/08

FIRE DEPARTMENT NOTES

JULIAN SORRELL, FIRE DEPARTMENT (208) 743-3554

1) NO GATES INSTALLED ALONG ENTRANCES. SHOULD GATES BE INSTALLED ON THIS PROJECT DURING OR ANYTIME AFTER DEVELOPMENT, AN EMERGENCY KEY BOX AND KEYS SHALL BE REQUIRED FOR EMERGENCY ACCESS. THE COMPLETED GATES SHALL REMAIN OPEN AND NOT OBSTRUCT THE FIRE DEPARTMENT ACCESS UNTIL INSPECTED AND APPROVED BY THE FIRE PROTECTION BUREAU. IFC 503.6

2) ALL REQUIRED FIRE ACCESS ROADWAYS SHALL BE COMPLETED TO A MINIMUM WIDTH OF 20 FEET, CAPABLE OF SUPPORTING 78,000 LBS, WITH AN ALL WEATHER SURFACE, TO WITHIN 150 OF ALL STOCKPILES AND ALL SIDES OF BUILDINGS. ACCESS ROADWAYS TO BE POSTED "NO STOPPING/FIRE LANE" AND SHALL NOT BE USED FOR THE STORAGE OF MATERIALS. IFC 501.4, 503.4

3) "FIRE LANE" SIGNS ARE REQUIRED TO BE INSTALLED ALONG THE INTERIOR ACCESS ROADWAYS IN LOCATIONS WHERE VEHICLE PARKING WOULD ENCROACH ON THE REQUIRED 20 FOOT CLEAR WIDTH OF THE ROADWAY. ALL RAISED CURBS SHALL BE PAINTED RED WITH "FIRE LANE" STENCILED 4 INCHES AT 30 FOOT INTERVALS. IFC 503.3

4) UNDERGROUND FIRE SERVICE MAINS AND ALL COMPONENTS SHALL CONFORM TO NFPA 24 MINIMUM STANDARD. THE PLANS SHALL BE REVIEWED AND APPROVED BY THE FIRE DEPARTMENT PRIOR TO INSTALLATION. STAMPED APPROVED PLANS MUST BE KEPT ON SITE FOR THE FIRE INSPECTOR. IFC 105.3.5

5) ALL NEW FIRE HYDRANTS SHALL MEET THE FOLLOWING REQUIREMENTS:
- 5.1) WATEROUS PACER – WITH 5-INCH HARRINGTON STORTZ CONNECTION.
- 5.2) MUELLER CENTURION – WITH 5-INCH HARRINGTON STORTZ CONNECTION.
- 5.3) 6" MINIMUM SUPPLY LINE FOR HYDRANT.
- 5.4) IF COMBUSTIBLE MATERIALS ARE USED (INCLUDING FRAMING) THE WATER SUPPLY (INCLUDING MAINS AND HYDRANTS) SHALL BE DESIGNED, INSTALLED, TESTED AND APPROVED BY THE FIRE DEPARTMENT PRIOR TO STOCKPILING COMBUSTIBLE BUILDING MATERIALS.
- 5.5) WATER SUPPLY SYSTEMS FOR PHASED CONSTRUCTION SHALL PROVIDE REQUIRED FIRE FLOWS AT ALL PHASES.
- 5.6) ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN 5-INCH HARRINGTON STORTZ CONNECTION, WITH THE APPROVED ATTACHED SEAL CAP AND AIRCRAFT CABLE.

6) APPROVED NUMBERS AND/OR LETTERS SHALL BE PLACED ON ALL BUILDINGS TO BE VISIBLE FROM THE STREET, COLOR CONTRASTING TO BACKGROUND. ADDRESS POSTING IS REQUIRED ON BUILDING, FIRE DEPARTMENT ACCESS ON ALL REAR DOORS.

7) ALL INSPECTIONS REQUIRE A MINIMUM 24 HOUR NOTICE. ALL FIRE DEPARTMENT INSPECTIONS ARE TO BE REQUESTED THROUGH THE PERMIT CENTER, PLEASE BE SPECIFIC AS TO THE TYPE OF INSPECTION REQUESTED.

8) PROJECT SHALL COMPLY WITH THE PROVISIONS OF IFC 105.3.6 COMPLIANCE WITH CODE.

9) APPLICATION AND PAYMENT FOR KNOX DEVICES AND STORTZ HYDRANT ADAPTERS SHALL BE COMPLETED PRIOR TO FIRE DEPARTMENT APPROVAL OF PERMITS. CONTACT THE LEWISTON FIRE DEPARTMENT FOR THE KNOX SECURITY APPLIANCES APPLICATION AND PAYMENT. CONTACT DAVE SIX WITH THE CITY OF LEWISTON WATER DEPARTMENT FOR ORDERING AND PAYMENT OF STORTZ HYDRANT ADAPTERS.

11) REQUIRED FIRE APPARATUS ACCESS ROADS AND FIRE HYDRANTS MUST BE INSTALLED, TESTED, PLACED IN SERVICE AND APPROVED PRIOR TO BUILDING PERMIT ISSUANCE.

12) "NOTICE TO CONTRACTORS" INSTALLATION OF FIRE SERVICE MAINS, FIRE SPRINKLER SYSTEMS, FIRE ALARM SYSTEMS OR OTHER FIRE PROTECTION SYSTEMS IS NOT ALLOWED PRIOR TO PLAN APPROVAL BY THE LEWISTON FIRE DEPARTMENT. FIRE SPRINKLER SYSTEMS REQUIRED APPROVAL BY THE STATE FIRE MARSHAL'S OFFICE PRIOR TO BEING SUBMITTED TO THE LEWISTON FIRE DEPARTMENT. CONTRACTORS WHO ENGAGE IN INSTALLATION PRIOR TO APPROPRIATE APPROVALS MAY BE CITED AND THE PROJECT WILL BE RED TAGGED. IFC111, 105.4, 105.7.1, 105.7.3, 105.7.11, 901.2.

13) SIZE AND TYPE OF FIRE SERVICE MAINS SHALL BE APPROVED BY THE FIRE DEPARTMENT PRIOR TO INSTALLATION OF UNDERGROUND SUPPLY LINES FOR FIRE SPRINKLER SERVICE LESS THAN 6" IN DIAMETER SHALL BE MINIMUM SCHEDULE 80. NFPA 13, 24.

14) A. TESTING REQUIRED FOR FIRE SPRINKLER SYSTEMS IS 200 PSI FOR 2 HOURS.
B. CONTRACTOR IS REQUIRED TO SUBMIT A SET OF "AS BUILTS" DOCUMENTS/DRAWINGS FOR APPROVAL PRIOR TO FINAL INSPECTION WHEN NOT INSTALLED PER PLAN.

15) FIRE DEPARTMENT CONNECTION (FDC) THREADS SHALL BE PROTECTED WITH APPROVED KNOX FDC PLUGS. BEGIN APPLICATION PROCESS WITH THE FIRE DEPARTMENT WHEN THE BUILDING PERMIT IS ISSUED.

WATER / WASTEWATER NOTES

DAVID SIX, WATER/WASTEWATER SYSTEM MANAGER, (208) 743-7461

1) SEE SHEET C9 FOR "WATER TAP INFORMATION", "STANDARD WATER COMMENTS", "WATER SERVICE CONNECTION", "NEW WATER MAIN CONSTRUCTION PROCEDURES" AND "WATER FACTS".

2) THE MAIN WATER LINES THAT ARE C-900 REQUIRE LOCATE WIRE AND BURY TAPE INSTALLED.

3) ALL WATER LINES ARE TO BE 4' BURY MINIMUM AND WILL NEED APPROVAL FOR ANY DEVIATION.

BUILDING DEPARTMENT NOTES

BUILDING OFFICIAL (208) 746-1319 EXT 294

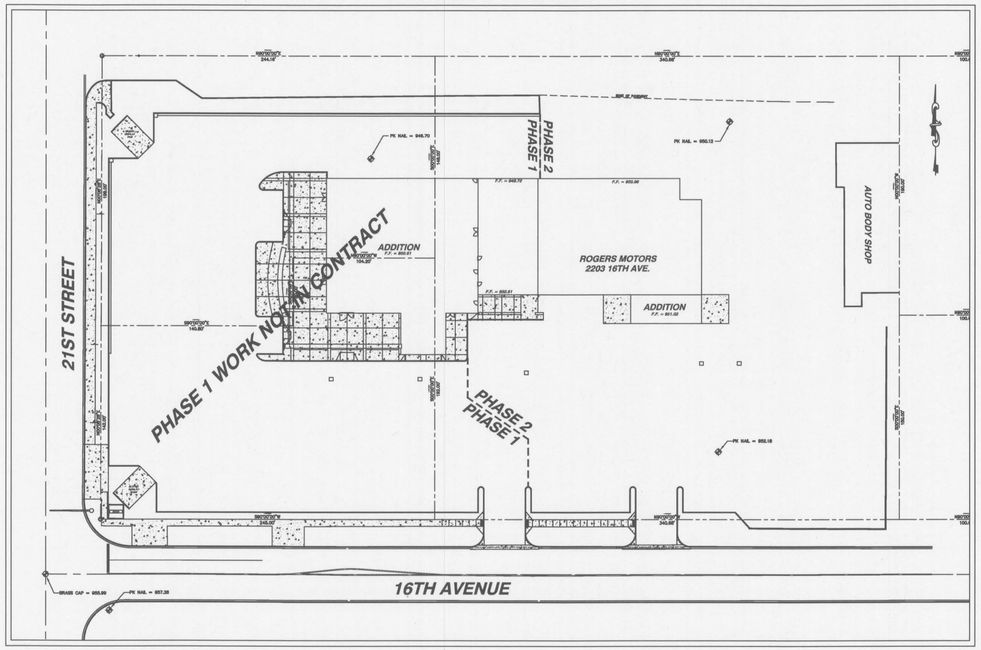
1) OWNER SHALL SUBMIT A LIST OF ALL CONTRACTORS, SUBCONTRACTORS AND EQUIPMENT INSTALLERS WORKING EITHER FOR THE OWNER OR THE GENERAL CONTRACTOR. CITY OF LEWISTON BUSINESS LICENSE IS REQUIRED TO PERFORM WORK IN THE CITY OF LEWISTON (LEWISTON CITY CODE SECTION 21-21)

2) CONTRACTORS ARE REQUIRED TO BE REGISTERED IN WITH THE STATE OF IDAHO. CONTRACTOR REGISTRATION NUMBER IS REQUIRED TO BE PRESENTED AT THE TIME OF PERMITTING AND SHOWN ON ALL PERMITS. (IDAHO CODE SECTION 52-5209)

STANDARDS

1) IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (LATEST ED.)
2) NATIONAL ELECTRIC COUNCIL & LOCAL ELECTRIC CODES
3) AMERICAN WATER WORKS ASSOCIATION STANDARDS
4) IDAPA 58 & 10 STATE STANDARDS
5) CITY OF LEWISTON STANDARD DRAWINGS
6) INTERNATIONAL BUILDING CODE 2003
7) INTERNATIONAL FIRE CODE 2003
8) ADA STANDARD FOR ACCESSIBILITY DESIGN, 28 CFR PART 36

PROJECT SITE



4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX (208) 750-1082
(208) 791-8055

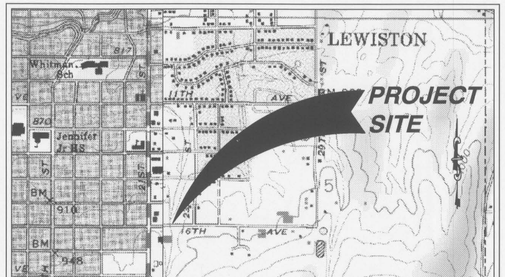
NACLINE
ENGINEERING & DRAFTING
"an affordable alternative"

REGISTERED PROFESSIONAL ENGINEER 10962 STATE OF IDAHO CHARLES R. FISKE

CALL BEFORE YOU DIG

CONTRACTOR SHALL CALL 1-800-342-1585 & HAVE ALL UNDERGROUND UTILITIES LOCATED AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY CONSTRUCTION.

VICINITY MAP



CONTACT INFORMATION

PROJECT ADDRESS:	2203 16TH AVENUE LEWISTON, ID 83501
OWNER:	RICH ROGERS AGENT: BOTT & ASSOC. 0309 2ND STREET LEWISTON, ID 83501 PHONE: (208) 746-9871 FAX: (208) 746-3523
CIVIL ENGINEER: INSPECTOR:	C. RYAN FISKE, P.E. ANACLINE ENGINEERING 4045 EAGLE CT. LEWISTON, ID 83501 PHONE: (208) 791-8055

ENGINEERING DEPARTMENT NOTES

CITY OF LEWISTON ENGINEERING DEPARTMENT NOTES:

THE FOLLOWING COMMENTS ARE STANDARD TO ALL REVIEWS AND MUST BE CONFORMED TO DURING AND AFTER CONSTRUCTION.

1) SITE DISTANCES FOR ABUTTING PROPERTIES DRIVEWAYS AND INTERSECTIONS MUST BE MAINTAINED.

2) EROSION AND DUST CONTROL MEASURES MUST BE USED DURING CONSTRUCTION TO REDUCE OR ELIMINATE BLOWING DUST, EXCESSIVE RUNOFF AND SOIL EROSION ACROSS PROPERTY LINES AND INTO STREETS AND RIGHT-OF-WAY, AND TO ELIMINATE TRACKING SOIL AND MUD ONTO STREETS FROM CONSTRUCTION EQUIPMENT AND VEHICLES. THE SITE CONTRACTOR IS RESPONSIBLE FOR STREET CLEANUP AT THE END OF EACH SHIFT.

3) IMPROVEMENTS CONSTRUCTED ON RIGHT-OF-WAY REQUIRE A STREET CUT PERMIT OBTAINED AT THE CONSTRUCTION MANAGEMENT SECTION OF THE PUBLIC WORKS DEPARTMENT.

4) ALL CONSTRUCTION NOT SPECIFICALLY MENTIONED OR SHOWN SHALL CONFORM TO CITY ORDINANCES AND STANDARDS.

5) CONTACT CITY ENGINEER, IF YOU HAVE ANY QUESTIONS CONCERNING THESE COMMENTS AT (208)746-3671.

SHEET INDEX

SHEET 1 - COVER
SHEET 2 - EROSION CONTROL PLAN
SHEET 3 - DEMOLITION PLAN
SHEET 4 - GRADING PLAN
SHEET 5 - UTILITY PLAN & - TRAFFIC CONTROL PLAN
SHEET 6 - CIVIL PLAN
SHEET 7 - CITY DETAILS
SHEET 8 - CITY DETAILS & SPECS

LEGEND

PROPERTY LINE		GAS METER	SIGNAL POLE
ROAD CENTERLINE		FLAG POLE	UTILITY BOX
ROAD CENTERLINE		MANHOLE	PROPOSED MANHOLE
SAWCUT LINE / EDGE OF PAVEMENT		DRYWELL	ROOF DOWN SPOUT
BREAK LINE		GATE VALVE	NEW CATCH BASIN
EXISTING GRADE CONTOUR	1973	WATER METER	EXISTING CATCH BASIN
FINISH GRADE CONTOUR	1973	FIRE HYDRANT	SEWER CLEAN OUT C/O
OVERHEAD POWER	OHP	IRRIGATION BOX	FIRE DEPARTMENT CONNECTION
UNDERGROUND POWER	UGP	STREET SIGN	POST INDICATOR VALVE
PHONE	PH	UTILITY POLE	CONTROL POINT OR MONUMENT
SANITARY SEWER	SAN	LIGHT POLE	WATER SPIGOT
WATER MAIN (IN INCHES)	6"W		
STORM DRAIN	SD		
FOUNDATION DRAIN	4"FD		
UNDERGROUND GAS LINE	GAS		
ROOF DOWN SPOUT	RDS		

LEGEND

CONSTRUCTION ENTRANCE (CE) — A stone pad, located at points of vehicular ingress and egress on a construction site, to reduce the soil transportation onto public roads and other paved areas. Location may vary from plan location.

DUST CONTROL (DC) — Reducing surface and air movement of dust during land disturbance, demolition or construction activities in areas subject to dust problems in order to prevent soil loss and reduce the presence of potentially harmful airborne substance.

PERMANENT SEEDING (PS) — Establishment of perennial vegetative cover by planting seed on rough-graded areas that will not be brought to grade for a period of a year or more or where permanent, long-lived vegetative cover is needed on fine-graded areas. Permanent seeding in turf areas shall match existing species. Permanent seeding on hill side shall be wheat grass variety.

STREET SWEEP (SS) — Where construction vehicle access routes intersect public streets, provisions shall be made to minimize the transportation of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a public street surface, the road shall be cleaned thoroughly. Periodic street sweeping may be required. Street washing shall be allowed only after sediment is first removed by sweeping.

INLET PROTECT (IP) — Inlet protection by means of block and gravel or geotextile fabric placed between the grate and concrete structure. Shall be cleaned out by the contractor after 1 inch of sediment has accumulated.

S.W.P.P.P. NOTES

SWPPP – STORM WATER POLLUTION PREVENTION PLAN

THIS PROJECT IS PART OF A COMMON PLAN THAT WILL DISTURB 2.75 ACRES OF LAND. THE GENERAL CONTRACTOR SHALL PREPARE AND IMPLEMENT A SWPPP MEETING E.P.A. REQUIREMENTS.

THE SITE WORK CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE, AND INSPECTION OF THE EROSION AND SEDIMENT CONTROLS IDENTIFIED ON THIS SHEET AND SHALL BE FAMILIAR WITH THE GENERAL CONTRACTORS SWPPP PLAN.

THE SITE WORK CONTRACTOR SHALL FILE INSPECTION REPORTS WITH THE SWPPP OPERATOR EVER 14 DAYS OR RAINFALL EVENT OF MORE THAN ½ INCH. THIS WORK SHALL BE INCLUDED IN THE SITE WORK CONTRACTORS BASE BID PROPOSAL TO THE GENERAL CONTRACTOR.

ALL CONSTRUCTION STORMWATER SHALL REMAIN ON SITE OR TREAT THE STORMWATER TO MEET IDAHO WATER QUALITY STANDARDS BEFORE IT LEAVES THE SITE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

N90°00'00"E 244.16'

21ST STREET

RAISED DISPLAY PAD

N00°08'28"E 195.00'

S00°00'00"E 148.00'

PHASE 2
PHASE 1

F.F. = 949.72

ADDITION
F.F. = 950.61
N90°00'00"W 104.20'

PHASE 1 WORK NOT IN CONTRACT

S90°00'00"E 140.80'

S00°00'00"E 192.00'

N00°08'28"E 242.00'

PHASE 2
PHASE 1

F.F. = 950.61

ROGERS MOTORS
2203 16TH AVE.

ADDITION
F.F. = 951.02

SLOPED DISPLAY RAMP

SIGN

S90°00'00"W 245.00'

S90°00'00"W 244.68'

16TH AVENUE

IP DC PS CE SS

REVISIONS

NO.	DATE	BY	FILENAME
0			00077

ORIGINAL DRAWING

REGISTERED PROFESSIONAL ENGINEER — CHARLES R. FISKE — 10962 — STATE OF IDAHO

NACLINE
ENGINEERING & DRAFTING
"an affordable alternative"
4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX (208) 792-1052
(208) 791-8055

ROGER MOTORS
LEWISTON, IDAHO

EROSION & SEDIMENT CONTROL PLAN

DRAWN BY: CRF	CHECKED BY: CRF
DESIGNED BY: CRF	
SCALE: 1" = 20'	
DATE: 6/13/08	
PROJECT NO.: 00077	
SHEET C2 OF 8	

ROGER MOTORS
LEWISTON, IDAHO
DEMOLITION PLAN

NACLINE
ENGINEERING & DRAFTING
"an affordable alternative"
4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX (208) 750-1082
(208) 791-8055

REGISTERED PROFESSIONAL ENGINEER
STATE OF IDAHO
10962
CHARLES R. FISKE

NO.	DATE	BY	FILENAME
0			00077

REVISIONS

ORIGINAL DRAWING

DRAWN BY: CRF | CHECKED BY: CRF
DESIGNED BY: CRF
SCALE: 1" = 20'
DATE: 6/13/08
PROJECT NO.: 00077
SHEET C3 OF 8

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
20 0 10 20 40 60

AUTO BODY SHOP

N00°00'00"W

S00°00'00"E

RETAIN AN PROTECT CATCH BASIN

SAWCUT LINE
ADJUST SAWCUT AND PAVING EXTENTS AS NEEDED TO ACCOMMODATE DRAINAGE

N90°00'00"E
340.68'

EDGE OF PAVEMENT

ROGERS MOTORS
2203 16TH AVE.

F.F. = 950.96

F.F. = 949.72

F.F. = 950.61

PHASE 2
PHASE 1

F.F. = 950.75

F.F. = 951.02

REMOVE CATCH BASIN STRUCTURE CAP AND GROUT STORM LINE

N90°00'00"W
340.68'

REMOVE CATCH BASIN STRUCTURE CAP AND GROUT STORM LINE

PHASE 2
PHASE 1

SAWCUT LINE
ADJUST SAWCUT AND PAVING EXTENTS AS NEEDED

S00°00'00"E
148.00'

S00°00'00"E
192.00'

ADDITION
F.F. = 950.61

N90°00'00"W
104.20'

S00°00'00"E
50.00'

PHASE 1 WORK NOT IN CONTRACT

N90°00'00"E
244.16'

S90°00'00"E
140.80'

S90°00'00"W
245.00'

INSIED DRIVE PAD

SLOPED DRIVE PAD

SIGN

N00°08'28"E
198.00'

N00°08'28"E
142.00'

16TH AVENUE

21ST STREET

ACP = TOP OF ASPHALT CEMENT PAVEMENT
LIP = LIP OF CURB
RIM = RIM ELEVATION OF STRUCTURE
CONC = TOP OF CONCRETE
FL = FLOWLINE
BFW = BOTTOM FACE OF WALL FINISH GRADE
BC = TOP BACK OF CURB

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

N90°00'00"E 244.16'
N90°00'00"E 340.68'
N00°08'28"E 195.00'
N00°08'28"E 142.00'
S90°00'00"W 140.80'
S90°00'00"W 245.00'
S00°00'00"E 148.00'
S00°00'00"E 192.00'
S90°00'00"W 340.68'

21ST STREET
16TH AVENUE

PHASE 1 WORK NOT IN CONTRACT
PHASE 2
PHASE 1

ROGERS MOTORS
2203 16TH AVE.
ADDITION
F.F. = 950.61
ADDITION
F.F. = 951.02
AUTO BODY SHOP
F.F. = 949.72
F.F. = 950.96
F.F. = 950.61

2:1 FILL SLOPE
EXISTING CONTOUR
PROPOSED CONTOUR
TOP OF SLOPE
EDGE OF PAVEMENT
PK NAIL = 946.70
PK NAIL = 950.12
PK NAIL = 952.18
10" RISE
(2) 5" STEPS REQUIRED
11" TRED
GRADE THIS AREA AS NEEDED
EXISTING GRADE
EXISTING LIP
SIGN
BRASS CAP = 955.99
PK NAIL = 957.26

REVISIONS

NO.	DATE	BY	FILENAME
0			00077

ORIGINAL DRAWING

REGISTERED PROFESSIONAL ENGINEER
CHARLES R. FISKE
10962
STATE OF IDAHO

4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX: (208) 750-1082
(208) 791-8055

NACLINE
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ROGER MOTORS
LEWISTON, IDAHO
GRADING PLAN

DRAWN BY:	CHECKED BY:
CRF	CRF
DESIGNED BY:	CRF
SCALE:	1" = 20'
DATE:	6/13/08
PROJECT NO.:	00077

SHEET C4 OF 8

21ST STREET

N90°00'00"E 244.16'

N90°00'00"E 340.68'

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

EDGE OF PAVEMENT

N01°08'24"E 49.89'

PHASE 2
PHASE 1

PK NAIL = 946.70

N74°54'40"E 125.05'

S00°00'00"E 148.00'

PK NAIL = 950.12

RAISED DISPLAY PAD

CONTECH SYSTEM
(LxWxH = 31.75'x4.42'x3.5')
TOR = 954.03'
INVERT = 940.53

N00°08'28"E 198.00'

F.F. = 949.72

F.F. = 950.96

NOTE: THE FOLLOWING SERVICE LINE ROUTES ARE UNKNOWN:
1) WATER SERVICE LINE
2) SEWER SERVICE LINE
3) ROOF DOWN SPOUTS TO STORM SEWER LINE
4) CONDUIT & POWER LINES TO LIGHT POLES

AUTO BODY SHOP

PHASE 1 WORK NOT IN CONTRACT

ADDITION
F.F. = 950.61

N90°00'00"W 104.20'

4" SAN INV = 941.36
8" STORM INV = 943.21
CLEARANCE = 2.1'±

ROGERS MOTORS
2203 16TH AVE.

EXISTING CATCH BASIN CB#3
RIM = 949.24
8" INV IN (E) = 943.31
8" INV OUT (W) = 943.21
F.F. = 950.61

EXISTING SANITARY SEWER SERVICE LINE LATER LOCATION UNKNOWN. CAMERA SEWER LINES AS NEEDED TO LOCATE. ROUTE SEWER LINE AS NEEDED. PROVIDE ENGINEER REDLINE DRAWINGS ON INSTALLATION.

RELOCATE EXISTING GAS METER NORTH A MINIMUM DISTANCE OF 4 FEET

ADDITION
F.F. = 951.02

REROUTE GAS LINE AS NEEDED

SEE MECHANICAL FOR CONTINUATION

RETAIN & PROTECT EXISTING CATCH BASIN
EXISTING RIM = 949.93
NEW RIM = 950.95
EXISTING 4" INVERT OUT (N)

S90°00'00"E 140.80'

N00°00'00"E 151.52'

N00°00'00"E 299.88'

50' UTILITY EASEMENT

INSTALL 75.4 L.F. OF 8" PVC SRD 35 PIPE
PIPE SLOPE @ 1.0%

INSTALL 125.8 L.F. OF 8" PVC SRD 35 PIPE
PIPE SLOPE @ 0.05%

INSTALL CATCH BASIN CB#2
WITH FRAME & GRATE
WITH STORM WATER 360° ENVIRO POD
RIM = 948.86
INV IN (E) = 944.16
INV OUT (W) = 944.06

N00°00'00"E 192.00'

N74°54'40"W 120.63'

INSTALL 172.4 L.F. OF 4" PVC SCH 40 PVC PIPE
PIPE SLOPE @ 4.64%

CONNECT TO PHASE 1 STORM SEWER AS NEEDED

CONNECT TO PHASE 1 SANITARY SEWER AS NEEDED

INSTALL CATCH BASIN CB#1
WITH FRAME & GRATE
WITH STORM WATER 360° ENVIRO POD
RIM = 950.41
INV OUT (W) = 944.78

PK NAIL = 952.18

INSTALL 2000 GALLON SAND / OIL WATER INTERCEPTOR
PER CITY OF LEWISTON STANDARD DRAWING I-6
WITH HEAVY LOAD OPTION
TOP OF STRUCTURE = 947.00
ADJUST AS NEEDED PER MECHANICAL INVERT OUT OF BUILDING

20' UTILITY EASEMENT

8"X4" WYE
8" INV = 937.61

EXISTING 330.5 L.F. OF 8" PVC C-900 (CL-200) PIPE

EXISTING SANITARY MANHOLE
RIM = 950.30±0.2
INV IN (S) = 937.80
INV OUT (NW) = 937.53

N01°08'24"E 74.67'

EXISTING 1-½" WATER SERVICE LINE

EXISTING STORM MANHOLE
RIM = 951.91
12" INV = 938.25±
30" INVERT = 921.41±
ADJUST RIM AS NEEDED

SLOPED DISPLAY RAMP

SIGN

N00°08'28"E 142.00'

S90°00'00"W 245.00'

N90°00'00"W 340.68'

EXISTING SANITARY MANHOLE
RIM = 951.51
INV = 942.51

LANE NARROWS

ROAD WORK AHEAD

16TH AVENUE

BRASS CAP = 955.99

PK NAIL = 957.26

12' LANE

12' LANE

16"X8" HOT TAP, 8" GATE VALVE
COORDINATE WITH DAVE SIX,
WATER DEPARTMENT (208) 791-9271

TRAFFIC CONES
TYPICAL SPACING 10'

HALL FORD ENTRANCE

12' LANE

12' LANE

TRAFFIC CONES
TYPICAL SPACING 10'

REVISIONS

NO.	DATE	BY	FILENAME
0			00077

ORIGINAL DRAWING

REGISTERED PROFESSIONAL ENGINEER
10962
STATE OF IDAHO
CHARLES R. FISKE

4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX (208) 750-1082
(208) 791-8055

NACLINE
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ROGER MOTORS
LEWISTON, IDAHO
UTILITY
GRADING PLAN
TRAFFIC CONTROL PLAN

DRAWN BY: CRF	CHECKED BY: CRF
DESIGNED BY: CRF	
SCALE: 1" = 20'	
DATE: 6/13/08	

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

N90°00'00"E 244.16'
N90°00'00"E 340.68'
EDGE OF PAVEMENT
RAISED DISPLAY PAD
NO PARKING
PHASE 2
PHASE 1
S00°00'00"E 148.00'
N00°08'28"E 196.00'
F.F. = 949.72
F.F. = 950.96
ADDITION
F.F. = 950.61
N90°00'00"W 104.20'
NOTE TO CITY: FOR CITIES BENEFIT. THE STRIPING IS PART OF PHASE 1 & NOT IN CONTRACT FOR PHASE 2.
PHASE 1 WORK NOT IN CONTRACT
S90°00'00"E 140.80'
R30'
30.00'
S00°00'00"E 30.00'
S00°00'00"E 148.00'
42' CURB CUT
DRIVABLE CONCRETE PAD
6" OF CONCRETE, 6" OF ¾"– ROCK
#4 REBAR 24" ON CENTER
ROGERS MOTORS
2203 16TH AVE.
F.F. = 950.61
ADDITION
F.F. = 951.02
DRIVABLE CONCRETE PAD
6" OF CONCRETE, 6" OF ¾"– ROCK
#4 REBAR 24" ON CENTER
AUTO BODY SHOP
EXISTING RETAINING WALL
2" OF ITD CLASS III PAVEMENT
COMPACTED TO 90 % RICE THEORETICAL MAXIMUM DENSITY
6" OF ¾"– CRUSHED AGGREGATE ITD CLASS B 19mm
COMPACTED TO 95 % ASTM 1557D MODIFIED PROCTOR
SUBGRADE COMPACTED TO 95 % ASTM 1557D MODIFIED PROCTOR
159.6'
N00°00'00"W
N00°08'28"E 142.00'
SLOPED DISPLAY RAMP
SIGN
S90°00'00"W 245.00'
40'
INTERSECTION SITE TRIANGLE
40'
R1.382'
TYPE 'A' CURB
EXISTING RETAINING WALL
R1.382'
R1.382'
TYPE 'A' CURB FIELD FIT
30'
N90°00'00"W 340.68'
5'
5'
R9.5'
R9.5'
REPAIR CURB GUTTER AS NEEDED
INTERSECTION VALLEY GUTTER PER CITY STANDARD DRAWING ST–2
TYPE 1 PEDESTRIAN RAMP WITH TACTILE WARNING STRIP
5' WIDE SIDEWALK PER CITY STANDARD DRAWING ST–4
PAVEMENT REPAIR PER CITY STANDARD ST–9B
80' R.O.W.
21ST STREET
16TH AVENUE

NO.	DATE	BY	REVISIONS
0			ORIGINAL DRAWING

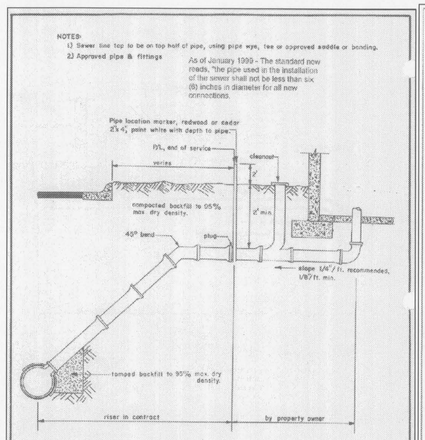
FILENAME 00077

REGISTERED PROFESSIONAL ENGINEER
CHARLES R. FISKE
STATE OF IDAHO
10962

NACLINE
ENGINEERING & DRAFTING
"an affordable alternative"
4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX (208) 750-1082
(208) 791-8035

ROGER MOTORS
LEWISTON, IDAHO
CIVIL PLAN

DRAWN BY: CRF	CHECKED BY: CRF
DESIGNED BY: CRF	
SCALE: 1" = 20'	
DATE: 6/13/08	
PROJECT NO.: 00077	
SHEET C6 OF 8	

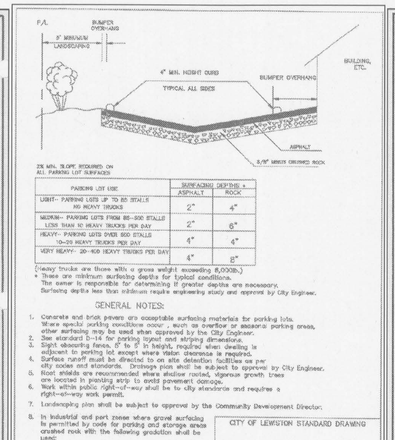


CITY OF LEWISTON STANDARD DRAWING

SERVICE CONNECTION RISER

APPROVED _____ P.E.

REVISED	EXPLANATION	DWG. NO.
		S-2



PARKING LOT USE	SURFACING DEPTHS *	
	ASPHALT	ROCK
LIGHT- PARKING LOTS UP TO 30 STALLS NO HEAVY TRUCKS	2"	4"
MEDIUM- PARKING LOTS FROM 30-500 STALLS LESS THAN 10 HEAVY TRUCKS PER DAY	2"	6"
HEAVY- PARKING LOTS OVER 500 STALLS 10-25 HEAVY TRUCKS PER DAY	4"	4"
VERY HEAVY- 20-400 HEAVY TRUCKS PER DAY	4"	8"

(Heavy trucks are those with a gross weight exceeding 8,000lb.)
* These are minimum surfacing depths for typical conditions.
The owner is responsible for determining if greater depths are necessary.
Surfacing depths less than minimum require engineering study and approval by City Engineer.

GENERAL NOTES:

1. Concrete and brick pavers are acceptable surfacing materials for parking lots. Where special parking conditions occur, such as overflow or seasonal parking areas, other surfacing may be used when approved by the City Engineer.
2. See standard D-14 for parking island and striping dimensions.
3. Slight obscuring fence, 6' to 8' in height, required when dwelling is adjacent to parking lot except where visitor clearance is required.
4. Surface runoff must be directed to on site detention facilities as per city codes and standards. Drainage plan shall be subject to approval by City Engineer.
5. Root shields are recommended where shallow rooted, vigorous growth trees are located in planting strip to avoid pavement damage.
6. Work within public right-of-way shall be to city standards and requires a right-of-way work permit.
7. Landscaping plan shall be subject to approval by the Community Development Director.
8. In industrial and part zones where gravel surfacing is permitted by code for parking and storage areas crushed rock with the following gradation shall be used:

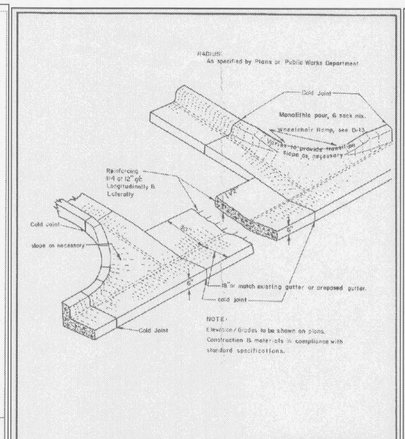
SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
No. 4	40-65
No. 8	30-50
No. 200	3-9

CITY OF LEWISTON STANDARD DRAWING

PARKING LOT SECTION

APPROVED _____ P.E.

REVISED	EXPLANATION	DWG. NO.
		D-14A



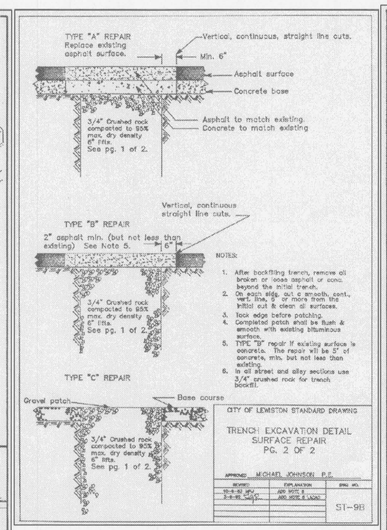
NOTE:
Elevation/Grades to be shown on plans.
Construction & materials in compliance with standard specifications.

CITY OF LEWISTON STANDARD DRAWING

INTERSECTION VALLEY GUTTER

APPROVED _____ P.E.

REVISED	EXPLANATION	DWG. NO.
10-14-85	Revised reinforcing	ST-2
12-19-86	Added back curb	
10-19-89	Revised Wheelchair Ramp	



NOTES:

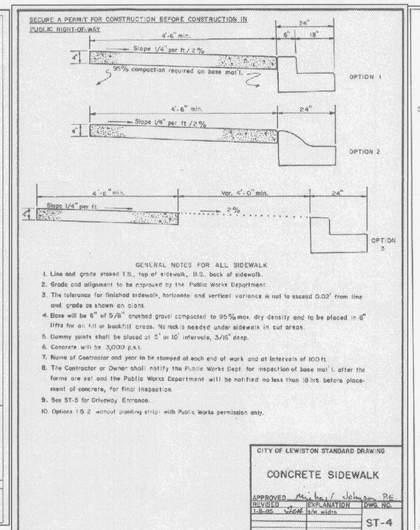
1. After backfilling trench, remove all broken or loose asphalt or conc. beyond the initial trench.
2. On each edge, cut a smooth, vert. line 2" min. deep where the initial cut & clean all surfaces.
3. Tack edge before patching.
4. Completed patch shall be flush & smooth with existing bituminous surface.
5. TYPE "B" repair if existing surface is concrete. The repair will be 2" of concrete, min. but not less than existing.
6. In all street and alley sections use 3/4" crushed rock for trench backfill.

CITY OF LEWISTON STANDARD DRAWING

TRENCH EXCAVATION DETAIL SURFACE REPAIR PG. 2 OF 2

APPROVED MICHAEL JOHNSON P.E.

REVISED	EXPLANATION	DWG. NO.
10-8-92 MPW	ADD NOTE 8	ST-9E
2-8-95 CMT	ADD NOTE 9 AND 10	



GENERAL NOTES FOR ALL SIDEWALK

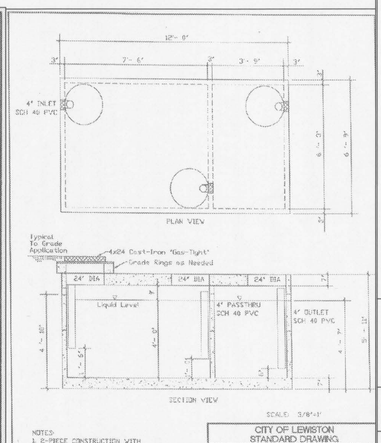
1. Line and grade staked T.S., top of sidewalk, B.S., back of sidewalk.
2. Grade and alignment to be approved by the Public Works Department.
3. The tolerance for finished sidewalk, horizontal and vertical variance is not to exceed 0.02' from line and grade as shown on plans.
4. Base will be 6" of 5/8" crushed gravel compacted to 95% max. dry density and to be placed in 6" lifts for all fill or backfill areas. No rock is needed under sidewalk in cut areas.
5. Dummy joints shall be placed at 5' or 10' intervals, 3/16" deep.
6. Concrete will be 3,000 p.s.i.
7. Name of Contractor and year to be stamped at each end of work and at intervals of 100 ft.
8. The Contractor or Owner shall notify the Public Works Dept. for inspection of base mat'l. after the forms are set and the Public Works Department will be notified no less than 48 hrs. before placement of concrete, for final inspection.
9. See ST-5 for Driveway Entrance.
10. Options 1 & 2 without planting strip with Public Works permission only.

CITY OF LEWISTON STANDARD DRAWING

CONCRETE SIDEWALK

APPROVED _____ P.E.

REVISED	EXPLANATION	DWG. NO.
1-8-85	6" min. slab width	ST-4



NOTES:
1. 2-PIECE CONSTRUCTION WITH BUTYL TAPE SEAL @ JOINT
2. REINFORCEMENT:
   REF. AND BOTTOM #4 @ 8" O.C.E.W.
   SIDES #4 @ 4" O.C.E.W.
3. SUITABLE FOR TRAFFIC SITUATIONS

(WILBERT PRECAST PRODUCT # 1630 5'DIA' - 16343 - HEAVY LOAD OPTION OR APPROVED EQUIVALENT)

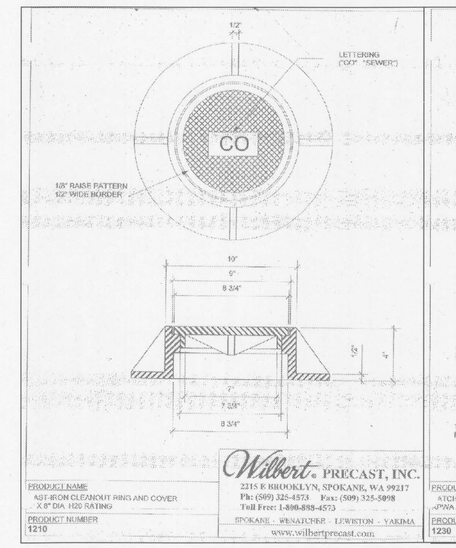
CITY OF LEWISTON STANDARD DRAWING

2000 GALLON SAND OIL/WATER INTERCEPTOR

APPROVED _____ PUBLIC WORKS DIRECTION _____ DATE

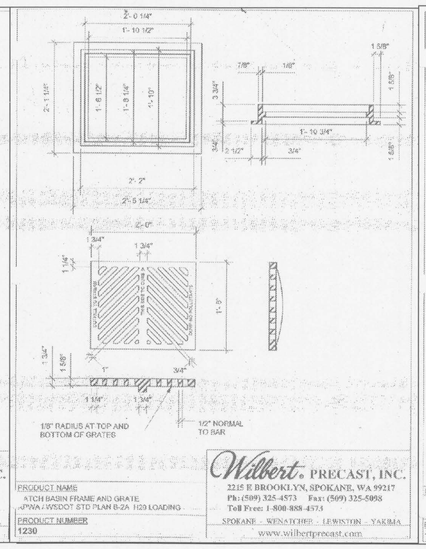
DWG. NO. I-6

DES.	DWN.	CKD.	DATE



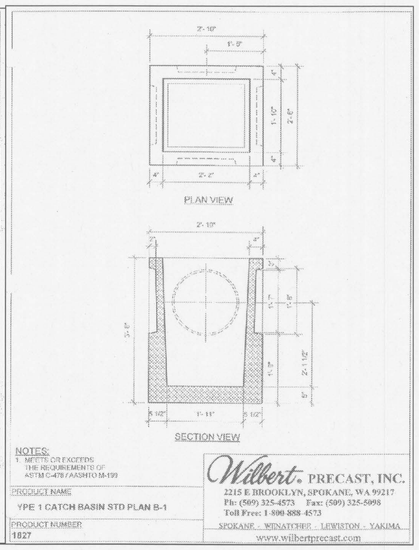
Wilbert PRECAST, INC.
2215 E BROOKLYN, SPOKANE, WA 99217
Ph: (509) 325-4573 Fax: (509) 325-5098
Toll Free: 1-800-888-4573
SPOKANE - WENATCHEE - LEWISTON - YAKIMA
www.wilbertprecast.com

PRODUCT NAME: ADT-IRON CLEANOUT RING AND COVER - X 8" DIA. H20 RATING
PRODUCT NUMBER: 1210



Wilbert PRECAST, INC.
2215 E BROOKLYN, SPOKANE, WA 99217
Ph: (509) 325-4573 Fax: (509) 325-5098
Toll Free: 1-800-888-4573
SPOKANE - WENATCHEE - LEWISTON - YAKIMA
www.wilbertprecast.com

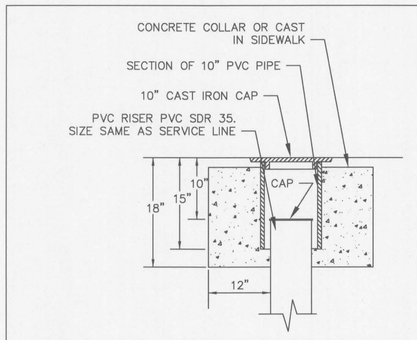
PRODUCT NAME: ATCH BASIN FRAME AND GRATE -PWA / WSDOT STD PLAN B-2A H20 LOADING
PRODUCT NUMBER: 1230



NOTES:
1. MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM C-478 / AASHTO M-199

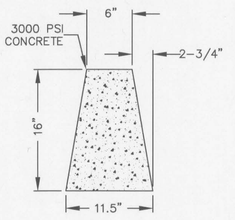
Wilbert PRECAST, INC.
2215 E BROOKLYN, SPOKANE, WA 99217
Ph: (509) 325-4573 Fax: (509) 325-5098
Toll Free: 1-800-888-4573
SPOKANE - WENATCHEE - LEWISTON - YAKIMA
www.wilbertprecast.com

PRODUCT NAME: YPE 1 CATCH BASIN STD PLAN B-1
PRODUCT NUMBER: 1827



SERVICE LEAD CLEANOUT DETAIL

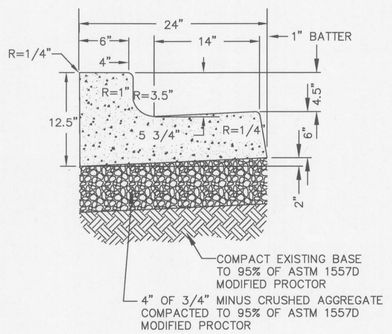
NO SCALE



TYPE 'A' CURB

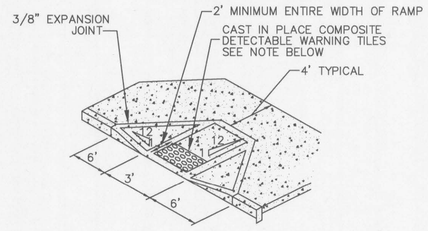
NO SCALE

NOTE: ALL CURBING SHALL BE TYPE 'A' CURB EXCEPT FOR CURBING DESIGNATED AS MONOLITHIC OR TYPE 1 CURB & GUTTER.



TYPE 1 HIGHBACK CURB & GUTTER DETAIL

NO SCALE



1. CONCRETE SHALL BE 3,000 PSI AND 4" THICK

2. DETECTABLE WARNING TILES SHALL BE "SAFETY YELLOW" COLORED FIELD AND TRUNCATED DOMES. DOMES SHALL BE SLIP RESISTANT AND HAVE A STABLE SURFACE ON THE TRUNCATED DOMES AND FIELD. NO VERTICAL CHANGES IN GRADE EXCEEDING 1/4", OR ANY GAPS EXCEEDING 1/2" IN WIDTH IN THE FIELD, INCLUDING ITS BOUNDARIES. ALIGN TRUNCATED DOMES ON A SQUARE GRID, IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. FIELD SHALL BE THE WIDTH OF THE RAMP AND MINIMUM 2' DEEP FROM BACK OF CURB.

3. SUBMIT DETECTABLE WARNING PATTERN FOR APPROVAL.

TYPE I PEDESTRIAN RAMP

NO SCALE

NO.	DATE	BY	REVISIONS
0			ORIGINAL DRAWING

FILENAME: 00077

REGISTERED PROFESSIONAL ENGINEER 10962 STATE OF IDAHO CHARLES R. FISKE

NACLINE ENGINEERING & DRAFTING "an affordable alternative"
4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX (208) 750-1082
(208) 791-8055

ROGER MOTORS
LEWISTON, IDAHO
CIVIL DETAILS

DRAWN BY: CRF	CHECKED BY: CRF
DESIGNED BY: CRF	
SCALE: N/A	
DATE: 6/13/08	
PROJECT NO.: 00077	
SHEET C7 OF 8	

New Water Main Construction Procedures

(Please attach to all new water developments)

New water mains that are installed, whether expanding a distribution system or adding a fire line, must be physically separated from the existing system until satisfactory flushing, pressure testing, disinfection, and bacteriological sampling has been completed. The new water main must be considered contaminated and the chlorine concentration used for disinfection (minimum 25 mg/L) makes the water nonpotable.

The City will perform the tap **only** for these new water main connections at a rate determined on each individual tap. The contractor to complete this work will furnish all materials, labor and supplies.

An approved backflow prevention assembly is required on the supply water line when filling the new water main during disinfection and flushing. This prevents the new main's contaminated water from entering the existing system. The backflow prevention assembly and supply piping must be removed during hydrostatic pressure testing.

After satisfactory bacteriological sample results are obtained from the new water main, a section of connecting pipe must be installed between the new section and the existing system. The contractor will be responsible for this final connection and the City will inspect this work. Before installation, the interiors of all pipes and fittings used to make the connection must be swabbed or sprayed with a 1% hypochlorite solution.

The contractor is responsible for flushing and pressure testing the new water main. **Contact the Plumbing Inspector at 746-1319 for a pressure test or the Water Division at 743-7461.** These tests must be completed and approved before the Water Department will begin disinfection procedures.

Upon completion and approval of the pressure test by the project inspector, which shall be a professional engineer inspecting all water main projects and which shall be a fire department inspector and a city plumbing inspector for all fire line connections, the inspector will notify the City engineering department (743-1316). The engineering department will then notify the City water division to proceed with the coordination for the disinfection and sampling of the new water main. NOTE: No hose or fire hydrant shall be used in collection of samples. **A combination blowoff and sampling tap is required.** The disinfection and bacteriological testing of the new main shall adhere to AWWA Standards (AWWA C651-99).

The number of water samples taken will depend upon the length and number of branches of the new main but a minimum of two samples must be taken. These samples shall be taken from each end of the new water main. Two consecutive samples at least twenty-four hours apart must be reported and display negative bacteriological results. Results from bacteriological testing will be available approximately 26 hours after the last sample is taken. The City will charge a fee for chlorination and bacterial testing.

Standard Water Comments

Minimum water line size shall be 8". Oversizing of water lines may be required to provide sufficient volumes of water to the system matrix. Materials shall be ductile iron or C-900.

Main water lines must be looped and placement shall avoid easements except when necessitated by land environs. Easements shall be a minimum of 20'. Water lines shall be offset in the easement.

All work shall be performed in accordance with AWWA and City of Lewiston Water Standards.

Pressure reducing valves are required on all service lines.

Backflow devices are required on all **irrigation systems** and **other** identified **hazards**. Backflow devices shall be installed as per standards and **shall be accessible** to permit testing.

Hydrants shall be spaced at a maximum of 600' in residential areas and 300' in commercial areas. All hydrants shall have valves on the hydrant branch line. Hydrants shall have two, 2 1/2" ports and one, 4 1/2" steamer port.

Service lines to the meters shall be "K" copper. Developer shall install the service line and meter setting to include all materials except the meter which shall be provided by the City. Meters shall be placed to avoid conflict with other utilities, driveway locations, and shall be in the right-of-way.

All **hydrants shall be thrust blocked or retained** and **all fittings shall be thrust blocked**.

Pressure reducing pits may be required due to elevation, different pressure zone tie-ins, etc.

Valves shall be placed on all branches of tees or crosses. A valve is required at a minimum of every 1000' of main water line.

Pressure testing of water lines shall be performed at 1.5 times the highest working pressure in the general area of the new line. The design engineer or other qualified firm shall certify the test. This certification shall be reported to the City Engineer. The City Engineer will inform the water division. The water division will contact the contractor to schedule water main disinfection and bacterial testing. Two consecutive negative bacterial tests 24 hours apart must be completed before the water line can be connected to the city system. This creates a minimum of 48 hours after chlorination before the line can be connected. The **Water Division,** to maintain the integrity of the system, **shall witness the final tie-in. Note:** a fire inspector must witness a fire line pressure test. Fire line tests shall be at 200 psi. The City will charge a fee for chlorination and bacterial testing.

The water division will **only** tap fire line connections and the **owner will furnish all materials and labor including thrust blocking. Fire lines** will **require backflow devices with detector checks.**

Water Facts

If you have a question about your water or an emergency such as a leak or other problems, whom do you call? If you don't know or have had difficulty in the past in determining whom to contact, the following information may be useful.

Lewiston Water Contact Numbers

Call the **Water Treatment Plant at 743-7461** from 5:00 am to 3:30 pm seven days a week except Thanksgiving, Christmas, and New Years. This number can be used for questions or emergencies regarding water.

If you are unable to contact anyone at this number, you can call the **Public Works Department at 746-3671** ext 252 from 8:00 am to 12:00 pm and from 1:00 pm to 5:00 pm Monday through Friday.

Also, you may call the **Water Transmission Shop at 746-0593** from 6:30 am to 12:00 pm and from 12:30 pm to 5:00 pm Monday through Friday. This number is for field personnel and it may be difficult at times to reach anyone because they are only at the facility at various times during the workday.

If you are unable to contact anyone at any of the above numbers or you are calling outside the times listed above, call the **Lewiston Police Department at 746-0171** and they will be able to contact someone. **Please try to use the above numbers during the hours listed rather than the police number for non-emergency problems.**

Services Available to the Public

Assistance is available for checking for water leaks, problems relating to high consumption and water pressure, meter turn-on or turn-off, and questions concerning testing parameters, water quality, etc.

Please note that these services are provided for you at no cost during the regular working hours from 6:30 am to 12:00 pm and from 12:30 pm to 5:00 pm Monday through Friday. Should you require an after hour call out, there is a $57.00 charge. If you can plan for these services during regular hours, please do so.

Note: The Lewiston water service area is north of Stewart Ave. and includes the Mayfair Addition, the Valley Vista Addition, and the Country Club and Palisades areas. If you are south of Stewart Ave., please call the **Lewiston Orchards Irrigation District** office for your concerns **at 746-8235.** This number can also be used for all after hours calls for LOID.

Water Tap Information

New Water Taps: The City of Lewiston will provide customers with water taps providing that the following conditions have been met:

(1) All appropriate fees have been paid.
(2) Final grade at the site has been completed. (or)
(3) If final grade has not been reached, but the customer or contractor provides final grade stakes
and accepts all subsequent responsibility for any damage that may occur to lines, meter boxes, or meter lids, then water service and meter can be installed.

Please note that any costs associated with raising or lowering of the meter box will be the responsibility of the owner and/or contractor after pre-grade installation.

(4) Site has been listed with Underground Utilities Locate Center.
(5) Both the customer and/or contractor and an appropriate representative of the Water Division
have knowledge of the exact tap location. See item #3 for important information

New Subdivision Meter Sets: The City of Lewiston will set water meters to complete the water service to all new subdivisions providing that the following conditions have been met:

(1) All appropriate fees have been paid.
(2) All specifications have been met and completed.
(3) Meter boxes or water lines have not been damaged.
(4) Curb, gutter, and sidewalk where applicable are acceptable and undamaged.
(5) Final grade is obtained (10) ten feet behind curb and gutter.

Additional Notes of Importance:

(1) The City of Lewiston is responsible for water mains and laterals located within the right-of-
way. The property owner is responsible for the installation and maintenance of the water services from the right-of-way or property line to the dwelling.
(2) If the customer has a contractor or private individual doing the service construction on their
property (water lines), please provide contact telephone numbers. This number should be given at the time permit fees are paid at City Hall. It will provide a necessary contact for work scheduling of the water department.
(3) If you have tentative dates when service will be needed, leave this date with us also.

Please allow two weeks for installation from the date that you call for the installation and have met with a water division representative, provided that all previous specifications have been met. (see numbers below or on "Water Facts" handout)

(4) After service taps have been installed, meter tops should remain uncovered and accessible.

We wish to provide you with quality service. Any information or questions that you may have should be directed to the Water Division at (208) 743-7461 from 6:30 am to 4:30 pm or to the Public Works Department at (208) 746-3671 ext 252 from 8:00 am to 12:00 pm and 1:00 pm to 5:00 pm Monday through Friday. After hour emergency calls should be directed to the Lewiston Police Department at 746-0171 for a call out of a utility employee.

DEVELOPER'S CONTACT LIST

AIRPORT 406 BURRELL AVE.	ROBIN TURNER AIRPORT MANAGER	Phone # 208-746-3671 x 244 Fax # 208-798-0591
AVISTA 1330 FAIR ST. CLARKSTON	KENNY RAY CONSTRUCTION DESIGN REP	Phone # 208-798-1472 Fax # 208-798-1499
BUILDING – COMMERCIAL 215 D ST.	JERRY HUME BUILDING OFFICIAL	Phone # 208-746-1319 x 294 Fax # 208-746-5595
BUILDING – RESIDENTIAL 215 D ST.	DAN BARNETT BUILDING INSPECTOR	Phone # 208-746-1319 x 205 Fax # 208-746-5595
BUSINESS LICENSING 215 D ST	SUE GEHRKE BUSINESS LICENSING	Phone # 208-746-1319 x 256 Fax # 208-746-5595
CENTRAL ORCHARDS SEWER DISTRICT 1522 POWERS AVE.	BILL LARSON MANAGER	Phone # 208-746-9689 Fax # 208-746-9680
CITY WATER/SEWER	DAVE SIX SYSTEM MANAGER	Phone # 208-746-3671 x 262 Fax # 208-750-1924
ENGINEERING – COMMERCIAL 1134 F ST. – 2ND FLOOR	SHAWN STUBBERS ASSISTANT CITY ENGINEER	Phone # 208-746-3671 x 290 Fax # 208-746-9667
ENGINEERING – RESIDENTIAL 1134 F ST. – 2ND FLOOR	SHERRI KOLE ENGINEERING TECHNICIAN	Phone # 208-746-3671 x 259 Fax # 208-746-9667
FIRE 1245 IDAHO ST.	LINDA STEPUTAT FIRE MARSHAL	Phone # 208-743-3554 Fax # 208-746-3801
HEALTH DEPARTMENT 215 10TH ST.	STEVEN GREGOR ENVIRONMENTAL HEALTH SPECIALIST	Phone # 208-799-3100 Fax # 208-799-0349
LEWISTON ORCHARDS IRRIGATION DISTRICT 1520 POWERS AVE.	BARNEY METZ MANAGER	Phone # 208-746-8235 Fax # 208-746-6484
CITY SEWER INDUSTRIAL PRETREATMENT 3106 N & S HIGHWAY	AL SINNER ENVIRONMENTAL PROGRAM SUPERVISOR	Phone # 208-750-1195 Fax # 208-750-1198
QWEST 528 6TH AVE. LEWISTON	KIM BIGGS DESIGN ENGINEER	Phone # 208-798-0607 Fax # 208-746-7826
SANITATION 1134 F ST. – 2ND FLOOR	SHAWN STUBBERS ASSISTANT CITY ENGINEER	Phone # 208-746-3671 x 297 Fax # 208-746-9667
ZONING – COMMERCIAL 215 D ST.	JOHN MURRAY PLANNER	Phone # 208-746-1318 x 250 Fax # 208-746-5595
ZONING – RESIDENTIAL 215 D ST.	BRIAN RUSCHE PLANNER	Phone # 208-746-1318 x 202 Fax # 208-746-5595

Updated on 8/8/06

INSPECTION - TESTING - FREQUENCY REQUIREMENTS

ITEM	MATERIAL	FREQUENCY	STANDARD	INSPECTOR/CO.	DATE	INITIAL
1. SOILS COMPACTION (All Utility Trenches)						
TRENCH SUBBASE	Native	1/200'/4" Compacted Lift		Contractors Materials Testing Sub		
PIPE BEDDING	3/4" minus Crushed Aggregate	1/200'/4" Compacted Lift	95% Per ASTM D-1557	Contractors Materials Testing Sub		
1st 1' OF FILL OVER PIPE	3/4" minus Crushed Aggregate	1/200'/12" Compacted Lift	95% Per ASTM D-1557	Contractors Materials Testing Sub		
TRENCH BACKFILL						
NEW CONST. Under Prop Road	Native, Max Agg NTE 4" MSD	1/200'/8" Compacted Lift	95% Per ASTM D-1557	Contractors Materials Testing Sub		
NEW CONST. In Easement/Non-trafficked Area	Native, Max Agg NTE 4" MSD	1/200'/8" Compacted Lift	92% Per ASTM D-1557	Contractors Materials Testing Sub		
TRENCH BACKFILL, Dist Road						
CUT PARALLEL TO CL	Native, Max Agg NTE 4" MSD	1/200'/8" Compacted Lift	95% Per ASTM D-1557	Contractors Materials Testing Sub		
CUT PERP TO CENTERLINE	3/4" minus Crushed Aggregate	1/Trench Cut	95% Per ASTM D-1557	Contractors Materials Testing Sub		
STRUCTURAL FILLS	As Specd by Engineer	As Specd by Engineer	As Specd by Engineer	Contractors Materials Testing Sub		
2. STORM DRAIN MAINS						
Gasketed PE Storm Sewer Pipe	Polyethylene, ADS N-12 or Equal			Civil Engineer will Inspect Contractors Work		
ALIGNMENT AND GRADE	N/A	Per Plan	Per Manufacturer's Instructions	Civil Engineer will Inspect Contractors Work		
JOINTS (Deflection/Proper Pipe Embedment)	N/A	Each Joint	Per Manufacturer's Instructions	Civil Engineer will Inspect Contractors Work		
PRESSURE TEST	N/A	Between Access Holes	4 PSI for 15 Minutes, 1/2 PSI Drop	Civil Engineer present during Contractors Test		
MANHOLES	Concrete	N/A	City Std	Civil Engineer will Inspect Contractors Work		
3. WATER MAINS						
Ductile Iron or PVC Water Main	AWWA C-151, C-900, C-905 (Class as Req'd)			Civil Engineer will Inspect Contractors Work		
ALIGNMENT AND GRADE	N/A	Per Plan	AWWA C-600, AWWA C-605	Civil Engineer will Inspect Contractors Work		
JOINTS (Deflection/Proper Pipe Embedment)	N/A	Each Joint	AWWA C-600, AWWA C-605	Civil Engineer will Inspect Contractors Work		
THRUST BLOCKS	Concrete, 2500 PSI Mix	Each Joint	Per plan/Std Dwg	Civil Engineer will Inspect Contractors Work		
HYDROSTATIC PRESSURE	N/A	150% of Working Pressure @ Low Point	2 Hrs, NTE Allowable Leakage Per AWWA C-600, AWWA C-605	Civil Engineer present during Contractors Test		
CHLORINATION/BACTERIA	N/A	2 Consecutive Passing Tests, 24 Hrs Apart	AWWA C-651	Contractor to Chlorinate, City of Lewiston to Test		
4. SEWER MAINS						
PVC Sewer main	PVC, SDR 35	N/A	ASTM 3034	Civil Engineer will Inspect Contractors Work		
ALIGNMENT AND GRADE	N/A	Per Plan	N/A	Civil Engineer will Inspect Contractors Work		
JOINTS (Deflection/Proper Pipe Embedment)	N/A	Each Joint	Per Manufacturer's Instructions	Civil Engineer will Inspect Contractors Work		
MANHOLES	Concrete	Each Joint	Hydrostatic Test	Civil Engineer will Inspect Contractors Work		
PRESSURE TEST	N/A	Between Access Holes	4 PSI for 15 Minutes, 1/2 PSI Drop	Civil Engineer present during Contractors Test		
VIDEO INSPECTION	N/A	Between Access Holes	No Perforations, Dents or Dimples, No Ballies, +-0.02	Contractors Sub		
5. CONCRETE CURB, GUTTER & SIDEWALK						
CONCRETE	3600 PSI Concrete w/WRA and AEA	Strength, Slump, Air & Cylinders, 1 Test/50 CY or Min 1 Test Daily	AASHTO T-22, T-23, T-119, T-152, T-309, & WAQTC TM-2	Contractors Materials Testing Sub		
ALIGNMENT AND GRADE	N/A	Per 10' Section	+-0.02' From Design Grade/Alignment	City of Lewiston and Civil Engineer		
JOINTS/FLATNESS/STRAIGHTNESS	N/A	Per 10' Section	+-0.02'/10' Segment	City of Lewiston and Civil Engineer		
FINISH	N/A	All	Floated, Uniform, Light Broom Finish	City of Lewiston and Civil Engineer		
6. ASPHALTIC CONCRETE PAVING						
Hot Mix Asphalt	ITD Class I (5/8" or 1/2") Appv'd Mix Design		ITD Spec. Sec. 405	Contractors Materials Testing Sub		
Aggregate	Per ITD Spec/Appv'd Mix Design	1/750 Ton, Min 1 Test	ITD Spec. Sec. 703	Contractors Materials Testing Sub		
Density	92% of Rice Density/Appv'd Mix Design	1/500 LF, Min 2 Tests	ASTM D-1556	Contractors Materials Testing Sub		
7. Erosion & Sediment Controls	Per Plan	1/Wk or After Every Rainfall	Per Plan and Manufacturers' Instructions	Contractor		
8. Traffic Control	Per Plan	Continuous	MUTCD/ITSBA	Contractor		
9. Record Drawings	AutoCAD10 Elect File, Bond Paper, 22" x 34" Min Size Accepted	Before Public Improvements Accepted	City Checklist	Contractors To Provide Redlined Drawings		

NO.	DATE	BY	FILENAME	REVISIONS
0			00077	ORIGINAL DRAWING

REGISTERED PROFESSIONAL ENGINEER 10962 STATE OF IDAHO CHARLES R. FISKE

4025 EAGLE COURT
LEWISTON, IDAHO 83501
FAX (208) 750-1082
(208) 791-8055

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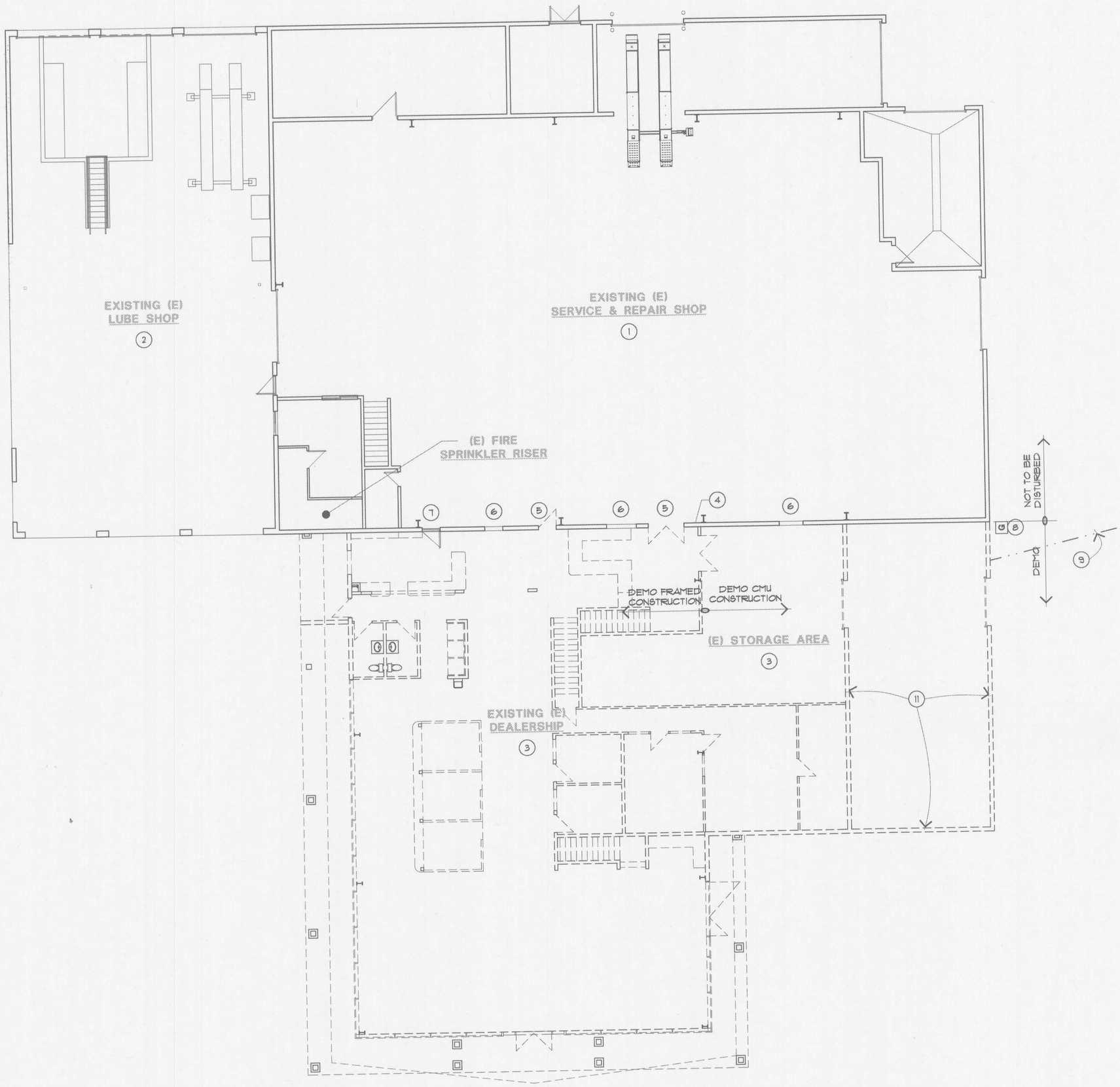
ROGER MOTORS
LEWISTON, IDAHO

CITY DETAILS
CITY SPECIFICATIONS

DRAWN BY:	CHECKED BY:
CRF	CRF
DESIGNED BY:	CRF
SCALE:	N/A
DATE:	6/13/08
PROJECT NO.:	00077
SHEET C8	OF 8

KEYED NOTES

1. EXISTING (E) SERVICE & REPAIR SHOP IS NOT TO BE DISTURBED.
2. EXISTING (E) LUBE SHOP IS NOT TO BE DISTURBED.
3. EXISTING (E) DEALERSHIP BUILDING IS TO BE DEMOLISHED. ALL DEBRIS & CONCRETE, INCLUDING FOUNDATIONS SHALL BE REMOVED. SOME OF EXISTING BUILDING IS RIGID METAL FRAMES w/ INFILL CONSTRUCTION. PART OF THE EXISTING BUILDING IS CMU WALL CONSTRUCTION. THERE IS A 2ND FLOOR AREA ABOVE PART OF THE (E) DEALERSHIP AREA NOT INDICATED ON DRAWING WHICH IS TO BE REMOVED
4. SAW CUT EXISTING CMU WALL AS REQUIRED FOR PIPING AND/OR CONDUIT PENETRATIONS THROUGH EXISTING CMU WALL. SEE MECHANICAL & ELECTRICAL DRAWINGS FOR EXTENT OF REQUIRED PENETRATIONS.
5. REMOVE DOOR. INFILL OPENING WITH 8" CMU TO MATCH EXISTING.
6. REMOVE WINDOW & COILING FIRE DOOR. SALVAGE FIRE DOOR FOR OWNER. INFILL OPENING WITH 8" CMU TO MATCH EXISTING.
7. EXISTING DOOR NOT TO BE DISTURBED. EXISTING THRESHOLD TO BE REMOVED & REPLACED.
8. EXISTING GAS METER & PIPING TO BE RELOCATED AS REQUIRED. SEE CIVIL ENGINEER'S DRAWINGS.
9. (E) CONDUIT FROM COLLISION REPAIR CENTER TO BE RE-ROUTED TO (E) SERVICE & REPAIR SHOP AS REQUIRED. COORDINATE SAWCUT OF ASPHALT WITH THIS WORK.
10. OPEN
11. REMOVE EXISTING 8" CMU WALL AS REQUIRED.
12. OPEN



MAIN FLOOR PLAN DEMOLITION PLAN

3/32" = 1' — 0"

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LICENSED ARCHITECT DON L. BOTT STATE OF IDAHO

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

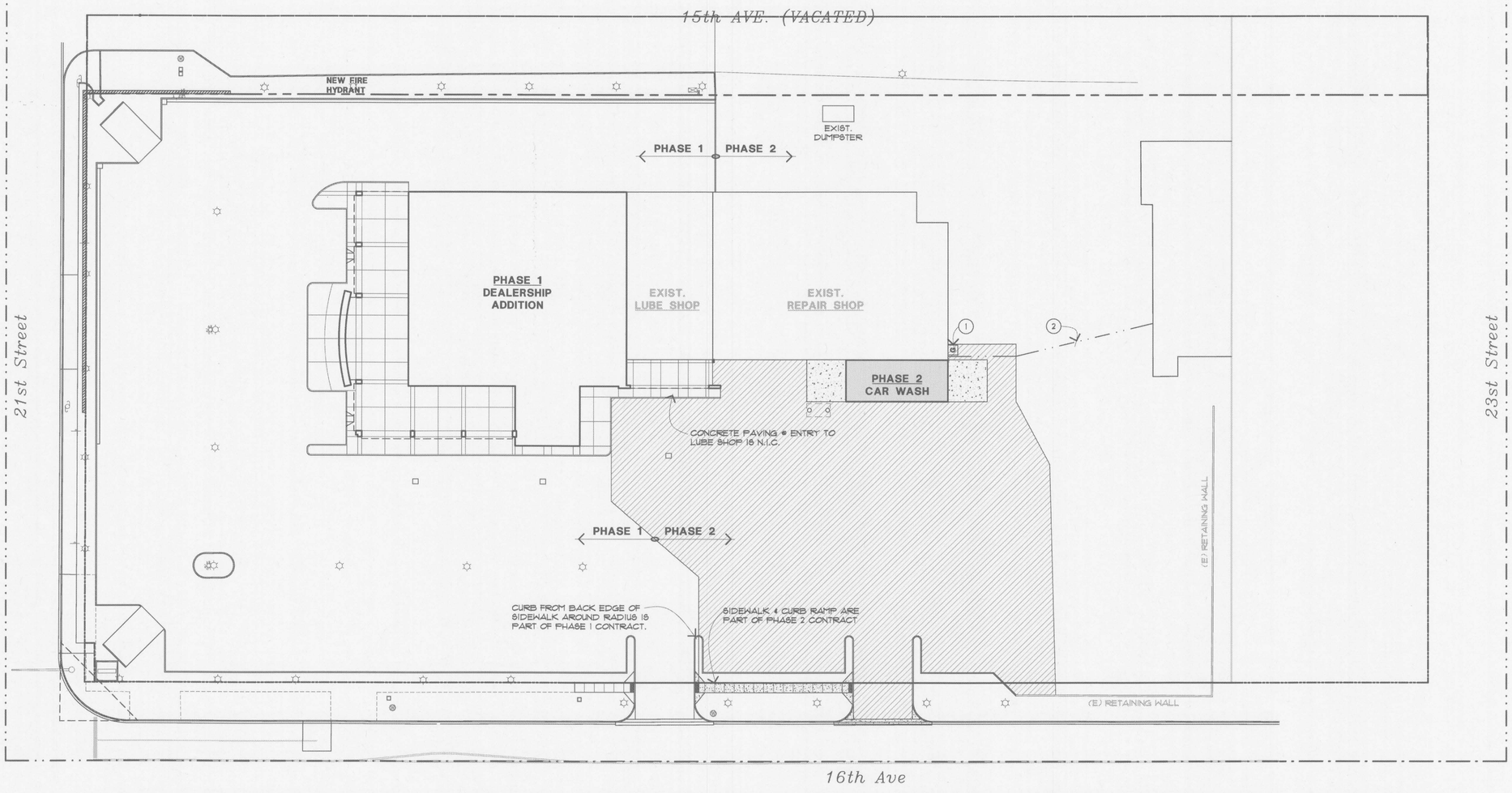
Lewiston Idaho

MAIN FLOOR PLAN DEMOLITION PLAN

DRAWN BY: MR
CHECKED BY: DLB
DATE: 6/20/08
JOB NO.: 080429

REVISION DATE:

SHEET:
D1



SITE PLAN

1" = 30' — 0"

1. PARKING LOT STRIPING IS NOT SHOWN. PARKING LOT STRIPING IS PART OF PHASE 1 CONTRACT.
2. LANDSCAPING IS NOT IN CONTRACT (N.I.C). LANDSCAPING IS PART OF PHASE 1 CONTRACT.
3. SEE PHASE 2 CIVIL DRAWINGS FOR EXTERIOR CURB, GUTTER & SIDEWALK CONSTRUCTION CALLOUTS.
4. SEE CIVIL PHASE 2 DRAWINGS FOR INTERIOR CURB CONSTRUCTION CALLOUTS.

KEYED NOTES

(1) EXISTING (E) GAS METER & PIPING TO BE RELOCATED AS REQUIRED. CONTRACTOR TO COORDINATE ALL WORK.

(2) EXISTING (E) 2"ø PVC CONDUIT BETWEEN COLLISION CENTER & (E) PARTS RECIEVING AREA TO BE RE-ROUTED TO EXTEND INTO (E) SERVICE & REPAIR SHOP. CONTRACTOR TO COORDINATE ALL WORK.

SITE LEGEND

NEW BUILDING	LANDSCAPE
CONCRETE	(E) CONCRETE
ASPHALT	VACATED R.O.W.

N

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

Lewiston Idaho

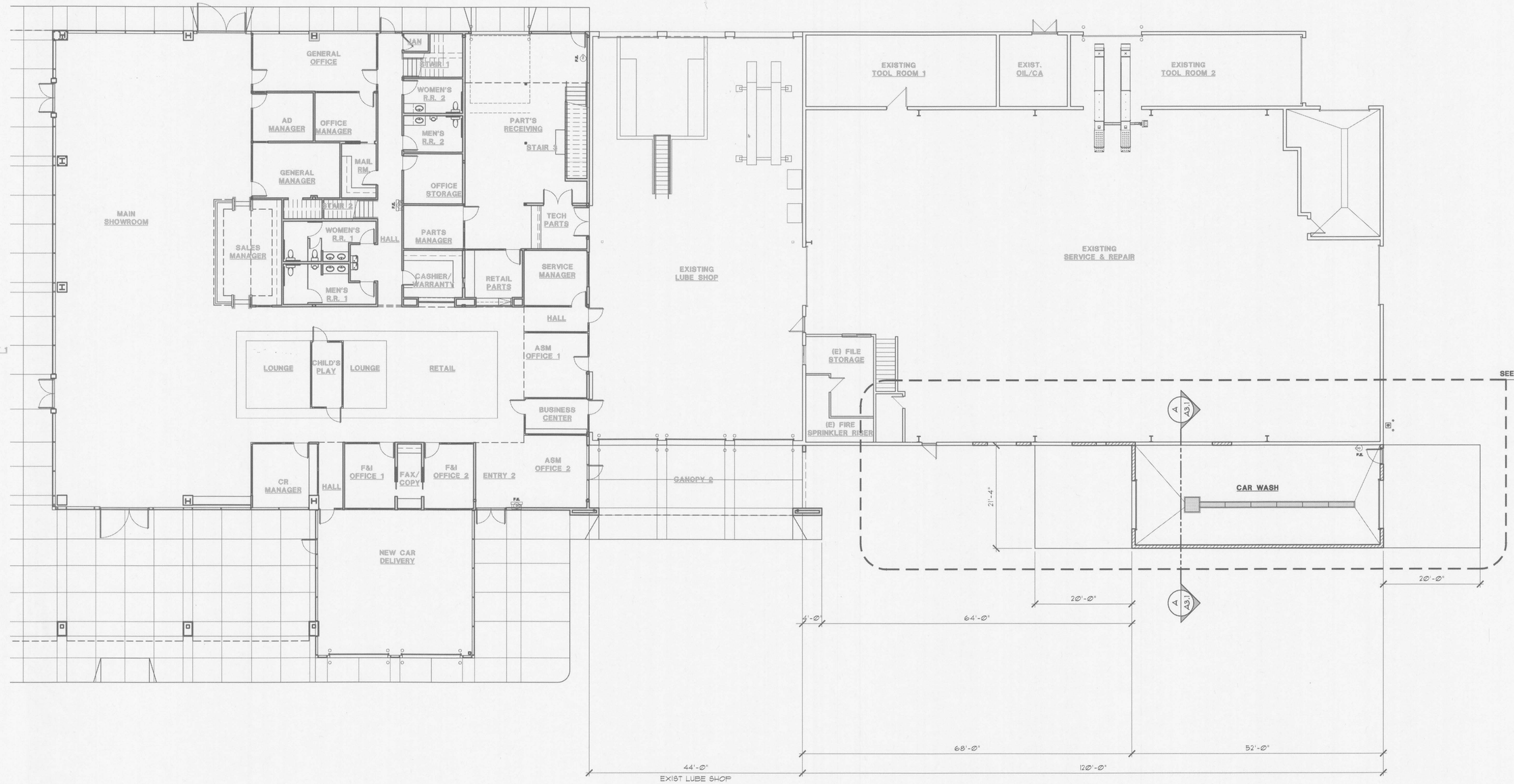
SITE PLAN

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DATE: 6/20/08
JOB NO.: 080429

REVISION DATE:

SHEET: A1



MAIN FLOOR PLAN

3/32" = 1' — 0"

1. SEE ENLARGED FLOOR PLANS FOR INTERIOR FINISH CALLOUTS.

N

DRAWING LEGEND

	INDICATES DETAIL CALLOUT
	INDICATES SECTION CALLOUT
	INDICATES INTERIOR ELEVATION NO. & SHT.
	WINDOW TYPE
	DOOR NO.
P.A.D.A.	INTERIOR FINISHES

LICENSED ARCHITECT AR-644 DON L. BOTT STATE OF IDAHO

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

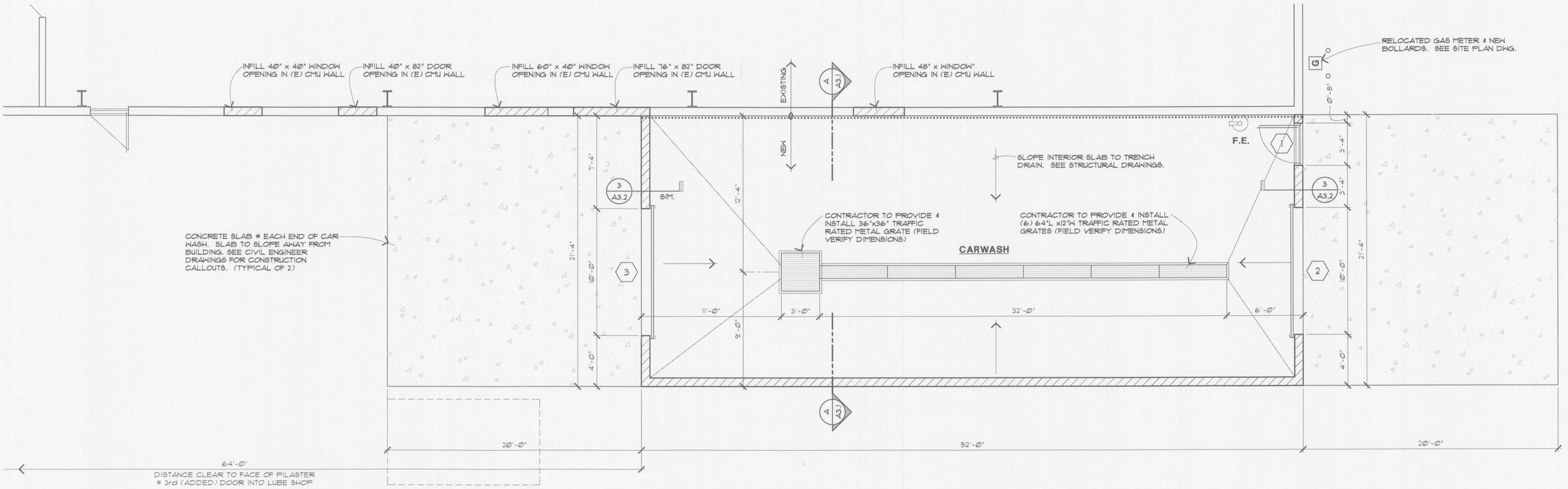
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MAIN FLOOR PLAN

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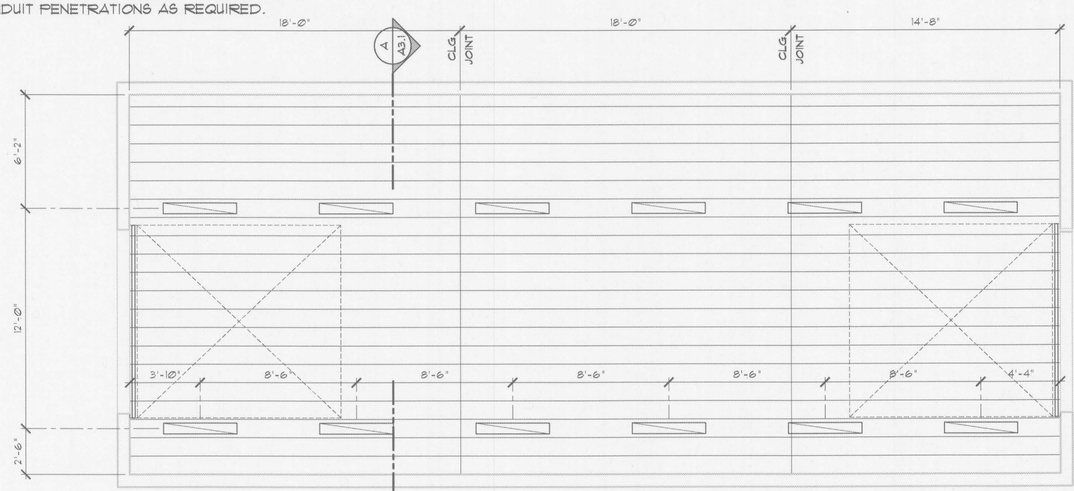
SHEET: A2.1



MAIN FLOOR PLAN - ENLARGED

1/4" = 1' — Ø"

1. SLAB SLOPES TO TRENCH DRAIN. SEE STRUCTURAL DRAWINGS FOR CAR WASH SLAB & TRENCH CONSTRUCTION.
2. DOOR ⟨1⟩ SHALL BE 3'-Ø" x 7'-Ø" x 1 3/4" INSULATED HOLLOW METAL DOOR & HOLLOW METAL FRAME PER CALLOUTS IN MINIMUM SPECIFICATIONS. DOOR HEAD RAIL TO BE 4". SIDE RAILS TO BE 2". DOOR IS SET IN CMU WALL. LOCKSET TO BE A MEDIUM GRADE COMMERCIAL LEVERED ENTRY LOCKSET.
3. DOORS ⟨2⟩ & ⟨3⟩ SHALL BE 10'-8" x 10'-Ø" OVERHEAD CAR WASH DOORS w/ MOTORIZED CONTROLS PER CALLOUTS IN MINIMUM SPECIFICATIONS.
4. SEE MINIMUM SPECIFICATIONS FOR INTERIOR & EXTERIOR FINISH CALLOUTS.
5. F.E. INDICATES LOCATION OF FIRE EXTINGUISHER TO BE WALL MOUNTED WITH BRACKET. SEE SHEET T2, NOTE 35 FOR FIRE EXTINGUISHER REQUIREMENTS.
6. ····· DOTTED LINE INDICATES EXTENT OF 3 HOUR FIRE WALL SEPARATING BUILDINGS. NO OPENINGS ARE PERMITTED THROUGH THIS WALL. FIRE CAULK AROUND ALL PIPE/CONDUIT PENETRATIONS AS REQUIRED.



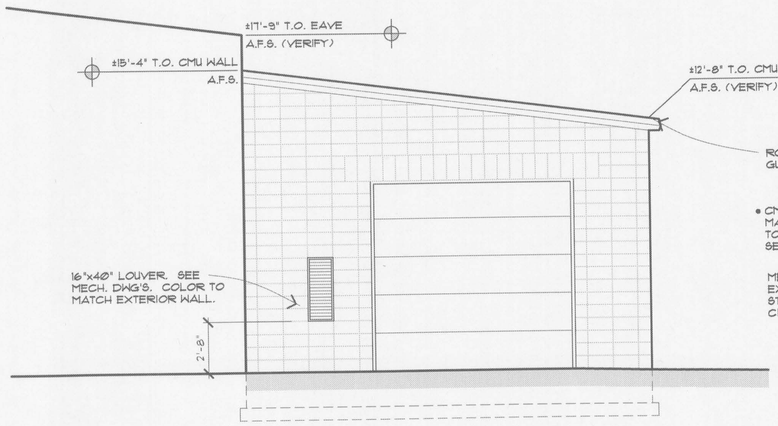
- 12"W PLASTIC CEILING PANEL LAYOUT TO BE VERIFIED BY MANUFACTURER. ATTACH PANELS TO ROOF FRAMING PER MANUF. SPECS. SEE ARCHITECT'S MINIMUM SPECS.
- DASHED LINE INDICATES OVERHEAD DOOR IN OPEN POSITION.

LICENSED ARCHITECT JAY BOTT STATE OF IDAHO

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho
MAIN FLOOR PLAN - ENLARGED

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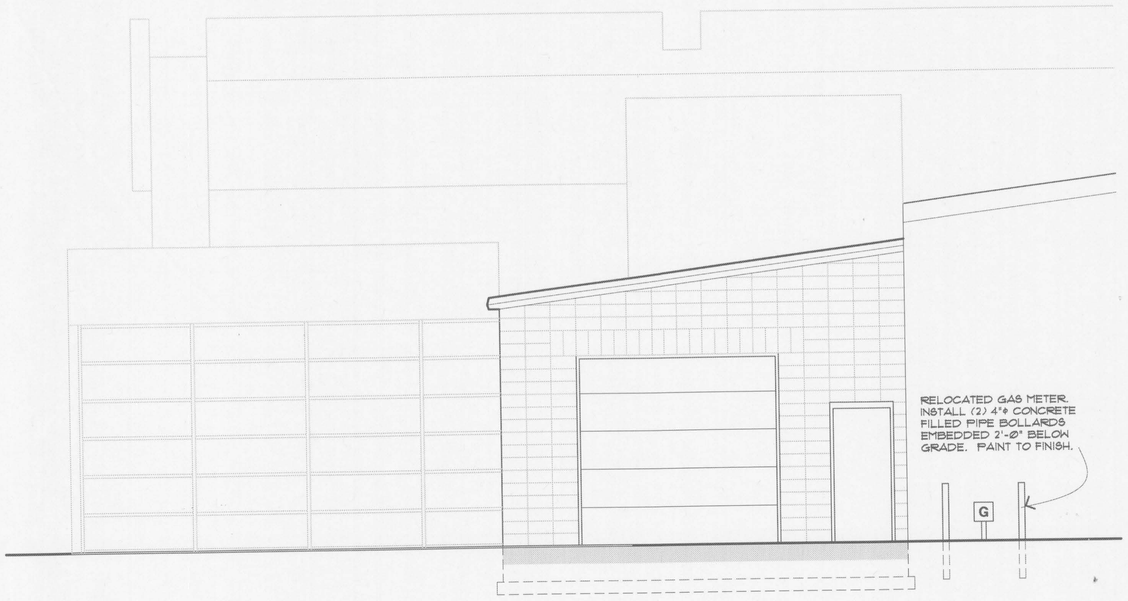
WEST ELEVATION

1/4" = 1' — 0"



SOUTH ELEVATION

1/4" = 1' — 0"



EAST ELEVATION

1/4" = 1' — 0"

TYP. ROOF CONSTRUCTION

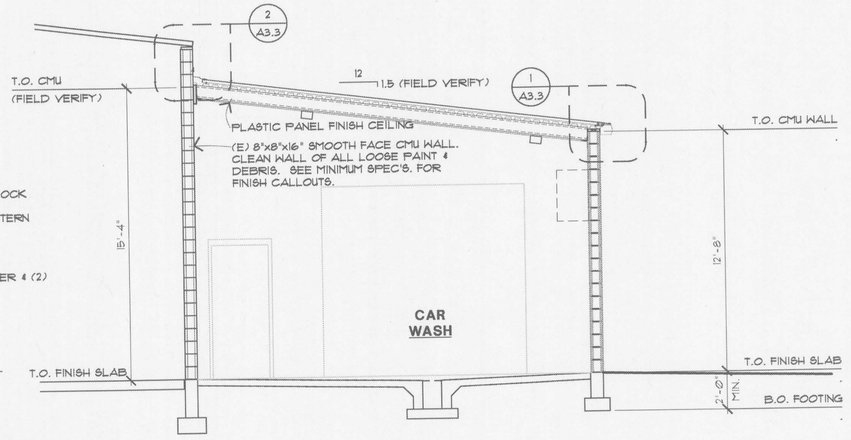
- ROOFING 22 GA. METAL ROOFING
- 1 1/4" 22 GA. GALVANIZED METAL DECKING PER STRUCTURAL CALLOUTS
- GALVANIZED METAL PURLINS PER STRUCTURAL CALLOUTS
- R-38 BLOWN-IN INSULATION
- 12"W PLASTIC PANELING PER MANUF. SPEC'S

TYP. CMU WALL CONSTRUCTION

- EXTERIOR FACE TO BE PAINTED WITH (1) COAT BLOCK FILLER & FINISHED W/ (2) COATS ACRYLIC PAINT.
- 8"x8"x16" GRAY SMOOTH FACE CMU, STACKED PATTERN
- REINFORCEMENT PER STRUCTURAL DRAWINGS
- SOLID GROUT ALL CELLS W/ REINF.
- FILL COURSES BTWN. W/ VERMICULITE INSULATION
- INSTALL WEEP HOLES @ 16" O.C. @ BASE OF WALL
- INTERIOR TO BE FINISHED W/ (1) COAT BLOCK FILLER & (2) COATS HEAVY DUTY WATER BASE EPOXY PAINT.

TYP. SLAB CONSTRUCTION

- CLEAR SEALER (UNFINISHED SLABS ONLY)
- 4" CONCRETE SLAB W/6x6 2.9x2.9 WWF or #3 BARS @ 18" O.C. EA. WAY
- 6 MIL VAPOR BARRIER
- 4" OF 3/4" MINUS GRAVEL FILL
- UNDISTURBED SOIL OR FILL COMPACTED TO 90% MAX. DRY DENSITY (MDD)



SECTION 'A'

1/4" = 1' — 0"

LICENSED PROFESSIONAL ENGINEER JB 9541 DOUGLAS L. BOTT

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

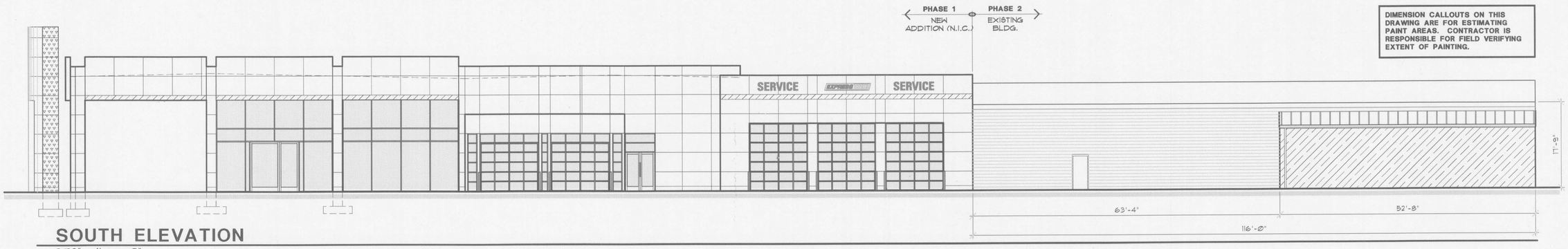
Lewiston Idaho

ELEVATION / SECTION / TYP. CONSTRUCTION C.O.

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DATE: 6/20/08
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REVISION DATE:

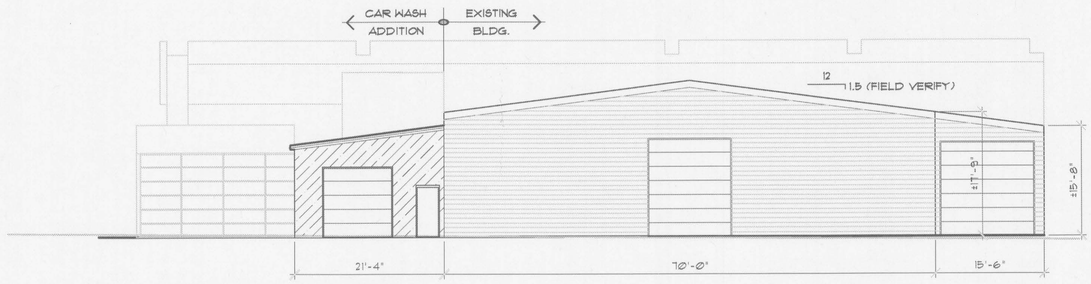
SHEET: A3.1



DIMENSION CALLOUTS ON THIS DRAWING ARE FOR ESTIMATING PAINT AREAS. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXTENT OF PAINTING.

SOUTH ELEVATION

3/32" = 1' — 0"



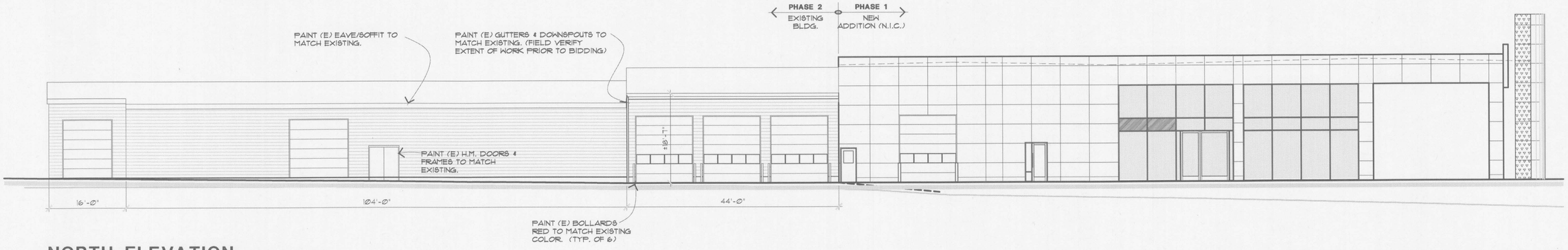
EAST ELEVATION

3/32" = 1' — 0"

EXTERIOR ELEVATION LEGEND

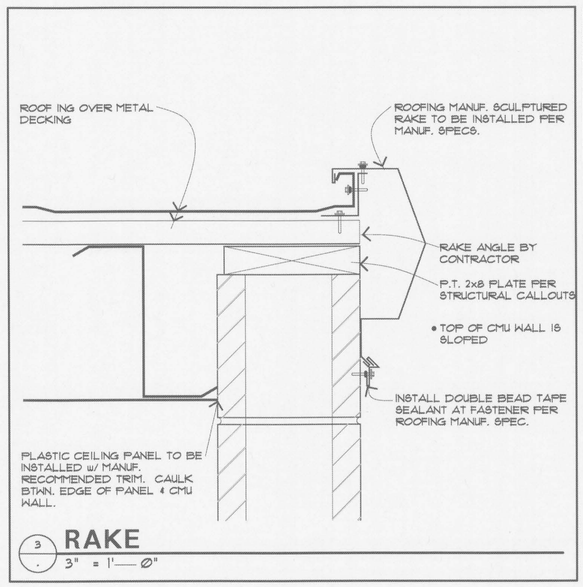
NEW CMU. SEE SHEET A3.1 FOR FINISH CALLOUTS

EXISTING CMU. CLEAN, PATCH PRIMER AS REQUIRED & PAINT ALL EXISTING EXPOSED CMU. SEE ARCHITECTURAL SPECIFICATIONS.



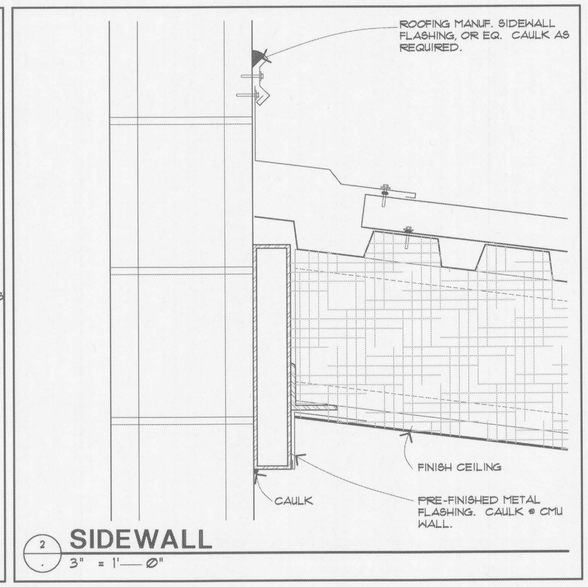
NORTH ELEVATION

3/32" = 1' — 0"



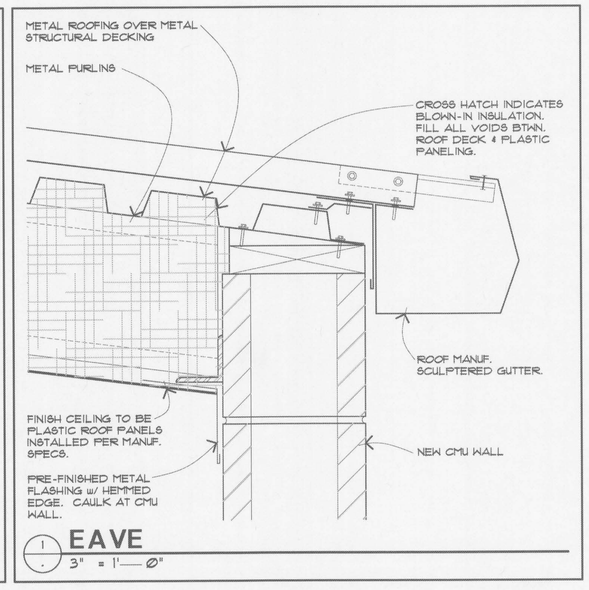
3 . RAKE

3" = 1' — 0"



2 . SIDEWALL

3" = 1' — 0"



1 . EAVE

3" = 1' — 0"

LICENSED ARCHITECT DOUGLAS L. BOTT EXPIRES 6/30/09

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

Lewiston Idaho

ELEVATIONS - PAINTING EXISTING BUILDING

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DRAWN BY: MR
CHECKED BY: DLB
DATE: 6/20/08
JOB NO.: 080429
REVISION DATE:

SHEET: A3.2

GENERAL STRUCTURAL NOTES

A. GENERAL:

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNOLOGIES, SEQUENCES AND PROCEDURES.
2. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS TO THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.
3. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER THROUGH ARCHITECT.
4. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.
5. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.
6. CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS ONLY.
7. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH RELATED WORK.
8. VISITS TO THE JOBSITE BY THE ENGINEER TO OBSERVE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT THEY ARE THE GUARANTORS OF THE CONTRACTORS WORK, NOR SUPERVISION, NOR SAFETY AT THE JOBSITE.

B. SHOP DRAWINGS:

1. THE GENERAL CONTRACTOR WILL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WTH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMISSION. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW.
2. ANY SHOP DRAWING NOT CHECKED AND INITIALED BY THE SUPPLIER/DETAILER PRIOR TO SUBMITTING FOR ARCHITECTURAL AND ENGINEERING REVIEW, WILL BE RETURNED WITHOUT REVIEW.
3. THE CONSTRUCTION DOCUMENTS MAY NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
4. ELECTRONIC FILES OF CONSTRUCTION DOCUMENTS WILL NOT BE MADE AVAILABLE FOR USE AS SHOP DRAWINGS.

C. CODE:

1. 2006 EDITION OF THE INTERNATIONAL BUILDING CODE
2. ASCE 7-05, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

D. DESIGN LOADS:

1. ROOF
   LIVE LOAD ____ 20 PSF (SNOW)
   DEAD LOAD ____ 15 PSF
2. SNOW
   EXPOSURE FACTOR ____ 1.0
   IMPORTANCE FACTOR ____ 1.0
   THERMAL FACTOR ____ 1.0
   ROOF SNOW LOAD ____ 20 PSF
3. WIND
   BASIC WIND SPEED ____ 90 MPH
   EXPOSURE ____ B
   IMPORTANCE FACTOR ____ 0.87
   COMPONENT AND CLADDING ____ 16.5 PSF
4. SEISMIC
   USE GROUP ____ I
   SITE CLASS ____ D
   SEISMIC DESIGN CATEGORY ____ C
   SPECTRAL RESPONSE COEFFICIENTS
   SHORT PERIOD S_{DS} = 0.316
   1-SEC PERIOD S_{D1} = 0.152
5. DEFLECTION CRITERIA
   ROOF DEFLECTION CRITERIA ____ L/180 FOR LL
   ROOF DEFLECTION CRITERIA ____ L/120 FOR TL

D. FOUNDATIONS:

1. FROST DEPTH: 24"
2. FOUNDATIONS SHALL BE SUPPORTED ON UNDISTURBED SOIL CAPABLE OF PROVIDING A MINIMUM ALLOWABLE BEARING PRESSURE OF 1,500 PSF. AT TIME OF EXCAVATION, CONTRACTOR IS TO DETERMINE IF SOIL CONDITIONS ARE SUITABLE AND IF THEY ARE OTHERWISE, A GEOTECHNICAL ENGINEER SHALL BE CONSULTED.

E. CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
2. ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE.
3. CONCRETE PROPERTIES:

CONCRETE USE	MINIMUM 28 DAY COMPRESSIVE STRENGTH	SLUMP AT PLACEMENT
UNLESS NOTE OTHERWISE, ALL CONCRETE SHALL BE	4,000 PSI	4"±1"
SLABS ON GRADE	4,000 PSI	4"±1"
FOOTINGS	3,000 PSI	4"±1"

*NOTE: ALL CONCRETE DESIGNED USING 2,500 PSI COMPRESSIVE STRENGTH

4. CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE A SLUMP OF 4" ± 1", TO BE FIELD VERIFIED, PRIOR TO ADDING ADMIXTURE, AND NOT EXCEEDING 8" AT PLACEMENT.
5. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS, SLAB EDGES, REINFORCING, KEYS, ETC.

F. STEEL REINFORCING:

1. TYPICAL REINFORCING BAR STRENGTHS
   REINFORCING (NONWELDABLE) ____ ASTM A706, (DEFORMED) Fy = 60 ksi (420 MPa)
2. TYPICAL CLEAR CONCRETE COVERAGE
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ____ 3"
   FORMED CONCRETE EXPOSED TO EARTH OR WEATHER: ____ 2"
3. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. LATEST ACI CODE AND DETAILING MANUAL APPLY. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS.
4. REINFORCING LAP SPLICES IN CONCRETE SHALL BE PER TYPICAL DETAIL UNLESS NOTED OTHERWISE. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.
5. ALL FIELD BENDING OR REINFORCING SHALL BE STANDARD 90 DEGREE HOOKS AS DEFINED IN CURRENT ACI 318 UNLESS NOTED OR DETAILED OTHERWISE. REINFORCING STEEL SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER INJURIOUS TO THE CONCRETE OR STEEL.

G. MASONRY:

1. MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
2. HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, TYP9IE1, WITH A COMPRESSIVE STRENGTH OF 1900 PSI AND A MAXIMUM DENSITY OF 125 PCF. F'm FOR DESIGN IS 1500 PSI (SOLID GROUTED CONSTRUCTION) AND 1350 PSI (PARTIAL GROUTED CONSTRUCTION).
3. MORTAR SHALL BE TYPE 2 (MASONRY CEMENT SHALL NOT BE USED)
4. GROUT FOR WALLS CONSTRUCTED WITH HOLLOW CONCRETE MASONRY UNITS SHALL HAVE AN F'g = 2000 PSI.
5. ALL UNITS SHALL BE LAID IN STACK BOND UNLESS NOTED OTHERWISE.
6. VERTICAL REINFORCING (UNLESS NOTED OTHERWISE):
   PLACE #5 (8" WALL) BAR IN CENTER OF GROUT AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL, WITH ONE BAR AT ALL CORNERS INTERSECTIONS, WALL ENDS, BEAM BEARING , JAMBS AND EACH SIDE OF CONTROL JOINTS AND AT INTERVALS NOT TO EXCEED 48" O.C.. TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE BY A.A. PRODUCTS COMPANY. UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE PER TYPICAL REINFORCING BAR SPLICE DETAILS. DOWELL ALL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90 DEGREE HOOKED DOWELS TO MATCH VERTICAL REINFORCING.
7. HORIZONTAL REINFORCING (UNLESS NOTED OTHERWISE):
   PLACE 2 #5 (8" WALL) BARS IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT ROOF AND ELEVATED FLOOR LINES. PLACE THESE BARS CONTINUOUS THROUGH CONTROL JOINTS. WRAP MASTIC TAPE FOR 1'-6" EACH SIDE OF CONTROL JOINT. PROVIDE BENT BARS, TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTIONS TO MAINTAIN BOND BEAM CONTINUITY. UNLESS NOTED OTHERWISE LAP SPLICES SHALL BE PER TYPICAL REINFORCING BAR SPLICE DATA. STAGGER ALTERNATE SPLICES A MINIMUM OF 4'-0". PROVIDE STANDARD WEIGHT (NO. 9 GAGE WIRE) DUR-O-WALL OR DUR-O-WIRE LADDER TYPE JOINT REINFORCING AT 16" O.C. IN MASONRY WALLS. LAP JOINT REINFORCING 6" MINIMUM.
8. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING. PROVIDE CLEANOUTS IF GROUT POUR EXCEEDS 5'-0" IN HEIGHT. IF CLEANOUTS ARE PROVIDED, GROUT POUR MAXIMUM HEIGHT = 12'-0", IN LIFTS NOT TO EXCEED 6'-0".
9. UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0"

H. STRUCTURAL STEEL:

1. LATEST AISC AND AWS CODES APPLY. THE SHOP DRAWING REVIEW TIME OF SECTION 4.4 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES IS REVISED TO MATCH THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. THE WORD APPROVED IN SECTION 4.4 IS REDEFINED AS REVIEWED.
2. STEEL PROPERTIES
   CHANNELS, PLATES AND ANGLES ____ ASTM A36 (Fy = 36 KSI)
   PURLINS ____ ASTM A570 (Fy = 50 KSI)
   BOLTS ____ ASTM A325N
   ANCHOR RODS (BOLTS) ____ ASTM F1554, GRADE 36
3. WHEN STRUCTURAL STEEL IS FURNISHED TO A SPECIFIED MINIMUM YIELD POINT GREATER THAN 36 KSI, THE ASTM OR OTHER SPECIFICATION DESIGNATION SHALL BE INCLUDED NEAR THE ERECTION MARK ON EACH SHIPPING ASSEMBLY OR IMPORTANT CONSTRUCTION COMPONENT OVER ANY SHOP COAT OF PAINT PRIOR TO SHIPMENT FROM THE FABRICATORS PLANT.
4. ALL BOLTS, ANCHOR BOLTS, EXPANSION/ADHESIVE ANCHORS, ETC. SHALL BE INSTALLED WITH STEEL WASHERS.
5. ALL EXPANSION/ADHESIVE ANCHORS SHALL HAVE AN I.C.B.O. RATING FOR MATERIAL INTO WHICH INSTALLATION TAKES PLACE.
6. ALL WELDING BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELDS SHOWN ON THE DRAWINGS OR NOTES, CERTIFICATES SHALL BE THOSE ISSUED BY AN INDEPENDENT TESTING AGENCY.
7. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS. USE E80 SERIES FOR ASTM A706 REINFORCING BARS.
8. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELD ON DRAWINGS ARE SHOWN AS SHOP WELDS, CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS.
9. SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE WELD AND ADJACENT BASE METAL SHALL BE CLEANED BY BRUSHING OR OTHER SUITABLE MEANS. WELDED JOINTS SHALL NOT BE PAINTED UNTIL AFTER WELDING HAS BEEN COMPLETED AND THE WELD ACCEPTED.

I. METAL ROOF DECK

1. METAL ROOF DECK SHALL BE PBR PANEL OR EQUIVALENT.
2. DECK PROPERTIES:

DEPTH	1 ¼
WIDTH	36
GAGE	22
MINIMUM YIELD STRESS	33,000 PSI
MINIMUM +S	.058 IN *3 PER FOOT OF WIDTH
MINIMUM I	.056 IN *4 PER FOOT OF WIDTH
FINISH	GALVANIZED

3. DECK ATTACHMENT (METAL TO WOOD):

LOCATION	ATTACHMENT TO SUPPORTING MEMBERS
FIELD	¼" HEX WASHER HEAD WOODGRIP 9-15 HWH SHARP POINT FASTENERS @ 12" ON CENTER
BOUNDARIES	¼" HEX WASHER HEAD WOODGRIP 9-15 HWH SHARP POINT FASTENERS @ 12" ON CENTER

4. DECK ATTACHMENT (METAL TO METAL):

LOCATION	ATTACHMENT TO SUPPORTING MEMBERS
SIDELAPS	¼" -14 X 7/8" LAP TEK FASTENERS AT 20" ON CENTER.
END LAPS	12-14 1" SELF DRILLING FASTENERS ON EACH SIDE OF MAJOR RIBS OF PANEL (TWO FASTENERS PER FOOT)

5. SHEETS SHALL HAVE ½" X 3/32" TAPE SEALER INSTALLED BETWEEN WEATHER INFILTRATION POINT AND FASTENER AT SIDE LAPS. USE DOUBLE BEAD TAPE SEALER AT END LAPS.
6. NO PERMANENT SUSPENDED LOADS ARE TO BE SUPPORTED BY THE METAL ROOF DECK.

J. SPECIAL STRUCTURAL INSPECTIONS:
THE TYPES OF WORK LISTED BELOW SHALL BE INSPECTED BY A SPECIAL INSPECTOR.

1. ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CIVIL OR STRUCTURAL ENGINEER.
2. THE QUALIFICATIONS OF ALL SPECIAL INSPECTORS SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
3. THE MINIMUM QUALIFICATIONS FOR THE SPECIAL INSPECTOR ARE AS FOLLOWS:
   3.1 CONCRETE INSPECTION - I.C.B.O. OR I.C.C. CERTIFICATION IN REINFORCED CONCRETE OR E.I.T. CERTIFICATION.
   3.2 STRUCTURAL WELDING INSPECTION
   a. VISUAL TESTING - I.C.B.O. OR I.C.C. CERTIFICATION IN STRUCTURAL STEEL AND WELDING OR A.W.S. CERTIFIED WELD INSPECTOR (C.W.I.).
   b. NON-DESTRUCTIVE TESTING - A.W.S. C.W.I.
   3.3 EXPANSION/ADHESIVE ANCHOR INSPECTION - I.C.B.O. OR I.C.C. CERTIFICATION IN REINFORCED CONCRETE AND MASONRY OR E.I.T. CERTIFICATION.
   3.4 STRUCTURAL MASONRY INSPECTION - I.C.B.O. OR I.C.C. CERTIFICATION OR E.I.T. CERTIFICATION.
   3.5 SPECIAL CASES - EXPERIENCE ACCEPTABLE TO THE STRUCTURAL ENGINEER OF RECORD.
4. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   a. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
   b. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO BE KEPT AT THE SITE FOR USE BY THE BUILDING OFFICIAL, THE CONTRACTOR AND THE STRUCTURAL ENGINEER OF RECORD. IF SPECIAL INSPECTION IS PROVIDED BY ANYONE OTHER THAN THE STRUCTURAL ENGINEER OF RECORD, INSPECTION REPORTS SHALL BE SUBMITTED TO THE OFFICE OF THE STRUCTURAL ENGINEER ON A WEEKLY BASIS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
   c. UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
5. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
   a. NOTIFY THE RESPONSIBLE INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
   b. ALL WORK REQUIRING SPECIAL STRUCTURAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT IS OBSERVED BY THE SPECIAL STRUCTURAL INSPECTOR.
6. SPECIAL INSPECTOR (INSP) AND MATERIAL TESTING (TEST) MATRIX:

MATERIAL	TASK	FREQUENCY: CONTINUOUS	FREQUENCY: PERIODIC	RESPONSIBLE FIRM
CAST-IN-PLACE CONCRETE	ADHESIVE AND EXPANSION ANCHORS	INSP		INSP AGENCY
UNIT MASONRY ASSEMBLIES	MORTAR MATERIALS		TEST	TESTING LAB
	GROUT MATERIALS		TEST	TESTING LAB
	GROUT SPACE PRIOR TO GROUTING		INSP	INSP AGENCY
	REINFORCEMENT AND CONNECTORS		INSP	INSP AGENCY
	GROUT PLACEMENT	INSP		INSP AGENCY
	ADHESIVE AND EXPANSION ANCHORS	INSP		INSP AGENCY

PROFESSIONAL ENGINEER REGISTERED 12880 STATE OF IDAHO PAUL M. HOPKINS

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SPOKANE LEWISTON

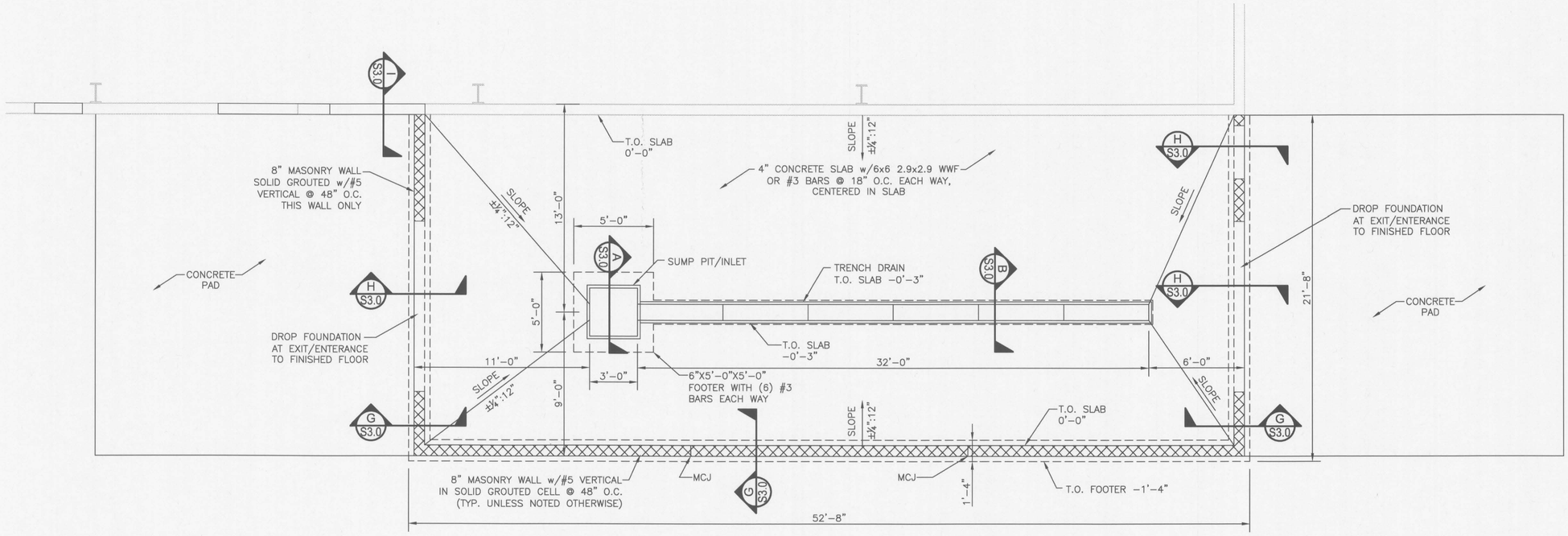
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DRAWN BY: TJP
DESIGNED BY: PMH
QUALITY CHECK: PMH
DATE: 06.17.08
JOB NO. L08-034
FIELDBOOK

ROGERS MOTORS WASH BAY
LEWISTON, IDAHO

GENERAL STRUCTURAL NOTES

CAD NO. L08034_S1-0.DWG
SHEET S1.0

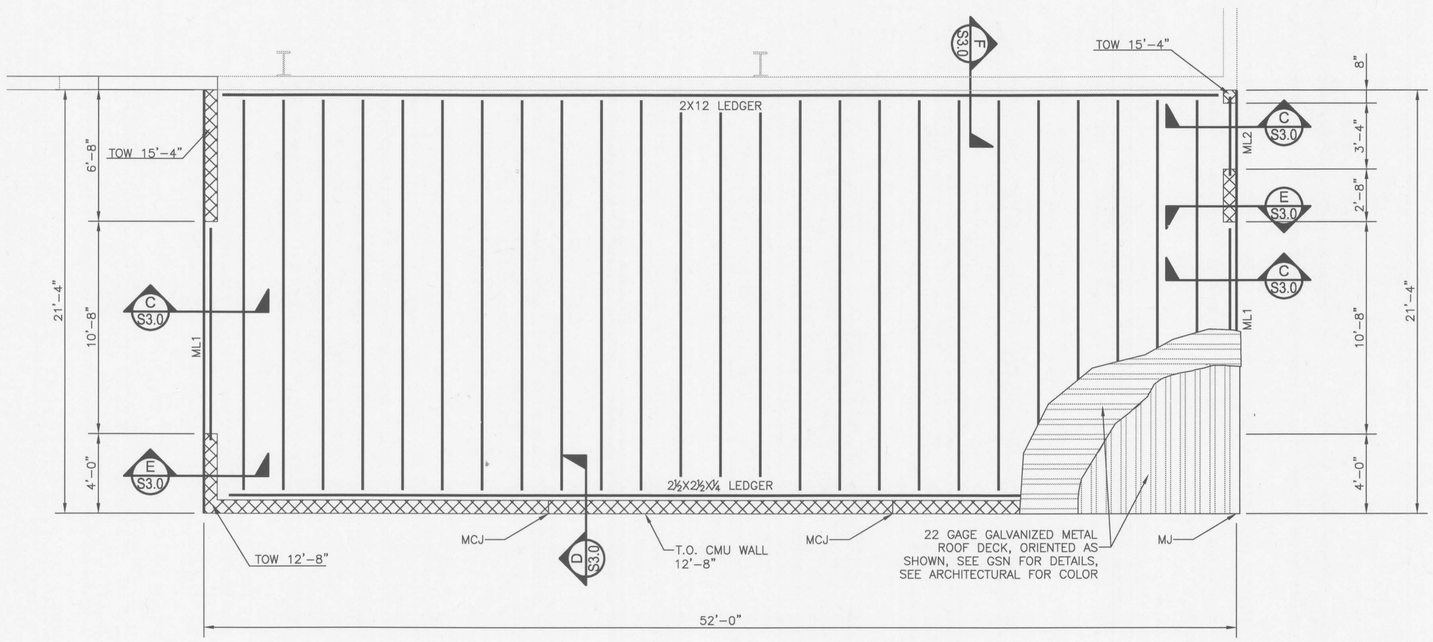


FOUNDATION PLAN

0 4' 8' 12'

SCALE
¼" = 1" SCALE

PLAN LEGEND AND ABBREVIATIONS		
SYMBOL	DESCRIPTION	REMARKS
☒	OPENING IN FLOOR OR ROOF	SEE PLANS
	MASONRY WALL UNLESS NOTED OTHERWISE	SIZES ARE DIMENSIONED ON PLANS
	WOOD FRAMED WALL	SIZES ARE DIMENSIONED ON PLANS
	CAST IN PLACE CONCRETE WALL	SIZES ARE DIMENSIONED ON PLANS
ARCH'L	ARCHITECTURAL	———
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	———
AWS	AMERICAN WELDING SOCIETY	———
BOD	BOTTOM OF DECK	———
BOF	BOTTOM OF FOOTING	———
CJ	CONSTRUCTION JOINT	———
CLR	CLEAR	———
DEG	DEGREES	———
DWGS	DRAWINGS	———
F.D.	FLOOR DRAIN	———
FFE	FINISHED FLOOR ELEVATION	———
GSN	GENERAL STRUCTURAL NOTES	———
MCJ	MASONRY CONTROL JOINT	———
MIN	MINIMUM	———
O.C.	ON CENTER	———
SIM	SIMILAR	———
TO	TOP OF	———
TOC	TOP OF CONCRETE	———
TOF	TOP OF FOOTING	———
TOS	TOP OF STEEL	———
TOGB	TOP OF GRADE BEAM	———
TOW	TOP OF WALL	———
TYP	TYPICAL	———
UNO	UNLESS NOTED OTHERWISE	———



ROOF FRAMING PLAN

0 4' 8' 12'

SCALE
¼" = 1" SCALE

NOTES :
1. COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND CIVIL PLANS
2. FOR GSN SEE SHEET S1.0
3. CONTRACTOR IS TO CONSTRUCT THE TRENCH PER THE CAR WASH EQUIPMENT SUPPLIER'S DRAWING SHEET TITLED "WATER RECLAIM SYSTEM WITH HOLDING TANKS" AND COORDINATE WITH THE STRUCTURAL DRAWINGS PROVIDED.

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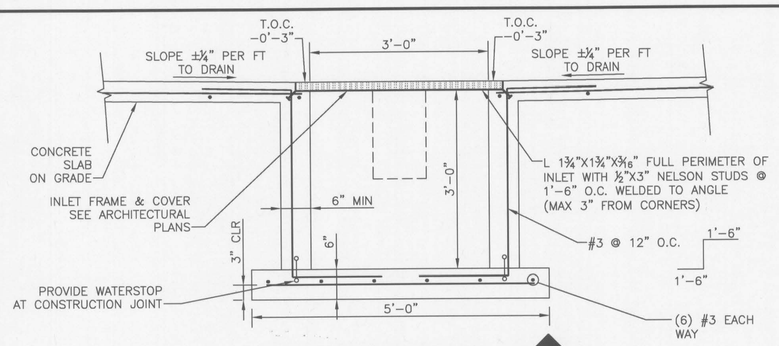
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ROGERS MOTORS WASH BAY
LEWISTON, IDAHO

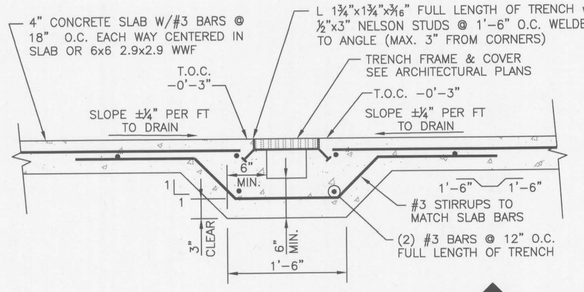
FOUNDATION & ROOF FRAMING PLAN

CAD NO. L08034_S2-0.DWG
SHEET S2.0



SUMP PIT SECTION A

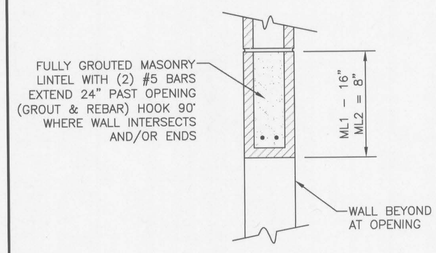
NOT TO SCALE



TRENCH DRAIN SECTION B

TDH 2753

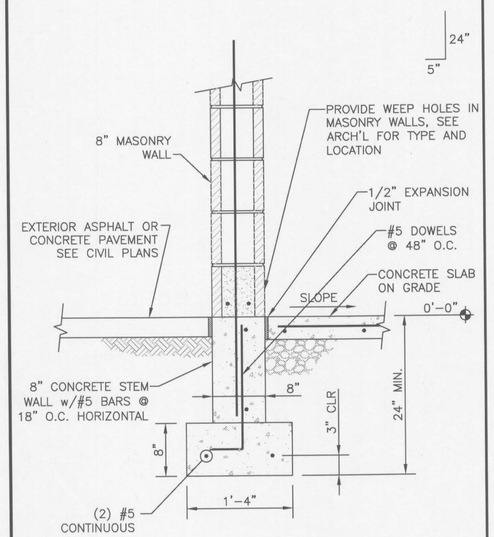
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MASONRY LINTEL DETAIL C

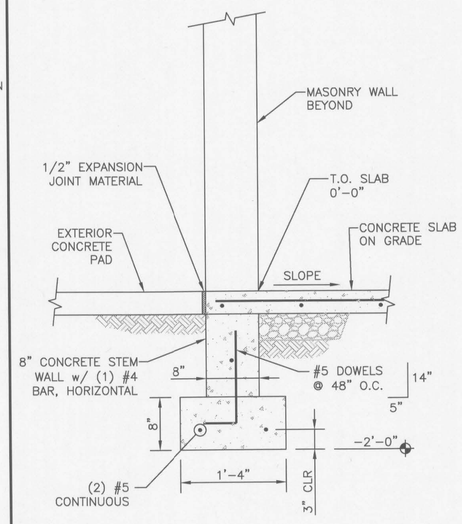
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NOTE:
CONTRACTOR OPTION TO USE A MASONRY STEM WALL IN LIEU OF CONCRETE. TYP. ALL LOCATIONS.



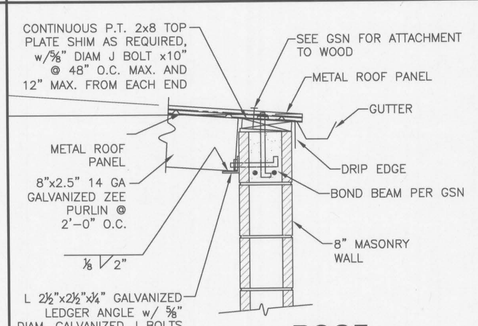
MASONRY WALL AT FOUNDATION G

NOT TO SCALE



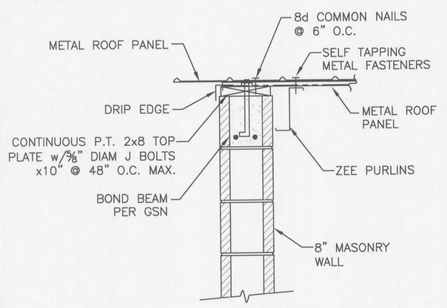
FOUNDATION AT WALL OPENING H

NOT TO SCALE



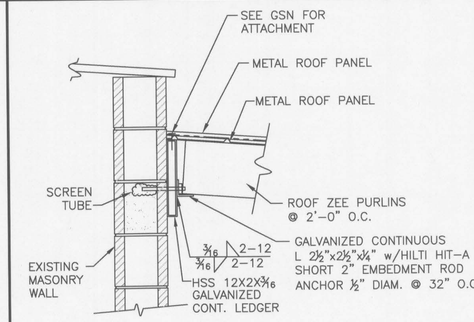
ROOF TO WALL CONNECTION D

NOT TO SCALE



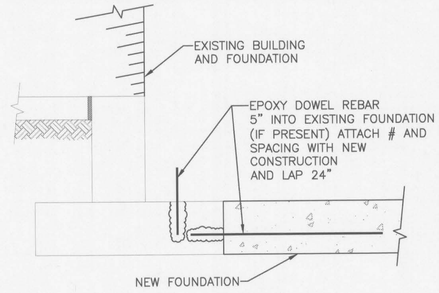
ROOF CONSTRUCTION AT WALL E

NOT TO SCALE



ROOF TO EXISTING WALL F

NOT TO SCALE



EXISTING BUILDING FOUNDATION I

NOT TO SCALE

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JOB NO.	L08-034
FIELDBOOK	

ROGERS MOTORS WASH BAY
LEWISTON, IDAHO

DETAILS

CAD NO. L08034_S3-0.DWG

SHEET S3.0

SECTION 15100 – MECHANICAL GENERAL PROVISIONS

PART 1 – GENERAL

1.1 SCOPE:

A. Work Included:

1. Install work in accordance with these specifications and the accompanying plans. Furnish all labor, material, and equipment together with all incidental items not specifically shown or specified which are required by good practice to provide the complete mechanical systems as described.

C. Coordination and Site Visits:

1. This section of the work requires examination of and reference to all architectural, structural, utility, and electrical drawings for construction conditions that may affect the work. Inspect the building site and existing facilities for verification of existing conditions. Base all measurements from established benchmarks. Any discrepancy between actual measurements and those indicated, which prevents following good practices or the intent of the drawings and specifications, shall be reported to the Architect/Engineer, and work halted until instructions are received from the Architect/Engineer.

1.2 CODES, PERMITS, FEES:

A. Install all work in accordance with applicable codes and standards. Obtain all required permits, pay all required fees including utility connections or extensions, in connection with this portion of the construction. Obtain all required certificates of inspection for the work.

PART 2 – PRODUCTS

2.1 MATERIALS AND WORKMANSHIP:

A. Materials:

1. All materials and equipment shall be of first quality, new, full size and weight, standard in every respect, and suitable for the space required. Use the same manufacturer for products of similar class or service, such as valves, pumps, controls, and air handlers. Protect all materials against loss, theft, or damage before and after installation.

2. Furnish equipment that will operate under all conditions of load without any sound or vibration that is objectionable in the opinion of the Architect/Engineer. Vibration or noise considered objectionable will be corrected by the Subcontractor at his expense.

3. Furnish and install all necessary foundations, supports, pads, bases, and piers required for all materials and equipment furnished under this contract.

4. Provide all required firestopping at piping and duct penetrations of fire rated walls, floors, ceilings, and roofs. Firestopping shall be Dow Corning Fire Stop Sealant 2000 or Fire Stop Foam 2001, or approved equal.

B. Workmanship:

1. All materials and equipment shall be installed in a neat and workmanlike manner by competent specialists for each subtrade. Work shall be installed to the satisfaction of the Architect/Engineer with unsatisfactory work removed and reinstalled to his satisfaction at no extra cost to the Owner.

2. Provide all cutting and patching necessary to install the work specified in this section. Patching shall match adjacent surfaces. No structural members shall be cut without the approval of the Architect/Engineer. Provide all sleeves and inserts required before the floors and walls are built.

3. Locate all equipment that must be serviced in fully accessible positions. Provide clearance for removal of replacement parts and components, and with necessary couplings or flanges to remove the component for maintenance.

2.2 SUBMITTALS AND SUBSTITUTIONS:

A. Prebid Approval:

1. Manufacturers trade names and catalog numbers stated herein are intended to indicate the quality of equipment or materials desired. All manufacturers not specifically listed require prior approval. Submit catalog data, including specifications, of the proposed equipment to the Architect/Engineer for his approval at least 10 calendar days prior to bid opening. Notice of such approvals will be published in an addendum.

B. Submittals:

1. Within thirty days after award of this contract, provide six copies of a complete list of all materials and equipment proposed for this project. List shall contain make, type, manufacturer's name, and trade designation of all materials and equipment. Submittal shall also include manufacturer's complete specification for each item, including capacities, ratings, etc., and dimensions as required to check space requirements. Provide six copies of all submittals.

2. Approval of submittals shall not relieve the contractor from responsibility for deviations from the plans or specifications, unless he has, in writing , called the Architect's /Engineer's attention to deviations at the time of submission, and obtained his written approval. Approval of submittals does not relieve the contractor from responsibility for errors in shop drawings or literature.

C. Submittal Form:

1. The manufacturer's representative shall be responsible for the completion of the submittal form. One form must be completed for each piece of equipment submitted. Equipment not provided with this form will not be reviewed and will be returned for re-submittals.

2. An electronic copy of this submittal form file is available from the engineer at the request of the manufacturer's representative.

D. Equipment Requiring Submittals:

1. Exhaust fans
2. Louvers
3. Electric heaters
6. Backflow preventor

PART 3 – EXECUTION

3.1 ACCESSIBILITY & SAFETY:

A. Accessibility:

1. All equipment which must be serviced or operated, shall be located in fully accessible position. Minor changes from the drawings may be made to allow for better accessibility. All changes shall be approved prior to actual installation.

2. Access panels shall be provided if required for accessibility. Subcontractor shall furnish the required panels to the General Contractor and the required location for all access panels. Panels shall be installed by the General Contractor.

B. Safety:

1. Subcontractor shall provide guards for all belt drives and rotating machinery. No water piping shall run immediately over or within a 3–foot plan view clearance of any electrical panel or motor starter. Where piping must be located within these zones, install piping inside a conduit to prevent water access to electrical equipment.

3.2 COORDINATION:

A. Coordinate all work with the various trades involved to provide a complete and satisfactory installation. The exact details of piping, ductwork, and equipment are not shown. No additional compensation will be made for offsets or relocation required in coordination with other trades.

B. Alterations required due to improper supervision by the subcontractor shall be made at no extra cost, to the satisfaction of the Architect/Engineer.

3.3 ELECTRICAL:

A. Electric motors required for equipment specified in this section shall be provided and installed by this Subcontractor. Motor starters, disconnects, relays, pilot lights, etc., are in general, to be furnished and installed by the Electrical Contractor. Starters, relays, controls, etc., which are factory assembled into packaged equipment shall be furnished by the Mechanical Contractor under this section of the specifications.

B. All motors shall be provided with adequate starting and protective equipment as specified or required. Motor capacity shall be sufficient to operate driven device under all conditions of operation and load without overload. Minimum horsepower shall be as specified.

3.4 EXCAVATION & BACKFILL:

A. Excavate trenches required for underground piping to proper elevation and grade. Provide trenches with solid bottoms to allow support of piping along entire length with excavation at bells as required for jointing and inspection. Provide repairing of finished surfaces, and all required shoring, bracing, pumping, and protection for safety of persons and property. Observe all Local or State Safety Codes. Verify that elevations of existing utilities will allow for proper grading of piping connecting to existing utilities.

B. Excavation and Backfill shall be in accordance with any other requirements concerning sitework, of this project specifications.

3.5 IDENTIFICATION AND CODING:

A. Painting:

1. All painting of mechanical equipment, accessories, ductwork, and piping shall be furnished and applied under the Architectural section of this project specifications. All painting shall be completed before any identification markings are applied.

B. Equipment:

1. Identify all equipment with a black formica label, with white reveal when engraved. Lettering to be 3/16 inch high minimum. In general, identify equipment as to area served in addition to title and code number of the equipment as taken from the plans.

C. Piping:

1. Identify all piping as to the service of the pipe and the direction of flow. The letters shall be 3/4 inch high on piping two inches or smaller, and 1–1/4 inches high on piping up to six inches. Flow arrows shall be at least six inches long. The letters and flow arrows shall be made by precut stencils and all base paint, one inch high and black, or factory fabricated plastic pipe markers. Piping shall be identified at 25 foot maximum intervals, on long continuous lines; adjacent to each item of equipment; on each riser and junction, and on both sides of all wall penetrations. Underground piping shall be identified with bright colored continuously printed plastic tape of not less than 6" wide by 4 mil thick, manufactured for direct burial service. Install directly above all buried pipe, 6 to 8 inches below finished grade. All piping shall be labeled per the Uniform Plumbing Code, latest edition.

D. Valves:

1. Regardless of size, all valves shall be tagged with a numbered brass tag, 1–1/2 inches by 3 inches minimum in size and 0.051 inch thick. A valve chart indicating valve tag number, location, service, and normal position shall be mounted in a suitable framed and glassed cover in the main mechanical room or as directed. Valve chart shall be duplicated in the Maintenance and Operations Manual.

3.6 TESTING:

A. Piping:

1. All plumbing piping (drainage, water, gas) shall be tested in accordance with the requirements of the Uniform Plumbing Code, latest edition. Other piping systems shall be tested to 1.5 times the operating pressure, for a minimum period of two hours. If the test pressure falls more than 5 percent during the test period, the leak shall be located, repaired, and the test repeated.

2. Piping shall be tested before insulation has been installed. Delicate control mechanisms shall be removed during tests to prevent shock damage. The use of chemicals or compounds to stop leaks shall not be permitted.

3. A test report shall be submitted for each piping system test. Test report forms are available from the Engineer.

B. Systems:

1. All plumbing systems, shall be tested at the completion of the building to establish that the systems operate as specified and required. Testing shall be performed after air and water balancing is completed.

2. All controls shall be calibrated accurately and all equipment shall be adjusted for satisfactory operation. Excessive vibration or noise from any system shall be corrected.

3. All systems shall be tested at building completion. All tests shall be performed in the presence of the Architect/Engineer or his representative.

3.7 CLEANING AND ADJUSTING:

A. Thoroughly clean all parts of the system at the completion of the work. Flush all water circulating systems with fresh water and then drain. Clean all strainers and refill system. Adjust all devices for proper operation and lubricate all equipment as required. Repaint any painted surface that has been damaged.

B. All potable water systems shall be flushed and disinfected after tests are completed. Disinfection shall be in accordance with local municipal and State Plumbing Inspector's criteria. In lieu of such criteria, the following procedure shall be followed for disinfection:

1. Completely flush system. Add alkali or acid (hydrochloric) to bring water ph level to between 7.4 and 7.6.

2. Inject chlorine (liquid, powder, tablet, or gas) throughout the system to obtain 50 to 80 mg/L residual.

3. Bleed water from outlets to ensure distribution, and test for residual at a minimum of 15 percent of the outlets.

4. Maintain disinfection in system for 24 hours.

5. If final disinfectant residual tests less than 25 mg/L, repeat treatment.

6. Flush disinfectant from system until residual is equal to that of incoming water, or 1.0 mg/L.

7. Take samples no sooner than 24 hours after flushing, from 10 percent of the outlets and the incoming water.

3.9 PROJECT CLOSEOUT:

A. Operations & Maintenance Manual:

1. The Contractor shall provide an operations and maintenance manual at least thirty days prior to completion of work. The manual shall be of the three ring binder type, entitled "Operations and Maintenance Manual", with the job name and year of completion also included. The manual shall include, as a minimum:

2. Maintenance instructions for all equipment, including lubrication requirements.

3. Equipment suppliers names, addresses, and telephone numbers.

4. Equipment catalog cuts and ratings tables, model numbers, serial numbers, and accessories.

5. Parts numbers for all replaceable parts.

6. Air system balance report as hereinbefore specified.

7. Guarantee letter as specified below.

8. Any additional information required to enable the Owner to properly maintain the building mechanical system.

9. After approval of the Operations and Maintenance Manual by the Architect/Engineer, the Contractor shall furnish two copies of the manual to the Owner.

B. As–Built–Drawings:

1. Provide two sets of blue–line mechanical drawings showing the work as it was actually installed. The drawings shall indicate all departures from the contract drawings, and shall locate all underground utility lines with dimensions from established building lines. Make all notations neat and legible, with red indelible pencil. At the completion of the work, these as–built drawings shall be signed and dated by the Mechanical Contractor, and returned to the Architect/Engineer.

C. Guarantee:

1. All work furnished under this section shall be guaranteed in writing to be free from defective work or materials for a period of one year after acceptance of the contract. All repairs or replacements because of defective materials or workmanship or noncompliance with code shall be provided without additional cost to the Owner. Contractor shall furnish a letter indicating above guarantee with space for date of acceptance and expiration of guarantee. Letter shall be included in O & M Manual.e sys

END OF SECTION 15100

SECTION 15200 – PLUMBING

PART 1 – GENERAL

1.1 SCOPE:

A. This section covers the work necessary for the plumbing system, complete. The Mechanical General Provisions, Section 15100, are to be included as a part of this section of the specifications.

1.2 CODES:

A. The plumbing system shall be installed in accordance with the Uniform Plumbing Code, latest edition, and all local and State Codes.

1.3 FIXTURES & EQUIPMENT:

A. General:

1. Plumbing fixtures and equipment shall be as listed on the drawings. In addition to those specifically listed, the following manufacturers are approved for bidding only, with final approval for installation based on submittal data furnished:

a. Backflow Preventers: Watts and Conaran CO.

b. All other manufacturers require prior approval.

2. Plumbing Fixture Standards:

All plumbing fixtures shall meet or exceed the following standards:

a. ANSI A112.6.1 – Supports for Off–the Floor Plumbing Fixtures for Public Use.

b. ANSI A112.18.1 – Finished and Rough Brass Plumbing Fixture Fittings.

c. ANSI A112.19.1 – Enameled Cast Iron Plumbing Fixtures.

d. ANSI A112.19.2 – Vitreous China Plumbing Fixtures.

e. ANSI A112.19.3 – Stainless Steel Plumbing Fixtures (Designed for Residential Use).

f. ANSI A112.19.4 – Porcelain Enameled Formed Steel Plumbing Fixtures.

g. ANSI A112.19.5 – Trim for Water–Closet Bowls, Tanks, and Urinals.

h. ANSI Z124.1 – Gel–Coated Glass–Fiber Reinforced Polyester Resin Bathtub Units.

i. ANSI Z124.2 – Gel–Coated Glass–Fiber Reinforced Polyester Resin Shower Receptor and Shower Stall Units.

j. ANSI Z358.1 – Emergency Eye Wash and Shower Equipment.

k. ARI 1010 – Drinking Fountains and Self–Contained Mechanically Refrigerated Drinking Water Coolers.

l. AWSI/ASSE 1001 – Atmospheric Vacuum Breaker.

m. ANSI/ASSE 1012 – Backflow Preventers with Immediate Atmospheric Vent.

n. ANSI/ASSE 1011 – Hose Connection Vacuum Breakers.

o. ANSI/ASSE 1013 – Backflow Preventers, Reduced Pressure Principle.

p. ANSI/ASSE 1015 – Backflow Preventers, Double Check Principle.

q. ANSI/ASSE 1019 – Wall Hydrants, Frost Proof Automatic Draining Anti–Backflow Types.

r. AWSI/ASSE 1020 – Pressure Vacuum Breaker.

s. AWSI/ASSE – 1–52 – Hose Connection, Double Check.

t. ANSI A112.21.1 – Floor Drains.

u. ANSI A112.21.2 – Roof Drains.

v. ANSI A112.26.1 – Water Hammer Arresters.

w. PDI WH–201 – Water Hammer Arresters.

PART 2 – PRODUCTS

2.1 PLUMBING FIXTURES & TRIM:

A. All plumbing fixtures shall be provided complete with all required trim for a complete and operational system. All exposed trim shall be chrome plated. All piping penetrations through finished walls shall be provided with chrome escutcheons. All plumbing fixtures shall be caulked and sealed to surrounding surfaces. All sink traps shall be provided with a cleanout plug in the bottom of the trap. Interior exposed pipe, valves, and fixture trim, including trim behind all casework doors, shall be chrome plated.

2.2 PIPING AND FITTINGS:

A. General:

1. Underground sanitary sewer and storm drain lines shall be installed at 1/4" per foot slope, unless otherwise indicated. If such slope is not possible due to existing inverts, approval shall be obtained from the Architect/Engineer and the authority having jurisdiction before any piping is installed at a lesser slope.

2. Connections between piping of dissimilar materials shall be made with dielectric waterways.

3. Provide standard manufactured water hammer arresters at all flush valves. Size and locate per manufacturers recommendations. Provide access panels for access to all water hammer arresters.

B. Domestic Hot and Cold Water:

1. Piping inside building above slab or above grade in crawl space shall be ASTM B88, Type "L", hard drawn copper. Fittings shall be ANSI/ASME B16.23 cast brass, or ANSI/ASME B16.29 wrought copper. Joints shall be ANSI/ASTM B32 solder, Grade 95–5, lead free.

2. Piping underground within 5 feet of the building line or below floor slab, smaller than 4 inches, shall be ASTM B88, Type "K", hard drawn or soft annealed copper. Fittings shall be ANSI/ASME B16.29 wrought copper. Joints shall be ANSI/ASTM B32 solder, Grade 95–5, lead free. No joints shall be installed beneath concrete floor slabs.

C. Sanitary Sewer and Vent:

1. Piping and fittings shall be Schedule 40 PVC–DWV (cellular core) per ASTM F1488 & ASTM F891, solvent welded as per solvent manufacturer's instructions. All main sewer risers (1 story or more), shall be cast iron CISPI 301, hubless, service weight, for prevention of noise transmission. All piping penetrations through fire rated walls, floors, or ceilings shall be cast iron or steel, and shall be fire sealed per local building inspectors requirements. All piping located above ceilings in areas used as return air plenums shall be cast iron or steel, ASTM A53.

2. Piping and fittings beyond 5 feet from the building line shall be PVC, ASTM D3033 or D3034, SDR 35. Joints shall be ASTM F477 with elastomeric gaskets.

3. All exposed vent piping located in occupied areas or rooms is to be cast iron with cast iron fittings.

D. Hanger and Supports:

1. Pipe hangers shall be provided to adequately support all piping systems. Hangers shall be vertically adjustable to provide for proper pitch and drainage. Hangers shall allow for expansion and contraction of the piping system.

2. Hangers for pipe sizes 1/2 to 1–1/2 inches shall be adjustable clevis type.

3. Hangers for pipe sizes 2 to 4 inches shall be adjustable clevis type.

4. Hangers for cold pipe, sizes 6 inches and over, shall be adjustable clevis type.

5. Hangers for hot pipe, sizes 6 inches and over, shall be adjustable steel yoke, cast iron roll, double hanger type.

6. Vertical pipes shall be supported with steel riser clamps.

7. All insulated piping shall be provided with minimum 18 gauge galvanized insulation shields, 12 inches long, and oversized hangers.

8. Hanger rod sizing and spacing for pipe shall be as follows:

Pipe Size	Minimum Rod Diameter	Maximum Spacing
To 1–1/4 inches	3/8 inch	6.5 feet
To 2 inches	3/8 inch	10 feet
To 3 inches	1/2 inch	10 feet
To 6 inches	5/8 inch	10 feet
8 to 12 inches	7/8 inch	14 feet
PVC & ABS (all sizes)	3/8 inch	6 feet
Cast Iron No–Hub	5/8 inch	5 feet and at joints

9. Provide hangers within 12 inches of each horizontal elbow.

10. Provide hangers with minimum 1–1/2 inches vertical adjustment.

2.3 INSULATION:

A. General:

1. All insulation shall have composite fire and smoke hazard ratings, as tested by ASTM E–84, NFPA 255, and UL 723, not exceeding:

Flame Spread	25
Smoke Developed	50

B. Piping:

1. All domestic hot and cold water lines and rain drains shall be insulated with preformed insulation.

a. Fiberglass insulation with a vapor barrier jacket. Insulation shall have a conductivity not exceeding 0.28 Btu–inch/hour–sq.ft.–°F. Laps and butt joints shall be sealed with pressure sensitive joint sealing tape of the same finish as the insulation jacket to provide a continuous vapor seal. Fittings and valves shall be insulated with PVC fitting covers and fiberglass insulation inserts, or with hydraulic setting insulating cement and four ounce canvass jacket with vapor barrier adhesive.

Insulation Thicknesses shall be as follows:

System	Pipe Sizes 1/2" & Above
Domestic Cold Water	1/2"

A. Ball Valves:

1. Valves 2–inches and smaller shall be bronze body, stainless steel ball, teflon seats, and lever handle. Valves over 2–inches shall be cast steel body, chrome plated steel ball, teflon seats, and lever handle.

B. Check Valves:

1. Valves 2–inches and smaller shall be bronze Y–pattern, swing check, bronze disc, 200 psi WOG. Valves, over 2–inches shall be iron body, bronze trim, swing check, renewable disc and seat.

C. Pressure Reducing Valves:

1. Valves 2–inches and smaller shall be bronze body, stainless steel and thermoplastic internal parts, fabric reinforced diaphragm, strainer, and single union end.

D. Strainers:

1. Strainers shall be cast steel body, Y–pattern, 20–mesh stainless screen.

PART 3 – EXECUTION

3.1 WORKMANSHIP:

A. General:

1. Install all piping, fixtures, equipment, and accessories as shown, and in strict accordance with the plumbing laws, rules, and regulations of the State and/or City. All work shall be done in a neat and orderly fashion, and left in a condition satisfactory to the Architect/Engineer.

B. Piping:

1. All piping shall be run parallel or perpendicular to established building lines. Install piping so as to allow for expansion. Waste and vent piping occurring above floor slab shall be installed true and plumb. Extend vents at least 1 foot above roof, and provide watertight flashing sleeves. Excavation and backfill shall be in accordance with Section 15100 of these specifications.

C. Fixtures:

1. Install fixtures true and plumb with building walls. Caulk all plumbing fixtures at joints along walls, countertops, and other intersecting surfaces. Locate fixtures as shown and per manufacturer's instructions. Furnish all required trim for fixtures to provide a complete and workable installation.

3.2 TESTS:

A. General:

1. All piping, fixtures, and equipment shall be inspected and approved before concealing or covering. All work shall be tested as required by Section 15100 of these specifications, and shall be leakproof before inspection is requested. All tests shall be repeated if required by those making the inspection.

2. All potable water systems shall be flushed and disinfected in accordance with Section 15100 of these specifications. Following disinfection, system shall be flushed and water sampled to show compliance with requirements of public health authority having jurisdiction. If tested water does not meet requirements, disinfecting shall be repeated until water quality meets requirements.

B. Fixtures and Equipment:

1. Fill all plumbing fixtures with water and check for leaks or retarded flow. Repair as required. Adjust each piece of plumbing equipment as required to insure proper functioning. Leave all fixtures and equipment in first class operating condition.

2. The plumbing contractor is responsible for all backflow devices to be inspected by a certified backflow technician before the use of the building potable water system.

END OF SECTION 15200

SECTION 15300 – HEATING, VENTILATING, AND AIR CONDITIONING

PART 1 – GENERAL

1.1 SCOPE

A. This section covers the work necessary for the heating, ventilating, and air conditioning system, complete. The Mechanical General Provisions, Section 15100, are to be included as a part of this section of the specifications.

1.2 CODES & STANDARDS

A. The heating, ventilating, and air conditioning system shall be installed in accordance with the latest edition of the following codes and standards:

1. International Mechanical Code (IMC)

2. International Building Code (IBC)

3. American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)

4. National Fire Protection Association (NFPA)

5. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA)

PART 2 – PRODUCTS

2.1 EXHAUST FANS

A. Ductwork:

1. Low pressure ductwork shall be fabricated from galvanized sheet metal, unless otherwise indicated. Construction requirements shall be in accordance with SMACNA – Low Pressure Duct Construction Standards, latest edition. All sheet metal ductwork shall be sealed with United Sheet Duct Sealer or equal. Low pressure ductwork shall be constructed to the following SMACNA static pressure standards:

a. Return, Exhaust, Outside Air intake ductwork = 1" W.G.

1. Low pressure ductwork, except ductwork located in mechanical rooms or in exposed areas (below ceilings), Shall be fabricated from rigid, resin–bonded fiberglass with a foil–scrim–kraft (FSK) vapor retarder. Airstream surface shall be impregnated with a polymer coating. Closure systems for joints shall utilize heat sealable tape. Construction standards shall be in accordance with SMACNA – Fibrous Glass Duct Construction Standards, latest edition. Duct systems shall be listed per UL–181, Class 1. Thickness of fiberglass duct shall be equal to R–5 for ducts located in unconditioned spaces (above ceiling), and equal to R–8 for ducts located outside of the building's insulation envelope.

B. Duct Accessories:

1. Turning vanes shall be airfoil blade type, as manufactured by Duro Dyne, Elgen, General Sheet Metal, or equal. Vanes shall be installed in vane side rails. Vanes shall be single wall vanes, and be fabricated and installed per SMACNA standards.

2. Volume dampers shall be fabricated from galvanized steel in accordance with SMACNA standards. Dampers shall have a continuous galvanized steel shaft, with damper regulators and end bearings. Dampers located above inaccessible ceilings (hard ceilings) shall be furnished with concealed ceiling damper regulators. Dampers shall be pressure rated equal to the design duct pressure rating.

3. Flexible connections shall be provided at all rotating fan equipment. Connectors shall be of fire, water, and weather resistant material.

C. Diffusers, Registers, Louvers, Grilles, Weathercaps:

1. See Drawings for requirement.

2.5 VIBRATION ISOLATION

A. General:

1. All rotating equipment and appurtenances connected to rotating equipment shall be vibration isolated from the supporting structure. No mental to mental contact will be permitted between fixed and floating parts. All metal isolators exposed to weather shall be hot dipped galvanized after fabrication. Piping connected to rotating equipment shall be hung with spring hangers for first 50 pipe diameters.

B. Spring Hangers:

1. Vibration hanger shall contain a spring and double deflection neoprene element in series. Spring shall have a diameter not less than 0.8 of compressed operating spring height. Spring shall have a minimum additional spring travel of 50 percent between design height and solid height. Spring shall permit a 15 degree angular misalignment without rubbing on hanger box.

2.6 SEISMIC SUPPORTS

A. All equipment, ductwork, and piping shall be seismically supported as required by the International Building Code, latest edition. Support details shall be as indicated on the drawings.

2.7 CONTROL SYSTEM

A. General:

1. The Mechanical Contractor shall be responsible for a complete and operable control system, including equipment, installation, and accessories required to perform the required control functions. All control conduit and wiring shall be furnished by the Electrical Contractor. Thermostats, sub–base switches, remote control devices, etc., shall be supplied by the Mechanical Contractor and installed and connected by the Mechanical Contractor. The Mechanical Contractor shall furnish the Electrical Contractor with wiring diagrams for all mechanical equipment and controls.

2. The control system shall be basically electric, with supplementary electronic devises as required.

PART 3 – EXECUTION

3.1 WORKMANSHIP

A. General:

1. Install all materials and equipment as shown and in strict accordance with the applicable codes for the State and/or city. Plans do not attempt to show exact details of all piping and ductwork, and no extra payment will be allowed for offsets required due to obstructions by other trades. All work shall be done in a neat and orderly fashion and left in a condition satisfactory to the Architect/Engineer.

2. All piping shall be run parallel or perpendicular to established building lines. Install piping so as to allow for expansion. Install all valves with stems horizontal or above. Install air vents at all high points. Provide all piping which passes through walls, floors, or ceilings with standard weight pipe sleeves.

1. All piping insulation shall be applied over clean, dry surfaces after system has been pressure tested and any leaks corrected. Finished appearance of all insulation shall be smooth and continuous. Provide coat of insulating cement where needed to obtain this result.

2. Flexible duct insulation shall be secured to duct surface with 4–inch wide bands of adhesive applied on maximum 18–inch centers. Additional galvanized tie–wire support shall be furnished as required and recommended by the insulation manufacturer.

B. Diffusers, Registers and Grilles:

1. All diffusers, grilles, and registers shall be installed tight on their respective mounting surfaces and shall be accurately centered on ceiling tile, recesses, windows, or doors.

C. Ductwork:

1. All sheet metal work shall be done by qualified, experienced mechanics in accordance with the requirements of ASHRAE and the latest edition of the applicable SMACNA Manual. All ductwork shall be installed in a neat and orderly manner, and shall be adequately supported to prevent vibration or sagging. All sheet metal ductwork shall be sealed with United–Sheet Metal Duct Sealer or equal.

END OF SECTION 15300

PROFESSIONAL ENGINEER
REGISTERED
Original stamped on Andy Lewiston, ID
8739
Date Original Signed: 06/20/08
STATE OF IDAHO
CHARLES E. PAULIN

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

Lewiston Idaho

MECHANICAL SPECIFICATIONS

83522
178

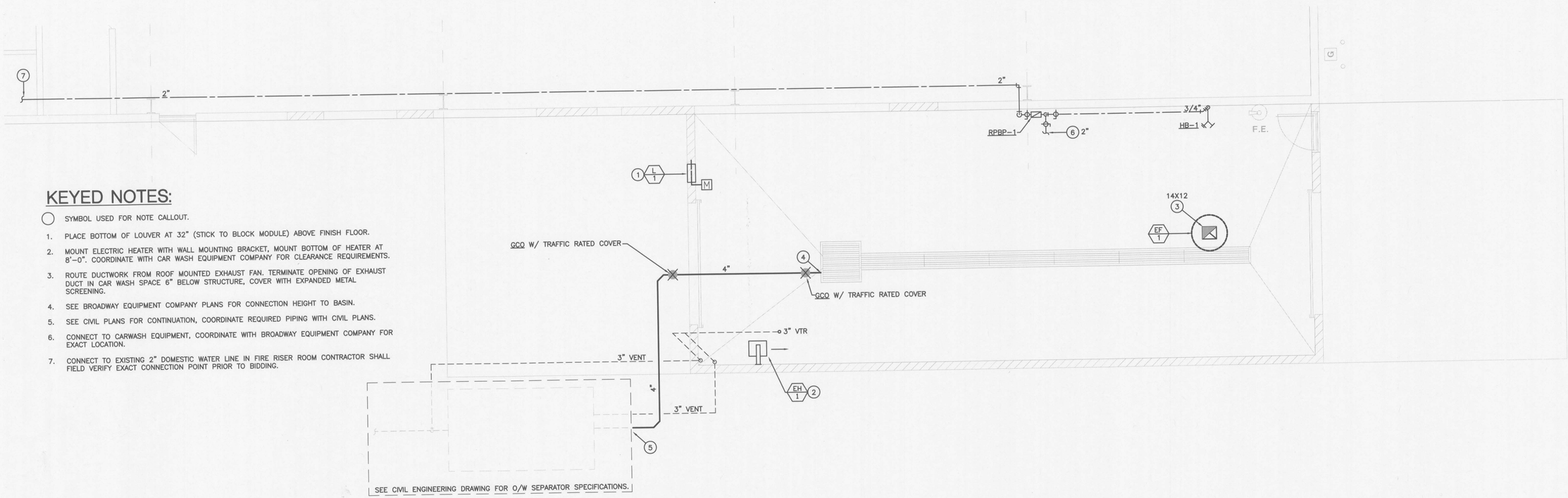
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DRAWN BY: JPM
CHECKED BY: CEP
DATE: 5/23/08
JOB NO.: 080429

REVISION DATE:

SHEET: MG1.1

ME
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OVER 25 YEARS OF EXCELLENCE
project number: 07-215



KEYED NOTES:

◯ SYMBOL USED FOR NOTE CALLOUT.

1. PLACE BOTTOM OF LOUVER AT 32" (STICK TO BLOCK MODULE) ABOVE FINISH FLOOR.
2. MOUNT ELECTRIC HEATER WITH WALL MOUNTING BRACKET, MOUNT BOTTOM OF HEATER AT 8'-0". COORDINATE WITH CAR WASH EQUIPMENT COMPANY FOR CLEARANCE REQUIREMENTS.
3. ROUTE DUCTWORK FROM ROOF MOUNTED EXHAUST FAN. TERMINATE OPENING OF EXHAUST DUCT IN CAR WASH SPACE 6" BELOW STRUCTURE, COVER WITH EXPANDED METAL SCREENING.
4. SEE BROADWAY EQUIPMENT COMPANY PLANS FOR CONNECTION HEIGHT TO BASIN.
5. SEE CIVIL PLANS FOR CONTINUATION, COORDINATE REQUIRED PIPING WITH CIVIL PLANS.
6. CONNECT TO CARWASH EQUIPMENT, COORDINATE WITH BROADWAY EQUIPMENT COMPANY FOR EXACT LOCATION.
7. CONNECT TO EXISTING 2" DOMESTIC WATER LINE IN FIRE RISER ROOM CONTRACTOR SHALL FIELD VERIFY EXACT CONNECTION POINT PRIOR TO BIDDING.

MAIN FLOOR HVAC PLAN

1/4" = 1' — 0"

N

EXHAUST FAN SCHEDULE

SYM	TYPE	AREA SERVED	BLOWER				ELECTRICAL		MAXIMUM SONES	OPERATING WEIGHT (LBS)	MANUFACTURER AND MODEL	REMARKS
			CFM	ESP	MAXIMUM RPM	DRIVE	HP	V/Ø				
EF 1	UP-BLAST	CAR WASH	1000	.50	1725	BELT	1/6	120/1	9.6	120	COOK MODEL ACRU-B 120	1 2 3

1. APPROVED ALTERNATE MANUFACTURER'S: GREENHECK, PENN, CARNES, BREIDERT & BARRY BLOWER.
2. PROVIDE UNIT WITH MANUFACTURER'S ROOF CURB W/ DAMPER TRAY AND BACKDRAFT DAMPER AND INTEGRAL BIRD SCREEN. ELECTRICAL WILL PROVIDE DISCONNECT.
3. CONTROL FAN WITH SEPARATE WALL SWITCH.

ELECTRIC HEATER SCHEDULE

SYMBOL	TYPE	AREA SERVED	FAN			ELECTRICAL				OPERATING WEIGHT (LBS)	MANUFACTURER AND MODEL	REMARKS
			CFM	RPM	HP	KW	STEPS	V/Ø	AMPS			
EH 1	SUSPENDED UNIT /WASH DOWN	CAR WASH	700	--	1/14	10.0	1	208/3	27.8	75	QMARK: JUW SERIES, WASH DOWN	1 2 3 4

1. APPROVED ALTERNATE MANUFACTURERS: BRASCH, MARKEL, CHROMALOX. INDEECO
2. PROVIDE UNIT WITH AN INTEGRAL THERMOSTAT.
3. PROVIDE UNIT WITH WALL MOUNTING BRACKET.
4. UNIT SHALL BE UL LISTED FOR CORROSIVE AREAS AND NEMA4X WASH DOWN REQUIREMENTS.

LOUVER SCHEDULE

SYMBOL	SERVICE	TYPE	NOMINAL SIZE	MINIMUM FREE AREA (SQ.FT.)	FINISH	MANUFACTURER AND MODEL	REMARKS
L 1	INTAKE	FIXED DRAINABLE	16X40	2.20	BAKED ENAMEL	RUSKIN ELF6375D	1 2 3 4

1. ALTERNATE MANUFACTURERS: GREENHECK, CARNES, AIROLITE, LOUVERS & DAMPERS & CESCO.
2. COLOR TO BE SELECTED BY ARCHITECT.
3. O.S.A. PROVIDE WITH FLANGED FRAME AND BIRD SCREEN.
4. PROVIDE WITH 120V/Ø-24VA LOW LEAKAGE MOTORIZED DAMPER, INTERLOCK TO OPEN WHEN EF-1 IS OPERATING.

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE ADDITIONAL COMMENTS	CONNECTION SIZE (INCHES)					MANUFACTURER / MODEL NUMBER DESCRIPTION / ADDITIONAL COMMENTS
		WASTE	VENT	TRAP	CW	HW	
HB-1	HOSE BIBB (INTERIOR)	--	--	--	3/4	--	WOODFORD MODEL 24 - EXPOSED STYLE, WITH ANTI-SIPHON VACUUM BREAKER, 3/4" INLET, CHROME PLATED, PROVIDE WITH METAL WHEEL HANDLE. WOODFORD MODEL 37HD1 / BACKFLOW PREVENTER.
RPBP-1	REDUCED PRESSURE BACKFLOW PREVENTER	--	--	--	SEE PLANS	--	WATTS, SERIES 009 REDUCED PRESSURE ZONE ASSEMBLY, MODEL NO. 009 WITH QUARTER TURN BALL VALVES, BRONZE STRAINER, AND AIR GAP. BRONZE BODY CONSTRUCTION- 1/2" THRU 2",
GCO	GRADE CLEANOUT (PAVED AREAS)	SEE PLANS	--	--	--	--	J.R. SMITH 4880 SERIES, ROUND FLANGED HOUSING WITH HEAVY DUTY CAST IRON COVER. FURNISH WITH BRONZE PLUG. COVER TO BE INSCRIBED "SAN".

NOTES:
1. BACKFLOW PREVENTION: THIS BUILDING IS PROVIDED WITH BACKFLOW PREVENTION DEVICE ON THE MAIN WATER SERVICE.

PROFESSIONAL ENGINEER
REGISTERED
As filed stamped in my office
7399
date of signature
STATE OF IDAHO
CHARLES E PAULIN

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

Lewiston Idaho

MECHANICAL PLAN

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ELECTRICAL ABBREVIATIONS

A	AMPERES
AC	6" ABOVE BACKSPLASH
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AF	AMP FRAME
AIC	AMPS INTERRUPTING CAPACITY
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CO	CONDUIT ONLY, PROVIDE PULL-LINE
CT	CURRENT TRANSFORMER
CTL	CONTROL
DC	DIRECT CURRENT
DEMO	DEMOLITION
DET	DETAIL
E	EMPTY/EMERGENCY
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EL	EMERGENCY LIGHT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXG	EXISTING
F	FUSE
FVNR	FULL VOLTAGE NON-REVERSING
FYR	FULL VOLTAGE REVERSING
G/GND	GROUND
GFI	GROUND FAULT INTERRUPTION
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IPCO	IDAHO POWER COMPANY
J/JB	JUNCTION BOX
KA	KILOAMP
KW	KILOWATT
KWH	KILOWATT HOUR
M	MAGNETIC CONTACTOR COIL
MB	MAIN BREAKER
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
MS	MOTOR STARTER
MH	MANHOLE
MH	METAL HALIDE
MTG	MOUNTING
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOAD
OS	OCCUPANCY SENSOR
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PC	PHOTOCELL
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PWR	POWER
REC	RECEPTACLE
(R)	RELOCATED
SF	SQUARE FEET
T	TELEPHONE
TB	TERMINAL BOARD
TBD	TO BE DETERMINED
TC	TIME CLOCK
TDR	TIME DELAY RELAY
TJB	TERMINAL JUNCTION BOX
TSP	TWISTED SHIELDED PAIR
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT-AMPERE
WP	WEATHER PROOF/NEMA 3R
XFMR	TRANSFORMER
X	EXPLOSION PROOF
XFR	TRANSFER

LIGHTING SYMBOLS
see luminaire schedule for mounting and fixture type

- 2'x4' ARCHITECTURAL LUMINAIRE
- 2'x4' PARABOLIC LUMINAIRE
- 2'x4' LUMINAIRE
- 2'x4' LUMINAIRE WITH EMERGENCY POWER SOURCE AS NOTED
- 1'x4' LUMINAIRE
- 1'x4' LUMINAIRE WITH EMERGENCY POWER SOURCE AS NOTED
- 2'x2' PARABOLIC LUMINAIRE
- 2'x2' LUMINAIRE
- 2'x2' LUMINAIRE WITH EMERGENCY POWER SOURCE AS NOTED
- SURFACE CABLE DOWN LUMINAIRE
- SURFACE CABLE DOWN LUMINAIRE
- SURFACE PENDANT LUMINAIRE
- SURFACE UPLIGHT LUMINAIRE
- STEP LUMINAIRE
- RECESSED WALLWASH LUMINAIRE
- RECESSED SLOPED CEILING LUMINAIRE
- RECESSED ACCENT LUMINAIRE
- RECESSED LUMINAIRE
- RECESSED LUMINAIRE WITH EMERGENCY POWER SOURCE AS NOTED
- INDIRECT LUMINAIRE (LENGTH AS INDICATED ON DWGS) GRID CEILINGS: PROVIDE WITH UL LISTED GRID JUNCTION BOX; SEE DETAIL ON DETAIL SHEET(S)
- INDIRECT LUMINARIES WITH EMERGENCY POWER SOURCE AS NOTED (LENGTH AS INDICATED ON DWGS) GRID CEILINGS: PROVIDE WITH UL LISTED GRID JUNCTION BOX; SEE DETAIL ON DETAIL SHEET(S)
- 4' WALL FIXTURE
- 4' WALL FIXTURE WITH EMERGENCY POWER SOURCE AS NOTED
- 2' WALL FIXTURE
- 2' WALL FIXTURE WITH EMERGENCY POWER SOURCE AS NOTED
- 3' WALL FIXTURE
- EMERGENCY LUMINAIRE
- SURFACE/WALL MOUNTED FLOOD LIGHT
- TRACK LUMINAIRE HEAD MOUNTED AS INDICATED
- ROUND LUMINAIRE
- WALL MOUNTED LUMINAIRE
- TC — TIMECLOCK
- P — PHOTOCELL
- OC — OCCUPANCY SENSOR- FOR 1-POLE LINE VOLTAGE CEILING MOUNTED OCCUPANCY SENSOR. SENSOR SWITCH NO. CMR-PDT OR PRE-BID APPROVED EQUAL. OCCUPANCY SENSOR TO BE INSTALLED NO LESS THAN 3FT FROM ANY HVAC DIFFUSERS. FOR 2-POLE LINE VOLTAGE CEILING MOUNTED OCCUPANCY SENSOR, SENSOR SWITCH NO. CMR-PDT-2P OR PRE-BID APPROVED EQUAL. OCCUPANCY SENSOR TO BE INSTALLED NO LESS THAN 3FT FROM ANY HVAC DIFFUSERS.
- POLE LIGHT WITH ONE HEAD ARM MOUNTED
- POLE LIGHT WITH TWO HEADS ARM MOUNTED
- WALLPACK LUMINAIRE
- WALLPACK LUMINAIRE WITH EMERGENCY POWER SOURCE AS NOTED
- LIGHTING CONTACTOR TO BE NEMA 1 UNLESS OTHERWISE NOTED. SIZE, POLES, AND TYPE AS INDICATED ON DRAWING
- CEILING MOUNTED EXIT SIGN, DOUBLE FACE
- WALL MOUNTED EXIT SIGN, DOUBLE FACE
- CEILING MOUNTED EXIT SIGN, SINGLE FACE
- WALL MOUNTED EXIT SIGN, SINGLE FACE
- WALL MOUNTED EXIT SIGN/ EMERGENCY LIGHT COMBO UNIT, SINGLE FACE
- ARROW INDICATES DIRECTION TO BE SHOWN ON SIGN

MOUNTING TYPE — ALL / X|XX / UNO — LAMP TYPE AND NUMBER TO DIFFERENTIATE LUMINAIRE E-DESIGNATES FIXTURE WITH EMERGENCY BALLAST

FLUORESCENT FIXTURES WITH AN 'E' DESIGNATION ARE TO BE SUPPLIED WITH BODINE 90 MINUTE EMERGENCY BATTERY PACK (OR

ELECTRICAL DEVICE SYMBOLS
see electrical specifications for further information

- DUAL LEVEL SWITCHING, INSIDE AND OUTSIDE LAMPS OF FIXTURE TO BE SWITCHED SEPARATELY.
- SINGLE RECEPTACLE. MOUNT AT +18" AFF UNLESS OTHERWISE NOTED.
- SINGLE RECEPTACLE. MOUNTED IN FLOOR. TYPE OF BOX AS INDICATED.
- DUPLEX RECEPTACLE. MOUNT AT +18" AFF UNLESS OTHERWISE NOTED.
  - C CEILING MOUNTED
- DUPLEX RECEPTACLE, HALF OF RECEPTACLE SHALL BE SWITCHED. MOUNT AT +18" AFF UNLESS NOTED OTHERWISE.
- DUPLEX RECEPTACLE. MOUNTED IN FLOOR. TYPE OF BOX AS INDICATED.
- FOURPLEX RECEPTACLE. MOUNT AT +18" AFF UNLESS OTHERWISE NOTED.
- FOURPLEX RECEPTACLE. MOUNTED IN FLOOR. TYPE OF BOX AS INDICATED.
- $ — SWITCH SUBSCRIPT INDICATES TYPE OF SWITCH. MOUNT AT +46" AFF UNLESS NOTED OTHERWISE
  - D DIMMER
  - K KEYED
  - LV LOW VOLTAGE
  - M MOMENTARY CONTACT
  - OV OVERRIDE
  - OC OCCUPANCY SENSOR; SEE DRAWINGS FOR ADDITIONAL INFORMATION. FOR 2-POLE, LINE VOLTAGE OCCUPANCY SENSOR, FURNISH AND INSTALL DUAL LEVEL SWITCHING. SENSORS EQUAL IN WATTSTOPPER AND SENSOR SWITCH.
  - P PILOT LIGHT
  - TO THERMAL OVERLOAD (THE NUMBER OF POLES TO MATCH CIRCUIT REQUIREMENTS AND BE SIZED FOR ASSOCIATED MOTOR LOAD.)
  - 2 DOUBLE POLE
  - 3 THREE WAY
  - 4 FOUR WAY
  - a SUPERSCRIPT INDICATES LIGHTS TO BE SWITCHED
- MOTOR STARTER/CONTACTOR TO BE NEMA 1 UNLESS NOTED OTHERWISE. SIZE AND TYPE AS INDICATED ON DRAWING.
- COMBINATION MOTOR STARTER AND DISCONNECT TO BE NEMA 1 UNLESS NOTED OTHERWISE. SIZE AND TYPE AS INDICATED ON DRAWING.
- FUSED DISCONNECT SWITCH TO BE NEMA 1 UNLESS NOTED OTHERWISE. SIZE AND POLES AS INDICATED.
- NON-FUSED DISCONNECT SWITCH TO BE NEMA 1 UNLESS NOTED OTHERWISE. SIZE AND POLES AS INDICATED.
- THERMOSTAT MOUNTED AT +48" AFF UNLESS NOTED OTHERWISE. MECHANICAL UNIT TO BE CONTROLLED AS INDICATED
- AQUASTAT
- EQUIPMENT CONNECTION POINT. VERIFY TYPE OF CONNECTION WITH EQUIPMENT SUPPLIER. DIVISION 16 TO SUPPLY ALL RACEWAY AND CONDUCTORS UNLESS NOTED OTHERWISE
- EQUIPMENT CONNECTION POINT MOUNTED IN FLOOR. TYPE OF BOX AS INDICATED. VERIFY TYPE OF CONNECTION WITH EQUIPMENT SUPPLIER. DIVISION 16 TO SUPPLY ALL RACEWAY AND CONDUCTORS UNLESS NOTED OTHERWISE
- GROUND ROD; 5/8" BY 10' MINIMUM, COPPER-CLAD
- JUNCTION BOX
- WALL MOUNTED PUSHBUTTON. MOUNT AT +46" AFF UNLESS NOTED OTHERWISE
- 3 BUTTON DOOR CONTROLLER
- 2 BUTTON DOOR CONTROLLER
- T — TRANSFORMER. SIZE AND TYPE AS INDICATED
- $/TO/M — MOTOR WITH THERMAL OVERLOAD
- M — MOTOR
- PANELBOARD. SEE ELECTRICAL SCHEDULES FOR TYPE, SIZE AND MOUNTING
- EQUIPMENT CABINET, SURFACE MOUNTED
- EQUIPMENT CABINET, FLUSH MOUNTED
- WALL MOUNTED CIRCUIT BREAKER. TYPE AND SIZE AS INDICATED
- WM / PM — RACEWAY MOUNT RECEPTACLES AS SHOWN. MOUNTING OF RACEWAY AS INDICATED
- # / # — MECHANICAL EQUIPMENT CALL OUT

ONE LINE SYMBOLS
see electrical specifications for further information

- ATS / #A / #P — AUTOMATIC TRANSFER SWITCH, SIZE AND POLES AS INDICATED ON DRAWING
- #A / #P — CIRCUIT BREAKER; SIZE AND POLES AS INDICATED ON DRAWING
- PANEL — PANELBOARD; NAME, SIZE, TYPE AS INDICATED ON DRAWINGS
- PAD MOUNTED TRANSFORMER BY LOCAL UTILITY
- METER
- GROUND BAR
- S — SECTOR SWITCH

SPECIAL SYSTEMS SYMBOLS
see electrical specifications for further information

- TELEPHONE/DATA OUTLET, +18" AFF UNO, FOUR-SQUARE DEEP TYPE BOX WITH SINGLE OR DOUBLE GANG MUDRING AS REQUIRED PER NUMBER OF DROPS
  TELEPHONE/DATA OUTLET, +18" AFF UNO, FOUR-SQUARE DEEP TYPE BOX WITH SINGLE GANG MUDRING
  C - INDICATES MOUNTED IN CEILING TILE
  M - INDICATED MICROPHONE INPUT
  W - INDICATES MOUNTED ABOVE ACCESSIBLE CEILING
  #T/#D - # INDICATES NUMBER OF TELEPHONE/DATA
- #D,#T — 1"CONDUIT TO ABOVE ACCESSIBLE CEILING OR TO TTB AS NOTED.
  (TYPICAL NUMBER OR PORTS AND ASSOCIATED CONDUCTORS) BLANK IMPLIES EMPTY RACEWAY WITH COVERPLATE
- FLOOR MOUNTED TELEPHONE/DATA OUTLET
- IC — CONDUCTORS INTERCOM
- M — SOUND SYSTEM MICROPHONE INPUT.
- S — CEILING MOUNTED SPEAKER WITH BACKBOX
- W — WALL MOUNTED SPEAKER, WITH BACKBOX +80" UNO
- S — SURFACE/WALL MOUNTED HORN TYPE SPEAKER
- VOLUME CONTROL, MOUNT AT SWITCH HEIGHT UNO
- TELEVISION OUTLET, +18" AFF UNO
- TV — CEILING MOUNTED TELEVISION OUTLET
- PA — PUBLIC ADDRESS SYSTEM, PUSH TO TALK
- CS — PUBLIC ADDRESS SYSTEM, WALL MOUNTED DIGITAL CLOCK WITH SPEAKER COMBO MOUNTED AT 8 1/2" ABOVE ROOM WHITEBOARD.
- C — PUBLIC ADDRESS SYSTEM, WALL MOUTED DIGITAL CLOCK

CIRCUITING SYMBOLS
see electrical specifications for further information

- NEUTRAL
- ISOLATED GROUND
- GROUNDING CONDUCTOR
- CURRENT CARRYING CONDUCTORS
- A-2,4,6 3/4" MIN. PANEL HOMERUN
- EM — EMERGENCY POWER SOURCE
- CIRCUIT CONCEALED IN WALL OR CEILING TYPICALLY TO BE 3#12-1#12G,3/4"C (UNO)
- CONDUIT SIZE
- QUANTITY AND SIZE OF CONDUCTORS
- QUANTITY AND SIZE OF GROUNDING CONDUCTOR
- 2 — BEGINNING OF CIRCUIT AND NUMBER OF CIRCUIT
- CONDUIT UP
- CONDUIT DOWN
- UNDERGROUND OR CONCEALED CONDUIT
- EXISTING CONDUIT
- CONDUIT STUBBED, CAPPED, MARKED, AND PROVIDED WITH PULLSTRING
- FUTURE CONDUIT

LINE TYPES

- EXISTING
- DEMOLITION
- FUTURE
- NEW

ELECTRICAL DRAWING SHEET INDEX

E0.0	ELECTRICAL SYMBOLS AND SHEET INDEX
E2.0	OVERALL ELECTRICAL PLAN
E2.1	CAR WASH LIGHTING AND POWER PLANS
E3.0	ONE LINE DIAGRAM AND ELECTRICAL SCHEDULES
E4.0	ELECTRICAL SPECIFICATIONS
E4.1	ELECTRICAL SPECIFICATIONS
E4.2	ELECTRICAL SPECIFICATIONS

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH

Lewiston Idaho

ELECTRICAL SYMBOLS LIST AND SHEET INDEX

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DRAWN BY: SM/MG
CHECKED BY: JVS
DATE: 06/05/08
JOB NO.: 080429
REVISION DATE:

KEYED NOTES:

1 EXISTING 'MSB' INSTALLED IN PHASE 1. FIELD VERIFY EXACT LOCATION.

2 NEW PANEL FOR CAR WASH; SEE ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.

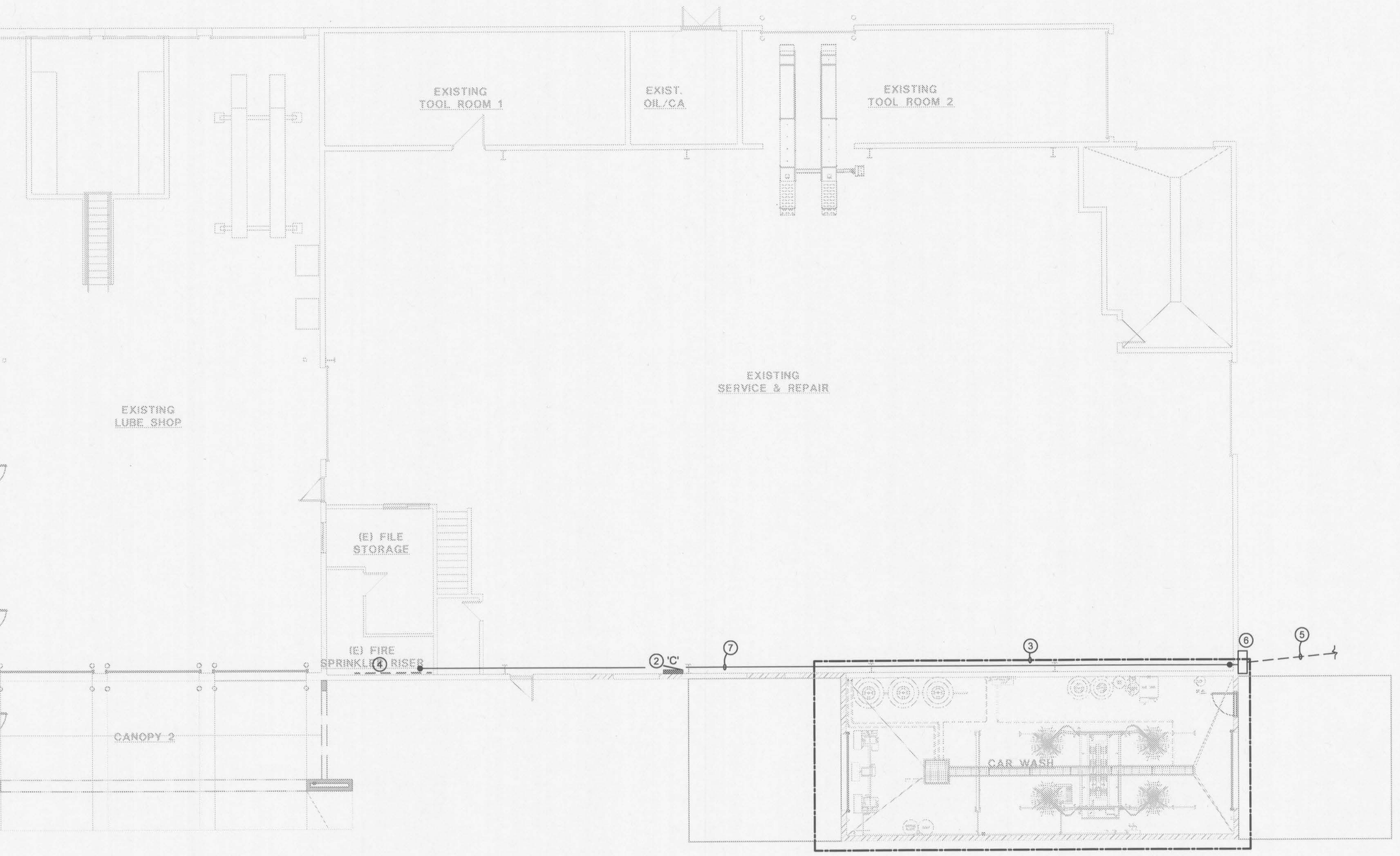
3 NEW CARWASH; SEE DRAWING FOR ADDITIONAL INFORMATION.

4 EXISTING TELEPHONE TERMINAL BOARD.

5 EXISTING 2" COMMUNICATIONS CONDUIT TO COLLISION CENTER TO BE RE-ROUTED AND EXTENDED AS REQUIRED. ELECTRICAL CONTRACTOR SHALL UTILIZE EXISTING CABLING IF POSSIBLE, OTHERWISE ELECTRICAL CONTRACTOR SHALL PROVIDE NEW CABLING FROM COLLISION CENTER TO TTB TO MAINTAIN ORIGINAL FUNCTIONALITY. CABLING SHALL BE EQUAL TO OR BETTER THAN EXISTING CABLE(S) FIELD VERIFY EXISTING CABLING.

6 ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 3R ELECTRICAL PULL BOX AT +18" AFG SIZED AS REQUIRED BASED ON EXISTING CABLING.

7 ELECTRICAL CONTRACTOR SHALL PROVIDE 2" CONDUIT FROM PULL BOX TO A MINIMUM OF 12FT AFF AND ROUTE CONDUIT AND CONDUCTORS TO EXISTING TTB FOR RECONNECTION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY CONDUIT ROUTING IN EXISTING SERVICE AND REPAIR SHOP WITH EXISTING CONDITIONS.



ROGERS MOTORS DEALERSHIP ADDITION
PHASE 2: CAR WASH

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OVERALL ELECTRICAL PLAN

OVERALL ELECTRICAL PLAN

0"

N

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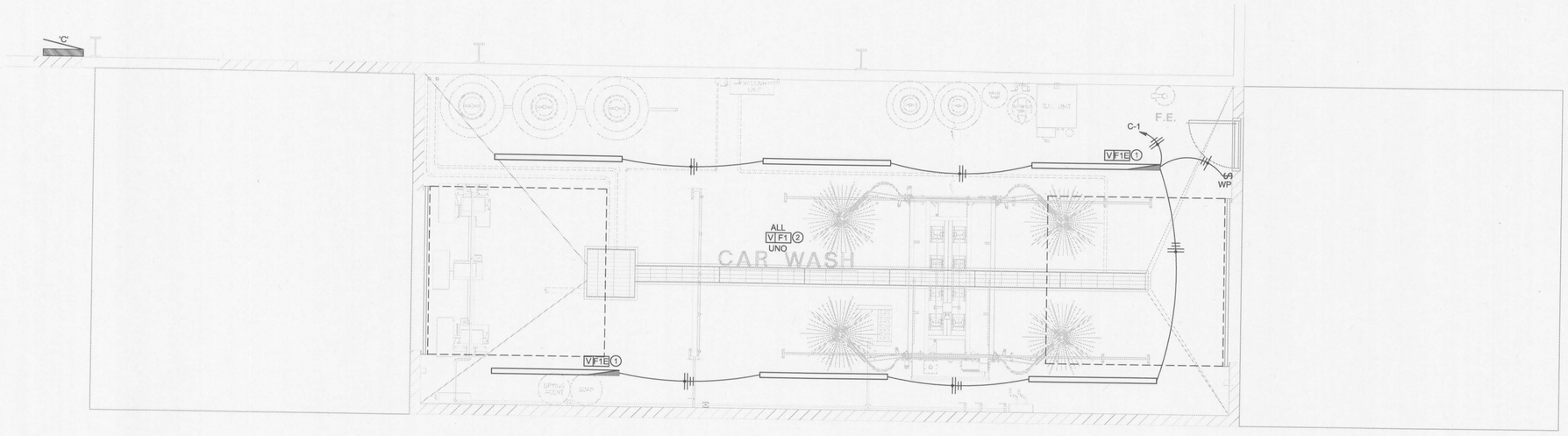
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LIGHTING PLAN - CAR WASH

1/4" = 1'-0"

LIGHTING PLAN GENERAL NOTES:

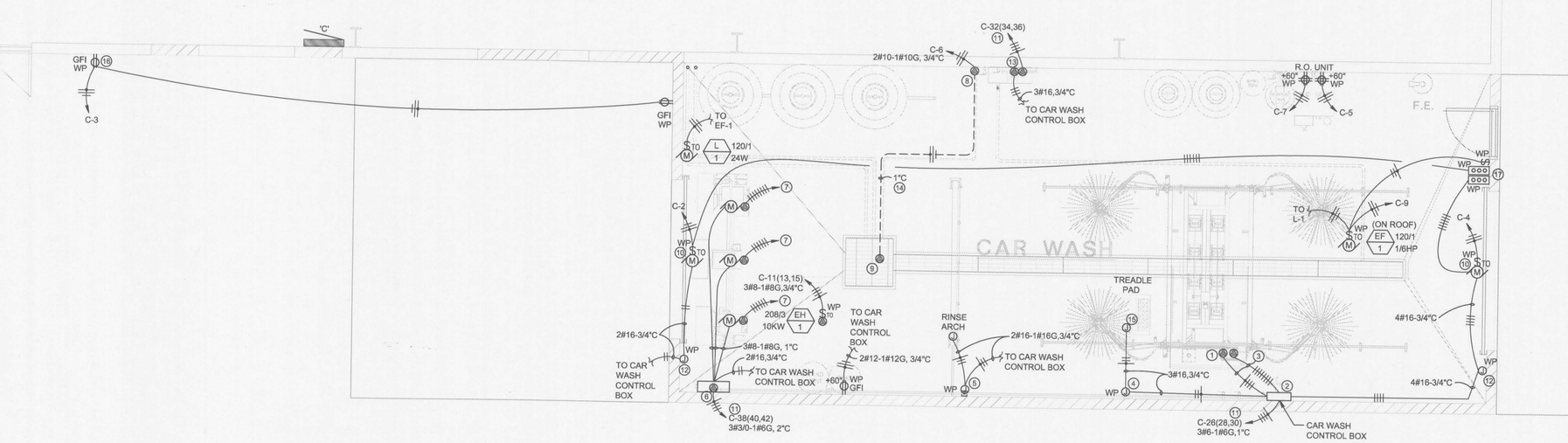
1 ALL EMERGENCY FIXTURES SHALL BE PROVIDED WITH AN EMERGENCY BATTERY PACK AS SPECIFIED ON THE FIXTURE SCHEDULE AND THE EMERGENCY FIXTURE SHALL BE PROVIDED WITH AND UNSWITCHED LEG THAT SHALL BE CONNECTED TO THE EMERGENCY BATTERY PACK.

2 ALL CONDUITS UTILIZED WITHIN CARWASH SHALL BE PVC AND ALL CONNECTIONS TO JUNCTION BOX, DISCONNECTS AND ETC. SHALL BE GASKETED. ALL JUNCTION BOXES, DISCONNECTS ETC. INSTALLED IN CARWASH AREA SHALL BE NEMA 4X RATED.

LIGHTING PLAN KEYED NOTES: (#)

1 CONNECT BATTERY PACK TO UNSWITCH LEG OF LIGHTING CIRCUIT.

2 ELECTRICAL CONTRACTOR COORDINATE PLACEMENT OF FIXTURE WITH CAR WASH EQUIPMENT AND PIPING PRIOR TO ROUGH-IN.



POWER PLAN - CAR WASH

1/4" = 1'-0"

POWER PLAN GENERAL NOTES:

1 ALL CONDUITS UTILIZED WITHIN CARWASH SHALL BE PVC AND ALL CONNECTIONS TO JUNCTION BOX, DISCONNECTS AND ETC. SHALL BE GASKETED. ALL JUNCTION BOXES, DISCONNECTS ETC. INSTALLED IN CARWASH AREA SHALL BE NEMA 4X RATED.

2 CONTRACTOR SHALL COORDINATE INSTALLATION AND ELECTRICAL REQUIREMENTS OF CAR WASH EQUIPMENT WITH CAR WASH DRAWINGS AND SUPPLIER PRIOR TO ROUGH-IN.

POWER PLAN KEYED NOTES: (#)

1 CAR WASH CONTROL BOX WITH INTERNAL DISCONNECT SWITCH FOR POWER TO THE CAR WASH AND TERMINALS FOR CONTROL WIRING. CAR WASH CONTROL BOX PROVIDED BY CAR WASH EQUIPMENT SUPPLIER AND INSTALLED BY THE CONTRACTOR PER DIVISION 16.

2 PROVIDE AND INSTALL 12"x12"x6" NEMA 4X JUNCTION BOX WITH SCREW COVER POSITIONED 8'-0" FROM THE ENTRANCE END OF TRACK AS CLOSE TO CEILING AS POSSIBLE.

3 (2) S.O. CORDS TO LOOP CONNECT FROM JUNCTION BOX TO ROLLOVER CAR WASH. (1) CORD FOR 3Ø WIRING TO CONNECT TO CONTACTORS INSIDE CAR WASH CONTROL BOX AND (1) CORD FOR CONTROL WIRING TO CONNECT TO TERMINALS INSIDE CAR WASH CONTROL BOX. S.O. CORDS PROVIDED BY CAR WASH EQUIPMENT SUPPLIER AND INSTALLED BY THE CONTRACTOR PER DIVISION 16.

4 PROVIDE AND INSTALL 4"x4" NEMA 4X SPLICE BOX POSITIONED 5'-5" FROM EXIT END OF TRACK AND 2'-0" A.F.F.

5 PROVIDE AND INSTALL 4"x4" NEMA 4X SPLICE BOX POSITIONED NEXT TO RINSE ARCH AND 10'-0" A.F.F. 2#16-1#16G IN 3/4"C FROM RINSE ARCH FOR CONTROL OF RINSE ARCH.

6 CONNECTION TO BLOWER CONTROL PANEL MOUNTED 4'-0" A.F.F. BLOWER CONTROL BOX CONTAINS AN INTERNAL 3Ø DISCONNECT SWITCH FOR POWER TO BLOWERS. BLOWER CONTROL BOX PROVIDED BY CAR WASH EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR PER DIVISION 16.

7 PROVIDE AND INSTALL (1) 1" CONDUIT AND CONDUCTORS TO BLOWER CONTROL PANEL, COORDINATE SIZE AND NUMBER OF CONDUCTORS WITH CAR WASH EQUIPMENT SUPPLIER. ALSO PROVIDE (1) 1" CONDUIT WITH 4#16-1#16G TO OSCILLATING MOTOR.

8 CONNECTION FOR SUMP PUMP ON/OFF SWITCH; COORDINATE CONNECTION TYPE AND EXACT LOCATION WITH CAR WASH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.

9 CONNECTION FOR SUMP PUMP PROVIDED BY CAR WASH EQUIPMENT SUPPLIER; COORDINATE CONNECTION TYPE AND EXACT LOCATION WITH CAR WASH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.

10 CONNECTION FOR CAR WASH OVERHEAD DOOR MOTOR SHALL BE COORDINATED BY THE CONTRACTOR. LOCATION OF OVERHEAD DOOR CONTROLS IS SHOWN ON DRAWING.

11 PROVIDE BREAKER WITH LOCK-OUT CAPABILITIES.

12 PROVIDE CONDUIT, CONDUCTORS AND CONNECTION TO GARAGE DOOR FOR CONTROL OF DOOR; COORDINATE WITH CAR WASH EQUIPMENT PROVIDER.

13 CONNECTION TO RECLAIM UNIT; COORDINATE CONNECTION WITH CAR WASH EQUIPMENT SUPPLIER.

14 CONDUIT SHALL BE ROUTED BELOW SLAB; COORDINATE WITH CAR WASH EQUIPMENT SUPPLIER.

15 CONNECTION TO FLOOR MOUNTED TREADLE PAD; COORDINATE EXACT LOCATION WITH CAR WASH EQUIPMENT SUPPLIER.

16 ELECTRICAL CONTRACTOR TO ROUTE CONDUIT AND CONDUCTORS ON INTERIOR WALL AND DRILL THROUGH WALL FOR RECEPTACLE, EXPOSED E> IS NOT ALLOWED.

17 ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4 3-BUTTON OVERHEAD DOOR CONTROLLERS AND ASSOCIATED CC COORDINATE WITH OVERHEAD DOOR EQUIPMENT SUPPLIER.

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ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho

CAR WASH ELECTRICAL PLANS

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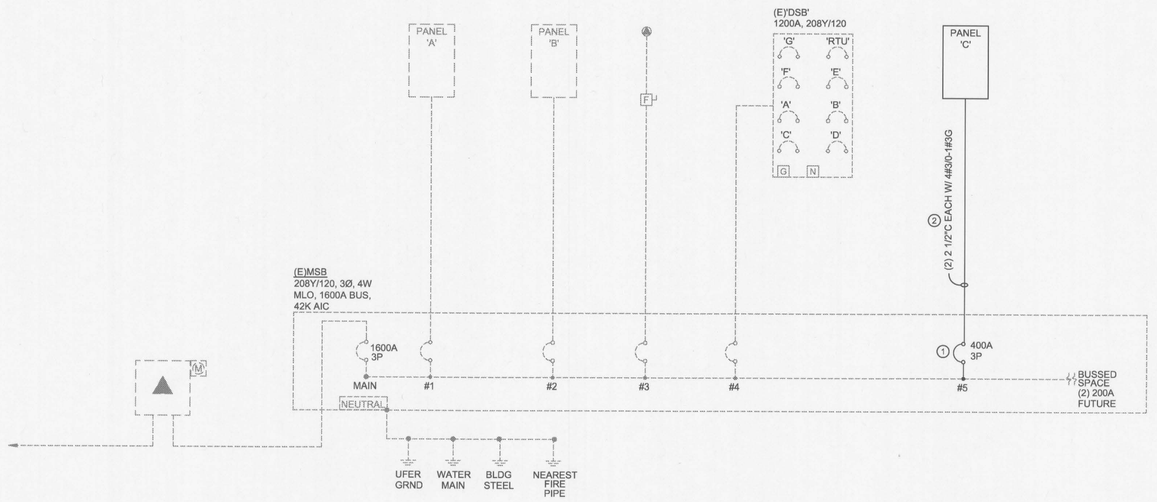
SHEET: E2.1

PANEL: C			PROJECT: ROGERS MOTORS - CAR WASH ADDITION							ENCLOSURE TYPE: NEMA 1									
VOLTAGE: 208Y/120			PHASE: 3			WIRE: 4			AMPERE RATING: 400 AMPS			SC RATING: 10000 AIC						
ENTRY: TOP/BOTTOM									TYPE: MLO			MOUNTING: SURFACE						
REMARKS: IF CONTRACTOR UTILIZES MULTIWIRE BRANCH CIRCUITS THEN CONTRACTOR SHALL PROVIDE BREAKER TIES SO THAT ALL UNGROUNDED CONDUCTORS ARE SIMULTANEOUSLY DISCONNECTED PER SECTION 210.4(B) OF THE NEC																			
CKT NO.	DESCRIPTION	AMPS/ POLES		LOAD W	LOAD AMPS	WIRE SIZE	PHASE (W) A	PHASE (W) B	PHASE (W) C	WIRE SIZE	LOAD AMPS	LOAD W	AMPS/ POLES		DESCRIPTION	CKT NO.
1	LTG - CAR WASH	20	1	1512	12.6	12	2688			12	9.8	1176	20	1	EXIT DOOR	2
3	REC - EXTERIOR	20	1	360	3.0	12		1536		12	9.8	1176	20	1	ENTRY DOOR	4
5	RO UNIT	20	1	360	3.0	12			2760	10	20.0	2400	30	1	SUMP PUMP	6
7	RO UNIT	20	1	360	3.0	12	360			12	0.0		20	1	SPARE	8
9	EF-1	20	1	528	4.4	12		528		12	0.0		20	1	SPARE	10
11	EH-1	40	3	3324	27.7	8			3324	12	0.0		20	1	SPARE	12
13	**	40	*	3324	27.7	8	3324			12	0.0		20	1	SPARE	14
15	**	40	*	3324	27.7	8		3324		12	0.0		20	1	SPARE	16
17	SPARE	20	1		0.0	12			0	12	0.0		20	1	SPARE	18
19	SPARE	20	1		0.0	12	0			12	0.0		20	1	SPARE	20
21	SPARE	20	1		0.0	12		0		12	0.0		20	1	SPARE	22
23	SPARE	20	1		0.0	12			0	12	0.0		20	1	SPARE	24
25	SPARE	20	1		0.0	12	5400			6	45.0	5400	60	3	CARWASH	26
27	SPARE	20	1		0.0	12		5400		6	45.0	5400	60	*	**	28
29	SPARE	20	1		0.0	12			5400	6	45.0	5400	60	*	**	30
31	SPARE	20	1		0.0	12	1680			12	14.0	1680	20	3	RECLAIM UNIT	32
33	BLANK				0.0	#N/A		1680		12	14.0	1680	20	*	**	34
35	BLANK				0.0	#N/A			1680	12	14.0	1680	20	*	**	36
37	SPACE FOR 200A BREAKER				0.0	#N/A	17400			3/0	145.0	17400	200	3	BLOWER MOTORS	38
39	SPACE FOR 200A BREAKER				0.0	#N/A		17400		3/0	145.0	17400	200	*	**	40
41	SPACE FOR 200A BREAKER				0.0	#N/A			17400	3/0	145.0	17400	200	*	**	42
	CONNECTED LOAD - TOTAL KW			91	KW		30852	29868	30564							
	CONNECTED LOAD - TOTAL AMPS			253	AMPS		257	249	255							
	DEMAND LOAD - TOTAL KW			91	KW											
	DEMAND LOAD - TOTAL AMPS			253	AMPS											

KEYED NOTES:

1 CONTRACTOR SHALL PROVIDE AND INSTALL NEW BREAKER SIZE AS INDICATED IN EXISTING 'MSB'. CONTRACTOR SHALL MODIFY EQUIPMENT AS REQUIRED.

2 CONTRACTOR SHALL FIELD VERIFY CONDUIT ROUTING THROUGH EXISTING BUILDING TO AVOID CONFLICTS WITH EXISTING CONDITIONS. CONTRACTOR SHALL PROVIDE PULL BOXES AS REQUIRED. MAINTAIN FIRE RATING OF ALL PENETRATION THROUGH FIRE RATED ASSEMBLY'S.



ONE LINE DIAGRAM

COM*check* Software Version 3.5.2

Interior Lighting Compliance Certificate

2006 IECC

Report Date: 06/19/08

Data filename: S:\ Project Directory\ Current projects\ 08065 Rogers Motors Car Wash Addition\ docs\ 08065_COMCHECK.cck

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: General Information

Building Use Description by: **Activity Type**

Activity Type(s)	**Floor Area**
Automotive Facility	1048

Section 3: Requirements Checklist

Interior Lighting:

☐ 1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
943	744	YES

Controls, Switching, and Wiring:

☐ 2. Independent controls for each space (switch/occupancy sensor).
Exceptions:
Areas designated as security or emergency areas that must be continuously illuminated.
Lighting in stairways or corridors that are elements of the means of egress.

☐ 3. Master switch at entry to hotel/motel guest room.

☐ 4. Individual dwelling units separately metered.

☐ 5. Each space provided with a manual control to provide uniform light reduction by at least 50%.
Exceptions:
Only one luminaire in space;
An occupant-sensing device controls the area;
The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
Areas that use less than 0.6 Watts/sq.ft.

☐ 6. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.
Exceptions:
Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.

☐ 7. Photocell/astronomical time switch on exterior lights.
Exceptions:
Lighting intended for 24 hour use.

☐ 8. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).
Exceptions:
Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2006 IECC requirements in COM*check* Version 3.5.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

COM*check* Software Version 3.5.2

Interior Lighting Application Worksheet

2006 IECC

Report Date:

Data filename: S:\ Project Directory\ Current projects\ 08065 Rogers Motors Car Wash Addition\ docs\ 08065_COMCHECK.cck

Section 1: Allowed Lighting Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Automotive Facility	1048	0.9	943
Total Allowed Watts =			943

Section 2: Proposed Lighting Power Calculation

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Automotive Facility (1048 sq.ft.)				
Linear Fluorescent 1: VF1/VF1E: SURFACE FLUORESCENT / 48" T8 32W / Electronic	4	6	124	744
Total Proposed Watts =				744

Section 3: Compliance Calculation

If the Total Allowed Watts minus the Total Proposed Watts is greater than or equal to zero, the building complies.

Total Allowed Watts =	943
Total Proposed Watts =	744
Project Compliance =	199

Interior Lighting PASSES: Design 21% better than code.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	MOUNTING	LAMPS	VOLTAGE	REMARKS
VF1	VAPOR PROOF FLUORESCENT, 1X8, 4-LAMPS UL LISTED FOR WET LOCATION	LSI NO.	EG3-2-32-SSO10-WL-UE	CEILING SURFACE	(4) 32W T8 3500K	120/277	2
VF1E	VAPOR PROOF FLUORESCENT, 1X8, 4-LAMPS UL LISTED FOR WET LOCATION EMERGENCY BALLAST	LSI NO.	EG3-2-32-SSO10-WL-UE	CEILING SURFACE	(4) 32W T8 3500K	120/277	2,4

REMARKS

1. PROVIDE DUAL BALLASTS FOR DUAL LEVEL SWITCHING
2. OR PRE-BID APPROVED EQUAL
3. PROVIDE WITH 35W QUARTZ BAYONETTE STYLE LAMP FOR EMERGENCY LIGHTING
4. PROVIDE WITH BODINE EMERGENCY BATTERY PACK SUITABLE FOR LAMP TYPE AND HALF THE LAMP LUMEN OUTPUT, PROVIDE WITH SELF TEST LIGHT AND PUSHBUTTON.

NOTE TO BIDDERS:

1. BID ONLY PRODUCTS THAT ARE SPECIFIED OR APPORVED VIA ADDENDUM. SUBMITTED ITEMS NOR APPROVED VIA ADDENDUM WILL BE REJECTED
2. PACKAGING OF LIGHT FIXTURES WITH OTHER SYSTEMS IS NOT ALLOWED
3. WHEN ONLY ONE PRODUCT IS APPROVED FOR BIDDING, THE PRICE FOR THAT ITEM SHALL BE BROKEN OUT SEPERATELY WHEN SUBMITTING PRICING TO THE VARIOUS DISTRIBUTORS AND/OR CONTRACTORS AS REQUESTED.
4. OSRAM, ADVANCED, UNIVERSAL, LUTRON BALLASTS ARE APPROVED. OTHER MUST BE PRE-BID APPROVED.

ONE LINE DIAGRAM AND ELECTRICAL SCHEDULES

NOT TO SCALE

Bott & Associates
ARCHITECTS
LEWISTON
0309 2nd Street Lewiston, Idaho 83501
Ph: (208) 746-9871 Fax: (208) 746-3523
COTTONWOOD
402-B King Street Cottonwood, Idaho 83522
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PROFESSIONAL ENGINEER REGISTERED 13053 STATE OF IDAHO SHAWN A. MEADOR

e2eco electricalengineeringcompany
engineering4tomorrow
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boise, idaho 83704
phone: 208.378.4450
fax: 208.378.4451
e2co project #: 08065

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho
ONE LINE DIAGRAM AND ELECTRICAL SCHEDULES

DRAWN BY: SM/MG
CHECKED BY: JVS
DATE: 06/05/08
JOB NO.: 080429
REVISION DATE:

SHEET: E3.0

SECTION 16010 - ELECTRICAL GENERAL PROVISIONS
PART 1 - GENERAL
1.1 CONDITIONS AND REQUIREMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
B. Provisions of this Section shall apply to all Sections of Division 16.
1.2 SCOPE OF WORK
A. Furnish and install all materials and equipment and provide all labor required and necessary to complete the work shown on the drawings and/or specified in all Sections of Division 16 and all other work and miscellaneous items, not specifically mentioned, but reasonably inferred for a complete installation, including all accessories required for testing the system. It is the intent of the drawings and specifications that all systems be complete and ready for operation.
1.3 CODE COMPLIANCE
A. All work and materials shall comply with the latest rules, codes and regulations, including, but not limited to, the following:
1. Occupational Safety and Health Act Standards (OSHA)
2. NFPA #70 - National Electric Code (NEC)
3. ADA Standards - Americans with Disabilities Act
4. ANSI/IEEE C-2 - National Electrical Safety Code
5. NECA - Standard of Installation
6. International Building Code
7. International Fire Code
8. International Energy Code
9. NFPA #72 - Fire Code
10. NFPA #101 - Life Safety Code
11. All other applicable Federal, State and local laws and regulations.
B. Work to be executed and inspected in accordance with local codes and ordinances. Permits, fees or charges for inspection or other services shall be paid for by the contractor. Local codes and ordinances are to be considered as minimum requirements and must be properly executed without expense to the owner; but do not relieve the contractor from work shown that exceeds minimum requirements.
1.4 CONDITIONS AT SITE
A. Visit to site is required of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.
B. Lines of other service that are damaged as a result of this work shall be promptly repaired at no expense to the owner to the complete satisfaction of the owner.
1.5 DRAWINGS AND SPECIFICATIONS
A. All drawings and all specifications shall be considered as a whole and work of this Division shown anywhere therein shall be furnished under this Division.
B. Drawings are diagrammatic and indicate the general arrangement of equipment and wiring. Most direct routing of conduits and wiring is not assured. Exact requirements shall be governed by architectural, structural and mechanical conditions of the job. Consult all other drawings in preparation of the bid. Extra lengths of wiring or addition of pull or junction boxes, etc., necessitated by such conditions shall be included in the bid. Check all information and report any apparent discrepancies before submitting bid.
1.6 SAFETY AND INDEMNITY
A. Safety: The contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours.
B. No act, service, drawing review or construction review by the owner is intended to include review of the adequacy of the contractor's safety measures in, on, or near the construction site.
1.7 PROJECT COMPLETION
A. Upon completion of all work and operational checks on all systems, the contractor shall request that a final construction observation be performed.
B. The engineer shall compile a punch list of items to be completed or corrected. The contractor shall notify the engineer upon completion of the items.
1.8 GUARANTEE
A. All work under this section shall be guaranteed in writing to be free of defective work, materials, or parts for a period of one (1) year, except lamps, which shall be guaranteed for thirty (30) days after final acceptance of the work under the contract.
B. Repair, revision or replacement of any and all defects, failure or inoperativeness shall be done by the contractor at no cost to the owner.
PART 2 - PRODUCTS
2.1 MATERIAL APPROVAL
A. The design, manufacturer and testing of electrical equipment and materials shall conform to or exceed latest applicable NEMA, IEEE or ANSI standards.
B. All materials must be new and UL listed. Materials that are not covered by UL testing standards shall be tested and approved by an independent testing laboratory or a governmental agency, which laboratory shall be acceptable to the owner and code enforcing agency.
2.2 SHOP DRAWINGS AND MATERIALS LIST
A. Submit shop drawings and materials lists as specified for review. Four (4) copies of submittals shall be presented to the owner.
2.3 OPERATION AND MAINTENANCE MANUALS
A. Submit four (4) sets of Operation and Maintenance Manuals of equipment to owner.
2.4 RECORD DRAWINGS
A. Submit record drawings to owner.
PART 3 - EXECUTION
3.1 COORDINATION
A. Coordinate work with other trades to avoid conflict and to provide correct rough-in and connection for equipment furnished under trades that require electrical connections. Inform contractors of other trades of the required access to and clearances around electrical equipment to maintain serviceability and code compliance.
B. Verify equipment dimensions and requirements with provisions specified under this Section. Check actual job conditions before fabricating work. Report necessary changes in time to prevent needless work. Changes or additions subject to additional compensation, which are made without the authorization of the owner, shall be at contractor's risk and expense.
3.2 MANUFACTURER'S INSTRUCTIONS
A. Where the specifications call for an installation to be made in accordance with manufacturer's recommendations, a copy of such recommendations shall at all times be kept in the job superintendent's office and shall be available to the owner.
B. Follow manufacturer's instructions where they cover points not specifically indicated on drawings and specifications. If they are in conflict with the drawings and specifications obtain clarification from the owner before starting work.
3.3 QUALITY ASSURANCE
A. The contractor shall insure that all workmanship, all materials employed, all required equipment and the manner and method of installation conforms to accepted construction and engineering practices, and that each piece of equipment is in satisfactory working condition to satisfactorily perform its functional operation.
B. Provide quality assurance tests and operational check on all components of the electrical distribution system, all lighting fixtures, and special systems.
3.4 CUTTING AND PATCHING
A. Perform all cutting and fittings required for work of this section in rough construction of the building.
B. All patching of finished construction of building shall be performed under the sections of specifications covering these materials.
C. No joists, beams, girders or columns shall be cut by any contractor without obtaining written permission from the owner.
END OF SECTION 16010

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 COORDINATION
A. Coordinate arrangement, mounting, and support of electrical equipment:
1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
3. To allow right of way for piping and conduit installed at required slope.
4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.
PART 2 - PRODUCTS
2.1 MANUFACTURERS
A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are
not limited to, manufacturers specified.
PART 3 - EXECUTION
3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION
A. Comply with NECA 1.
B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible
headroom consistent with these requirements.
D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations.
Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
E. Right of Way: Give to raceways and piping systems installed at a required slope.
F. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials.
G. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
3.2 FIRESTOPPING
A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly.
3.3 FIELD QUALITY CONTROL
A. Inspect installed sleeve and sleeve-seal installations and associated firestopping for damage and faulty work.

END OF SECTION 16050

SECTION 16060 - GROUNDING AND BONDING
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 SUMMARY
1. This Section includes methods and materials for grounding systems and equipment.
1.3 QUALITY ASSURANCE
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
B. Comply with UL 467 for grounding and bonding materials and equipment.
PART 2 - PRODUCTS
2.1 CONDUCTORS
A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
B. Bare Copper Conductors:
1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor,1/4 inch in diameter.
4. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
5. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
2.2 CONNECTORS
A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type,with at least two bolts.
1. Pipe Connectors: Clamp type, sized for pipe.
C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
2.3 GROUNDING ELECTRODES
A. Ground Rods: Copper-clad steel; 5/8 by 120 inches in diameter.
PART 3 - EXECUTION
3.1 APPLICATIONS
A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.
B. Grounding Bus: Install in electrical and telephone equipment rooms, in rooms housing service equipment, and elsewhere as indicated.
1. Install bus on insulated spacers 1 inch, minimum, from wall 6 inches above finished floor, unless otherwise indicated.
2. Where indicated on both sides of doorways, route bus up to top of door frame, across top of doorway, down to specified height above floor, and connect to horizontal bus.
C. Conductor Terminations and Connections:
1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors, except at test wells and as otherwise indicated.
3. Connections to Ground Rods at Test Wells: Bolted connectors.
4. Connections to Structural Steel: Welded connectors.
3.2 EQUIPMENT GROUNDING
A. Install insulated equipment grounding conductors with all feeders and branch circuits.
B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
1. Feeders and branch circuits.
2. Lighting circuits.
3. Receptacle circuits.
4. Single-phase motor and appliance branch circuits.
5. Three-phase motor and appliance branch circuits.
6. Flexible raceway runs.
7. Armored and metal-clad cable runs.
8. Busway Supply Circuits: Install insulated equipment grounding conductor from grounding bus in the switchgear, switchboard, or distribution panel to equipment grounding bar terminal on busway.
9. Computer and Rack-Mounted Electronic Equipment Circuits: Install insulated equipment grounding conductor in branch-circuit runs from equipment-area power panels and power-distribution units.
10. X-Ray Equipment Circuits: Install insulated equipment grounding conductor in circuits supplying x-ray equipment.
C. Air-Duct Equipment Circuits: Install insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners, heaters, dampers, humidifiers, and other duct electrical equipment. Bond conductor to each unit and to air duct and connected metallic piping.
D. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install a separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.
E. Signal and Communication Equipment: For telephone, alarm, voice and data, and other communication equipment, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.
1. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-2-by-12-inch grounding bus.
2. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.
3.3 INSTALLATION
A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing
access or placing conductors where they may be subjected to strain, impact, or damage.
B. Ground Rods: Drive rods until tops are 24 inches (50 mm) below finished floor or final grade,unless otherwise indicated on drawings.
1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing
steel or damaging coating, if any.
2. For grounding electrode system, install at least three rods spaced at least one-rod length from each other and located at least the same distance
from other grounding electrodes, and connect to the service grounding electrode conductor.
C. Test Wells: Ground rod driven through drilled hole in bottom of handhole and shall be at least 12 inches (300 mm) deep, with cover. See drawings
for additional information.
1. Test Wells: Install at least one test well for each service, unless otherwise indicated.Install at the ground rod electrically closest to service entrance.
Set top of test well flush with finished grade or floor.
D. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.
3. Use exothermic-welded connectors for outdoor locations, but if a disconnect-type connection is required, use a bolted clamp.
E. Grounding and Bonding for Piping:
1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to
main metal water service entrances to building. Connect grounding conductors to main metal water service pipes, using a bolted clamp connector
or by bolting a lug-type connector to a pipe flange, using one of the lug bolts of the flange. Where a dielectric main water fitting is installed,
connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water
meters. Connect to pipe with a bolted connector.
3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.
F. Bonding Interior Metal Ducts: Bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners.
Install bonding jumper to bond across flexible duct connections to achieve continuity.
G. Grounding for Steel Building Structure: Install a driven ground rod at base of each corner
column and at intermediate exterior columns at distances not more than 60 feet(18m) apart.
H. Ground Ring: Install a grounding conductor, electrically connected to building structure ground bar and to each ground rod as indicated on drawings,
extending around the perimeter of building.
1. Install tinned-copper conductor not less than No. 3/0 AWG for ground ring and for taps to building steel.
2. Bury ground ring not less than 24 inches (600 mm) from building foundation.
I. Ufer Ground (Concrete-Encased Grounding Electrode): Fabricate according to NFPA 70, using a minimum of 20 feet (6 m) of bare copper conductor
not smaller than No. 4 AWG.
1. If concrete foundation is less than 20 feet (6 m) long, coil excess conductor within base of foundation.
2. Bond grounding conductor to reinforcing steel in at least four locations and to anchor bolts. Extend grounding conductor below grade and connect
to building grounding grid or to grounding electrode external to concrete.
3.4 FIELD QUALITY CONTROL
A. Perform the following tests and inspections and prepare test reports:
1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, at ground test wells, and at individual ground rods. Make tests at ground rods before any conductors are connected.
a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
b. Perform tests by fall-of-potential method according to IEEE 81.
3. Prepare dimensioned drawings locating each test well, ground rod and ground rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location, and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.
B. Report measured ground resistances that exceed the following values:
1. Grounding System: 5 ohms.
2. Test/observation locations of ground rods: 5 ohms..
C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.
END OF SECTION 16060

SECTION 16072 - ELECTRICAL SUPPORTS AND SEISMIC RESTRAINTS
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to
this Section.
1.2 SUMMARY
A. This Section includes the following:
1. Hangers and supports for electrical equipment and systems.
2. Seismic restraints for electrical equipment and systems.
3. Construction requirements for concrete bases.
1.3 DEFINITIONS
A. EMT: Electrical metallic tubing.
B. IMC: Intermediate metal conduit.
C. NBC: National Building Code.
D. OSHPD: Office of Statewide Health Planning and Development.
E. RMC: Rigid metal conduit.
F. SBC: Standard Building Code.
G. Seismic Restraint: A structural support element such as a metal framing member, a cable, an anchor bolt or stud, a fastening device, or an assembly
of these items used to transmit seismic forces from an item of equipment or system to building structure and to limit movement of item during a seismic event.
H. IBC: International Building Code.
1.4 SUBMITTALS
A. Product Data: Illustrate and indicate style, material, strength, fastening provision, and finish for each type and size of electrical support component
used.
B. Coordination Drawings: Show coordination of seismic bracing for electrical components with other systems and equipment in the vicinity, including other supports and seismic restraints.
1.5 QUALITY ASSURANCE
A. Support systems shall be adequate for weight of equipment including associated conduit and conducts.
B. Comply with seismic-restraint requirements in the UBC unless requirements in this Section are more stringent.
PART 2 - PRODUCTS
2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS
A. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed under this Project, with a minimum
structural safety factor of five times the applied force.
B. Steel Slotted Support Systems: Comply with MFMA-3, factory-fabricated components for field assembly.
1. Approved Manufacturers:
a. Cooper B-Line; a division of Cooper Industries.
b. ERICO International Corporation.
c. Allied Support Systems; Power-Strut Unit.
d. GS Metals Corp.
e. Michigan Hanger Co., Inc.; O-Strut Div.
f. National Pipe Hanger Corp.
g. Thomas & Betts Corporation.
h. Unistrut; Tyco International, Ltd.
i. Wesanco, Inc.
2. Finishes:
a. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-3.
b. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-3.
c. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-3.
3. Channel Dimensions: Selected for structural loading.
C. Nonmetallic Slotted Support Systems: Structural-grade, factory-formed, glass-fiber-resin channels and angles with 9/16-inch- (14-mm-) diameter holes at a maximum of 8 inches (200 mm) o.c., in at least 1 surface.
1. Approved Manufacturers:
a. Allied Support Systems; Aickinstrut Unit.
b. Cooper B-Line; a division of Cooper Industries.
c. Fabco Plastics Wholesale Limited.
d. Seasafe, Inc.
2. Fittings and Accessories: Products of channel and angle manufacturer and designed for use with those items.
3. Fitting and Accessory Materials: Same as channels and angles, except metal items may be stainless steel.
4. Rated Strength: Selected to suit structural loading.
D. Raceway and Cable Supports: As described in NECA 1.
E. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
F. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
G. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
H. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
1. Powder-Actuated Fasteners are not allowed.
2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
a. Approved Manufacturers:
1) Cooper B-Line; a division of Cooper Industries.
2) Empire Tool and Manufacturing Co., Inc
3) Hilti, Inc.
4) ITW Construction Products.
5) MKT Fastening, LLC.
6) Powers Fasteners.
3. Concrete Inserts: Steel or malleable-iron slotted-support-system units similar to MSS Type 18; complying with MFMA-3 or MSS SP-58.
4. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
5. Through Bolts: Structural type, hex head, high strength. Comply with ASTM A 325.
6. Toggle Bolts: All-steel springhead type.
7. Hanger Rods: Threaded steel.
2.2 SEISMIC-RESTRAINT COMPONENTS
A. Rated Strength, Features, and Application Requirements for Restraint Components: As defined in reports by an agency acceptable to authorities having jurisdiction.
1. Structural Safety Factor: Strength in tension, shear, and pullout force of components used shall be at least five times the maximum seismic forces to which they will be subjected.
B. Angle and Channel-Type Brace Assemblies: Steel angles or steel slotted-support-system components; with accessories for attachment to braced component at one end and to building structure at the other end.
C. Cable Restraints: ASTM A 603, zinc-coated, steel wire rope attached to steel or stainless-steel thimbles, brackets, swivels, and bolts designed for restraining cable service.
1. Approved Manufacturers:
a. Amber/Booth Company, Inc.
b. Loos & Co., Inc.
c. Mason Industries, Inc.
2. Seismic Mountings, Anchors, and Attachments: Devices as specified in Part 2 "Support, Anchorage, and Attachment Components" Article, selected to resist seismic forces.
3. Hanger Rod Stiffener: Steel tube or steel slotted-support-system sleeve with internally bolted connections to hanger rod, of design recognized by an agency acceptable to authorities having jurisdiction.
4. Bushings for Floor-Mounted Equipment Anchors: Neoprene units designed for seismically rated rigid equipment mountings, and matched to type and size of anchor bolts and studs used.
5. Bushing Assemblies for Wall-Mounted Equipment Anchorage: Assemblies of neoprene elements and steel sleeves designed for seismically rated rigid equipment mountings, and matched to type and size of attachment devices used.
2.3 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES
A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.
B. Materials: Comply with requirements in Division 5 Section "Metal Fabrications" for steel shapes and plates.
PART 3 - EXECUTION
3.1 APPLICATION
A. Comply with NECA 1 for application of hangers and supports for electrical equipment and systems, except if requirements in this Section are stricter.
B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
1. Secure raceways and cables to trapeze member with clamps approved for application by an agency acceptable to authorities having jurisdiction.
2. Secure raceways and cables to these supports with two-bolt conduit clamps.
D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.
3.2 SUPPORT INSTALLATION
A. Comply with NECA 1 for installation requirements, except as specified in this Article.
B. Raceway Support Methods: In addition to methods described in NECA 1, EMT may be supported by openings through structure members, as permitted in NFPA 70.
C. Install seismic-restraint components using methods approved by the evaluation service providing required submittals for component.
D. Strength of Support and Seismic-Restraint Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static and seismic loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).
E. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches (100 mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches (100 mm) thick.
6. To Steel: Welded threaded studs complying with AWS D1.1/D1.1M, with lock washers and nuts.
7. To Light Steel: Sheet metal screws.
8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets,panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.
F. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.
3.3 INSTALLATION OF FABRICATED METAL SUPPORTS
A. Comply with installation requirements in Division 5 Section "Metal Fabrications" for site-fabricated metal supports.
B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
C. Field Welding: Comply with AWS D1.1/D1.1M.
3.4 INSTALLATION OF SEISMIC-RESTRAINT COMPONENTS
A. Install bushing assemblies for anchor bolts for floor-mounted equipment, arranged to provide resilient media between anchor bolt and mounting hole in concrete base.
B. Install bushing assemblies for mounting bolts for wall-mounted equipment, arranged to provide resilient media where equipment or equipment-mounting channels are attached to wall.
C. Restraint Cables: Provide slack within maximums recommended by manufacturer.
D. Attachment to Structure: If specific attachment is not indicated, anchor bracing to structure at flanges of beams, upper truss chords of bar joists, or at concrete members.
3.5 ACCOMMODATION OF DIFFERENTIAL SEISMIC MOTION
A. Make flexible connections in runs of raceways, cables, wireways, cable trays, and busways where they cross expansion and seismic-control joints, where adjacent sections or branches are supported by different structural elements, and where they terminate with connection to electrical equipment that is anchored to a different structural element from the one supporting them as they approach equipment.
END OF SECTION 16072

ELECTRICAL SPECIFICATIONS
NOT TO SCALE

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ROGERS MOTOR'S DEALERSHIP ADDITION
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Lewiston Idaho
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SECTION 16075 - ELECTRICAL IDENTIFICATION
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 QUALITY ASSURANCE
A. Comply with ANSI A13.1 and ANSI C2.
B. Comply with NFPA 70.
C. Comply with 29 CFR 1910.145.
1.3 COORDINATION
A. Coordinate identification names, abbreviations, colors, and other features with requirements in the Contract Documents, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual, and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.
B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
C. Coordinate installation of identifying devices with location of access panels and doors.
D. Install identifying devices before installing acoustical ceilings and similar concealment.
PART 2 - PRODUCTS
2.1 RACEWAY AND METAL-CLAD CABLE IDENTIFICATION MATERIALS
A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.
2.2 CONDUCTOR AND COMMUNICATION- AND CONTROL-CABLE IDENTIFICATION MATERIALS
A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.
B. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.
C. Aluminum Wraparound Marker Labels: Cut from 0.014-inch-thick aluminum sheet, with stamped, embossed, or scribed legend, and fitted with tabs and matching slots for permanently securing around wire or cable jacket or around groups of conductors.
D. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking nylon tie fastener.
E. Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and polyester or nylon tie for attachment to conductor or cable.
1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
2.3 WARNING LABELS AND SIGNS
A. Comply with NFPA 70 and 29 CFR 1910.145.
B. Self-Adhesive Warning Labels: Factory printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment, unless otherwise indicated.
C. Warning label and sign shall include, but are not limited to, the following legends:
1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."
2.4 EQUIPMENT IDENTIFICATION LABELS
A. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.
PART 3 - EXECUTION
3.1 APPLICATION
A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 30 A: Identify with orange self-adhesive vinyl label, snap-around label, or self-adhesive vinyl tape applied in bands.
B. Power-Circuit Conductor Identification: For primary and secondary conductors No. 1/0 AWG and larger in vaults, pull and junction boxes, manholes, and handholes use color-coding conductor tape, marker tape, aluminum wraparound marker labels, metal tags, or write-on tags. Identify source and circuit number of each set of conductors. For single conductor cables, identify phase in addition to the above.
C. Branch-Circuit Conductor Identification: Where there are conductors for more than three branch circuits in same junction or pull box, use color-coding conductor tape, marker tape, aluminum wraparound marker labels, metal tags, or write-on tags. Identify each ungrounded conductor according to source and circuit number.
D. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Comply with 29 CFR 1910.145 and apply self-adhesive warning labels, baked-enamel warning signs, or metal-backed, butyrate warning signs. Identify system voltage with black letters on an orange background. Apply to exterior of door, cover, or other access.
1. Equipment Requiring Workspace Clearance According to NFPA 70: Unless otherwise indicated, apply to door or cover of equipment but not on flush panelboards and similar equipment in finished spaces.
E. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.
1. Labeling Instructions:
a. Indoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch-high label; where 2 lines of text are required, use labels 2 inches high.
2. Equipment to Be Labeled:
a. Panelboards, electrical cabinets, and enclosures.
b. Disconnect switches.
c. Voice and data cable terminal equipment.
d. Terminals, racks, and patch panels for voice and data communication and for signal and control functions.
3.2 INSTALLATION
A. Verify identity of each item before installing identification products.
B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
C. Color-Coding for Phase and Voltage Level Identification, 600 V and Less: Use the colors listed below for ungrounded service, feeder, and branch-circuit conductors.
1. Color shall be factory applied or, for sizes larger than No. 10 AWG if authorities having jurisdiction permit, field applied.
2. Colors for 208Y/120-V Circuits:
a. Phase A: Black.
b. Phase B: Red.
c. Phase C: Blue.
3. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.
END OF SECTION 16075

SECTION 16120 - CONDUCTORS AND CABLES
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 SUMMARY
A. This Section includes building wires and cables and associated connectors, splices, and terminations for wiring systems rated 600 V and less.
1.3 QUALITY ASSURANCE
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
PART 2 - PRODUCTS
2.1 CONDUCTORS AND CABLES
A. Conductor Material: Copper complying with NEMA WC 5; stranded conductor.
B. Conductor Insulation Types: Type THHN-THWN complying with NEMA WC 5.
2.2 CONNECTORS AND SPLICES
A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.
PART 3 - EXECUTION
3.1 CONDUCTOR AND INSULATION APPLICATIONS
A. Exposed and Service Feeders: Type THHN-THWN, single conductors in raceway.
B. Feeders Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway.
C. Exposed Branch Circuits, including in Crawlspaces: Type THHN-THWN, single conductors in raceway.
D. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway.
E. Branch Circuits Concealed in Concrete and below Slabs-on-Grade: Type THHN-THWN, single conductors in raceway.
F. Class 1 Control Circuits: Type THHN-THWN, in raceway.
G. Class 2 Control Circuits: Type THHN-THWN, in raceway. Power limited cable, concealed in building finishes.
J. Fire Alarm Circuits: Power limited cable, concealed in building finishes.
3.2 INSTALLATION
A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
E. Support cables according to Division 16 Section "Basic Electrical Materials and Methods."
F. Seal around cables penetrating fire-rated elements according to Division 7 Section "Through-Penetration Firestop Systems."
G. Identify and color-code conductors and cables according to Division 16 Section "Electrical Identification."
3.3 CONNECTIONS
A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
1. Use oxide inhibitor in each splice and tap conductor for aluminum conductors.
C. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches of slack.
END OF SECTION 16120

SECTION 16130 - RACEWAYS AND BOXES
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 SUMMARY
A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.
1.3 DEFINITIONS
A. EMT: Electrical metallic tubing.
B. ENT: Electrical nonmetallic tubing.
C. FMC: Flexible metal conduit.
D. IMC: Intermediate metal conduit.
E. LFMC: Liquidtight flexible metal conduit.
F. LFNC: Liquidtigh flexible nonmetallic conduit.
G. RNC: Rigid nonmetallic conduit.
1.4 QUALITY ASSURANCE
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
1.5 COORDINATION
A. Coordinate layout and installation of raceways, boxes, enclosures, cabinets, and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.
PART 2 - PRODUCTS
2.1 METAL CONDUIT AND TUBING
A. Rigid Steel Conduit: ANSI C80.1.
B. Aluminum Rigid Conduit: ANSI C80.5.
C. IMC: ANSI C80.6.
D. EMT and Fittings: ANSI C80.3.
1. Fittings: Set-screw type.
E. FMC: Aluminum.
F. LFMC: Flexible steel conduit with PVC jacket.
G. Fittings: NEMA FB 1; compatible with conduit and tubing materials.
2.2 SURFACE RACEWAYS
A. Surface Metal Raceways: Galvanized steel with snap-on covers. Finish with manufacturer's standard prime coating.
B. Types, sizes, and channels as indicated and required for each application, with fittings that match and mate with raceways.
2.3 BOXES, ENCLOSURES, AND CABINETS
A. Sheet Metal Outlet and Device Boxes: NEMA OS 1.
B. Cast-Metal Outlet and Device Boxes: NEMA FB 1, Type FD, with gasketed cover.
C. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
D. Cast-Metal Pull and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.
E. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous hinge cover and flush latch.
1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
2. Nonmetallic Enclosures: Plastic, finished inside with radio-frequency-resistant paint.
F. Cabinets: NEMA 250, Type 1, galvanized steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel. Hinged door in front cover with flush latch and concealed hinge. Key latch to match panelboards. Include metal barriers to separate wiring of different systems and voltage and include accessory feet where required for freestanding equipment.
2.4 FACTORY FINISHES
A. Finish: For raceway, enclosure, or cabinet components, provide manufacturer's standard paint applied to factory-assembled surface raceways, enclosures, and cabinets before shipping.
PART 3 - EXECUTION
3.1 RACEWAY APPLICATION
A. Indoors:
1. Exposed: EMT.
2. Concealed: EMT.
3. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC; except use LFMC in damp or wet locations.
4. Damp or Wet Locations: Rigid steel conduit.
5. Boxes and Enclosures: NEMA 250, Type 1, except as follows:
a. Damp or Wet Locations: NEMA 250, Type 4, stainless steel.
B. Minimum Raceway Size: 1/2-inch trade size.
C. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings approved for use with that material. Patch all nicks and scrapes in PVC coating after installing conduits.
D. Install nonferrous conduit or tubing for circuits operating above 60 Hz. Where aluminum raceways are installed for such circuits and pass through concrete, install in nonmetallic sleeve.
E. Do not install aluminum conduits embedded in or in contact with concrete.
3.2 INSTALLATION
A. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
B. Complete raceway installation before starting conductor installation.
C. Install temporary closures to prevent foreign matter from entering raceways.
D. Make bends and offsets so ID is not reduced. Keep legs of bends in the same plane and keep straight legs of offsets parallel, unless otherwise indicated.
E. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.
1. Install concealed raceways with a minimum of bends in the shortest practical distance, considering type of building construction and obstructions, unless otherwise indicated.
F. Install exposed raceways parallel or at right angles to nearby surfaces or structural members and follow surface contours as much as possible.
1. Run parallel or banked raceways together on common supports.
2. Make parallel bends in parallel or banked runs. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.
G. Join raceways with fittings designed and approved for that purpose and make joints tight.
1. Use insulating bushings to protect conductors.
H. Tighten set screws of threadless fittings with suitable tools.
I. Terminations:
1. Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against box. Use two locknuts, one inside and one outside box.
2. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into hub so end bears against wire protection shoulder. Where chase nipples are used, align raceways so coupling is square to box; tighten chase nipple so no threads are exposed.
J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
K. Telephone and Signal System Raceways, 2-Inch Trade Size and Smaller: In addition to above requirements, install raceways in maximum lengths of 150 feet and with a maximum of two 90-degree bends or equivalent. Separate lengths with pull or junction boxes where necessary to comply with these requirements.
L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with UL-listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
2. Where otherwise required by NFPA 70.
M. Surface Raceways: Install a separate, green, ground conductor in raceways from junction box supplying raceways to receptacle or fixture ground terminals.
N. Install hinged-cover enclosures and cabinets plumb. Support at each corner.
END OF SECTION 16130

SECTION 16140 - WIRING DEVICES
PART 1 - GENERAL
1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 SUMMARY
A. This Section includes the following:
1. Single and duplex receptacles, ground-fault circuit interrupters, integral surge suppression units, and isolated-ground receptacles.
2. Single- and double-pole snap switches and dimmer switches.
3. Device wall plates.
1.3 DEFINITIONS
A. EMI: Electromagnetic interference.
B. GFCI: Ground-fault circuit interrupter.
C. PVC: Polyvinyl chloride.
D. RFI: Radio-frequency interference.
E. UTP: Unshielded twisted pair.
1.4 QUALITY ASSURANCE
A. Source Limitations: Obtain each type of wiring device through one source from a single manufacturer.
B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
1.5 COORDINATION
A. Receptacles for Owner-Furnished Equipment: Match plug configurations.
1. Cord and Plug Sets: Match equipment requirements.
PART 2 - PRODUCTS
2.1 MANUFACTURERS
A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Wiring Devices:
a. Bryant Electric, Inc./Hubbell Subsidiary.
b. Eagle Electric Manufacturing Co., Inc.
c. Hubbell Incorporated; Wiring Device-Kellems.
d. Leviton Mfg. Company Inc.
e. Cooper Wiring Devices.
2.2 RECEPTACLES
A. Straight-Blade-Type Receptacles: Comply with NEMA WD 1, NEMA WD 6, DSCC W-C-596G, and UL 498.
B. Straight-Blade and Locking Receptacles: Heavy-Duty grade.
C. GFCI Receptacles: Straight blade, non-feed-through type, Heavy Duty grade, with integral NEMA WD 6, Configuration 5-20R duplex receptacle; complying with UL 498 and UL 943. Design units for installation in a 2-3/4-inch- deep outlet box without an adapter.
2.3 CORD AND PLUG SETS
A. Description: Match voltage and current ratings and number of conductors to requirements of equipment being connected.
1. Cord: Rubber-insulated, stranded-copper conductors, with Type SOW-A jacket; with green-insulated grounding conductor and equipment-rating ampacity plus a minimum of 30 percent.
2. Plug: Nylon body and integral cable-clamping jaws. Match cord and receptacle type for connection.
2.4 SWITCHES
A. Single- and Double-Pole Switches: Comply with DSCC W-C-896F and UL 20.
B. Snap Switches: Heavy-Duty grade, quiet type.
C. Combination Switch and Receptacle: Both devices in a single gang unit with plaster ears and removable tab connector that permit separate or common feed connection.
1. Switch: 20 A, 120/277-V ac.
2. Receptacle: NEMA WD 6, Configuration 5-20R.
D. Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on/off switches and audible frequency and EMI/RFI filters.
1. Control: Continuously adjustable slider; with single-pole or three-way switching to suit connections.
2. Incandescent Lamp Dimmers: Modular, 120 V, 60 Hz with continuously adjustable rotary knob, toggle switch, or slider; single pole with soft tap or other quiet switch; EMI/RFI filter to eliminate interference; and 5-inch wire connecting leads.
2.5 WALL PLATES
A. Single and combination types to match corresponding wiring devices.
1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: 0.035-inch-thick, satin-finished stainless steel
3. Material for Unfinished Spaces: Galvanized steel.
4. Material for Wet Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in "wet locations."
2.6 FINISHES
A. Color:
1. Wiring Devices Connected to Normal Power System: White, unless otherwise indicated or required by NFPA 70.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install devices and assemblies level, plumb, and square with building lines.
B. Install wall dimmers to achieve indicated rating after derating for ganging according to manufacturer's written instructions.
C. Install unshared neutral conductors on line and load side of dimmers according to manufacturers' written instructions.
D. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical, and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.
E. Remove wall plates and protect devices and assemblies during painting.
3.2 IDENTIFICATION
A. Comply with Division 16 Section "Electrical Identification."
1. Receptacles: Identify panelboard and circuit number from which served. Use hot, stamped or engraved machine printing with white-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.
3.3 CONNECTIONS
A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
3.4 FIELD QUALITY CONTROL
A. Perform the following field tests and inspections and prepare test reports:
1. After installing wiring devices and after electrical circuitry has been energized, test for proper polarity, ground continuity, and compliance with requirements.
2. Test GFCI operation with both local and remote fault simulations according to manufacturer's written instructions.
B. Remove malfunctioning units, replace with new units, and retest as specified above.
END OF SECTION 16140

ELECTRICAL SPECIFICATIONS
NOT TO SCALE

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho

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SECTION 16442 - PANELBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Lighting and appliance branch-circuit panelboards.

1.3 DEFINITIONS

A. EMI: Electromagnetic interference.
B. GFCI: Ground-fault circuit interrupter.
C. RFI: Radio-frequency interference.
D. RMS: Root mean square.
E. SPDT: Single pole, double throw.

1.4 SUBMITTALS

A. Product Data: For each type of panelboard, overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
B. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories through one source from a single manufacturer.
B. Product Options: Drawings indicate size, profiles, and dimensional requirements of panelboards and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.6 COORDINATION

A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, and encumbrances to workspace clearance requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Panelboards, Overcurrent Protective Devices, Controllers, Contactors, and Accessories:
      a. Eaton Corporation; Cutler-Hammer Products.
      b. General Electric Co.; Electrical Distribution & Protection Div.
      c. Siemens Energy & Automation, Inc.
      d. Square D.

2.2 MANUFACTURED UNITS

A. Enclosures: Surface mounted cabinets. NEMA PB 1, Type 1.
   1. Rated for environmental conditions at installed location.
      a. Kitchen Areas: NEMA 250, Type [4X] <Insert other>, stainless steel.
   2. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
   3. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
   4. Finish: Manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat.
   5. Directory Card: With transparent protective cover, mounted in metal frame, inside panelboard door.
B. Phase and Ground Buses:
   1. Material: Hard-drawn copper, 98 percent conductivity.
   2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors; bonded to box.
   3. Extra-Capacity Neutral Bus: Neutral bus rated 200 percent of phase bus and UL listed as suitable for nonlinear loads.
C. Conductor Connectors: Suitable for use with conductor material.
   1. Main and Neutral Lugs: Mechanical type.
   2. Ground Lugs and Bus Configured Terminators: Compression type.
   3. Extra-Capacity Neutral Lugs: Rated 200 percent of phase lugs mounted on extra-capacity neutral bus.

2.3 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
B. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

2.4 OVERCURRENT PROTECTIVE DEVICES

A. Molded-Case Circuit Breaker: UL 489, with series-connected rating to meet available fault currents.
   1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
   2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
   3. GFCI Circuit Breakers: Single- and two-pole configurations with [5] [30]-mA trip sensitivity.
B. Molded-Case Circuit-Breaker Features and Accessories: Standard frame sizes, trip ratings, and number of poles.
   1. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
   2. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air-conditioning, and refrigerating equipment.
   3. Undervoltage Trip: Set to operate at 35 to 75 percent of rated voltage with field-adjustable 0.1- to 0.6-second time delay.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install panelboards and accessories according to NEMA PB 1.1.
B. Mount top of trim 74 inches above finished floor, unless otherwise indicated.
C. Mount plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.
D. Install filler plates in unused spaces.
E. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.

3.2 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs as specified in Division 16 Section "Electrical Identification."
B. Create a directory to indicate installed circuit loads[after balancing panelboard loads. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
C. Panelboard Nameplates: Label each panelboard with engraved metal or laminated-plastic nameplate mounted with corrosion-resistant screws.

3.3 CONNECTIONS

A. Ground equipment according to Division 16 Section "Grounding and Bonding."
B. Connect wiring according to Division 16 Section "Conductors and Cables."

3.4 FIELD QUALITY CONTROL

A. Load Balancing: After Substantial Completion, but not more than 60 days after Final Acceptance, measure load balancing and make circuit changes.
   1. Measure as directed during period of normal system loading.
   2. Perform load-balancing circuit changes outside normal occupancy/working schedule of the facility and at time directed. Avoid disrupting critical 24-hour services such as fax machines and on-line data processing, computing, transmitting, and receiving equipment.
   3. After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
   4. Tolerance: Difference exceeding 20 percent between phase loads, within a panelboard, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

3.5 CLEANING

A. On completion of installation, inspect interior and exterior of panelboards. Remove paint splatters and other spots. Vacuum dirt and debris; do not use compressed air to assist in cleaning. Repair exposed surfaces to match original finish.

END OF SECTION 16442

SECTION 16511 - INTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Interior lighting fixtures, lamps, and ballasts.
   2. Exit signs.
   3. Lighting fixture supports.
B. Related Sections include the following:
   1. Division 16 Section "Wiring Devices" for manual wall-box dimmers for incandescent lamps.

1.3 DEFINITIONS

A. BF: Ballast factor.
B. CRI: Color-rendering index.
C. CU: Coefficient of utilization.
D. HID: High-intensity discharge.
E. LER: Luminaire efficacy rating.
F. Luminaire: Complete lighting fixture, including ballast housing if provided.
G. RCR: Room cavity ratio.

1.4 SUBMITTALS

A. Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, accessories, finishes, and the following:
   1. Physical description of lighting fixture including dimensions.
   2. Emergency lighting units including battery and charger.
   3. Ballast.
   4. Energy-efficiency data.
   5. Sound Performance Data: For air-handling lighting fixtures. Indicate sound power level and sound transmission class in test reports certified according to standards specified in Division 15 Section "Diffusers, Registers, and Grilles."
   6. Life, output, and energy-efficiency data for lamps.
B. Operation and Maintenance Data: For lighting equipment and fixtures to include in emergency, operation, and maintenance manuals.
C. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.6 COORDINATION

A. Coordinate layout and installation of lighting fixtures and suspension system with other construction that penetrates ceilings or is supported by them, including HVAC equipment, fire-suppression system, and partition assemblies.

1.7 WARRANTY

A. Special Warranty for Emergency Lighting Batteries: Manufacturer's standard form in which manufacturer of battery-powered emergency lighting unit agrees to repair or replace components of rechargeable batteries that fail in materials or workmanship within specified warranty period.
   1. Warranty Period for Emergency Lighting Unit Batteries: 10 years from date of Substantial Completion. Full warranty shall apply for first year, and prorated warranty for the remaining nine years.
   2. Warranty Period for Emergency Fluorescent Ballast Batteries: Seven years from date of Substantial Completion. Full warranty shall apply for first year, and prorated warranty for the remaining six years.
B. Special Warranty for Ballasts: Manufacturer's standard form in which ballast manufacturer agrees to repair or replace ballasts that fail in materials or workmanship within specified warranty period.
   1. Warranty Period for Electronic Ballasts: Five years from date of Substantial Completion.

1.8 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Lamps: 10 for every 100 of each type and rating installed. Furnish at least one of each type.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
B. In Interior Lighting Fixture Schedule where titles below are column or row headings that introduce lists, the following requirements apply to product selection:
   1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
   2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.
   3. Basis-of-Design Product: The design for each lighting fixture is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.2 LIGHTING FIXTURES AND COMPONENTS, GENERAL REQUIREMENTS

A. Recessed Fixtures: Comply with NEMA LE 4 for ceiling compatibility for recessed fixtures.
B. Incandescent Fixtures: Comply with UL 1598. Where LER is specified, test according to NEMA LE 5A.
C. Metal Parts: Free of burrs and sharp corners and edges.
D. Sheet Metal Components: Steel, unless otherwise indicated. Form and support to prevent warping and sagging.
E. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.
F. Reflecting surfaces shall have minimum reflectance as follows, unless otherwise indicated:
   1. White Surfaces: 85 percent.
   2. Specular Surfaces: 83 percent.
   3. Diffusing Specular Surfaces: 75 percent.
   4. Laminated Silver Metallized Film: 90 percent.
G. Plastic Diffusers, Covers, and Globes:
   1. Acrylic Lighting Diffusers: 100 percent virgin acrylic plastic. High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
      a. Lens Thickness: At least 0.125 inch minimum unless different thickness is indicated.
      b. UV stabilized.
   2. Glass: Annealed crystal glass, unless otherwise indicated.

2.3 BALLASTS FOR LINEAR FLUORESCENT LAMPS

A. Electronic Ballasts: Comply with ANSI C82.11; instant-start type, unless otherwise indicated, and designed for type and quantity of lamps served. Ballasts shall be designed for full light output unless dimmer or bi-level control is indicated.
   1. Sound Rating: A
   2. Total Harmonic Distortion Rating: Less than 10 percent.
   3. Transient Voltage Protection: IEEE C62.41, Category A or better.
   4. Operating Frequency: 20 kHz or higher.
   5. Lamp Current Crest Factor: 1.7 or less.
   6. BF: 0.85 or higher.
   7. Power Factor: 0.95 or higher.
   8. Parallel Lamp Circuits: Multiple lamp ballasts shall comply with ANSI C 82.11 and shall be connected to maintain full light output on surviving lamps if one or more lamps fail.
B. Ballasts for Bi-Level Controlled Lighting Fixtures: Electronic type.
   1. Operating Modes: Ballast circuit and leads provide for remote control of the light output of the associated lamp between high- and low-level and off.
      a. High-Level Operation: 100 percent of rated lamp lumens.
      b. Low-Level Operation: 30 percent of rated lamp lumens.
   2. Ballast shall provide equal current to each lamp in each operating mode.
   3. Compatibility: Certified by manufacturer for use with specific bi-level control system and lamp type indicated.

2.4 EXIT SIGNS

A. Description: Comply with UL 924; for sign colors, visibility, luminance, and lettering size, comply with authorities having jurisdiction.
B. Internally Lighted Signs:
   1. Lamps for AC Operation: LEDs, 70,000 hours minimum rated lamp life.

2.5 EMERGENCY LIGHTING UNITS

A. Description: Self-contained units complying with UL 924.
   1. Battery: Sealed, maintenance-free, lead-acid type.
   2. Charger: Fully automatic, solid-state type with sealed transfer relay.
   3. Operation: Relay automatically turns lamp on when power supply circuit voltage drops to 80 percent of nominal voltage or below. Lamp automatically disconnects from battery when voltage approaches deep-discharge level. When normal voltage is restored, relay disconnects lamps from battery, and battery is automatically recharged and floated on charger.
   4. Test Push Button: Push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability.
   5. LED Indicator Light: Indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.
   6. Wire Guard: Heavy-chrome-plated wire guard protects lamp heads or fixtures.
   7. Integral Time-Delay Relay: Holds unit on for fixed interval of [15] <Insert period> minutes when power is restored after an outage.
   8. Remote Test: Switch in hand-held remote device aimed in direction of tested unit initiates coded infrared signal. Signal reception by factory-installed infrared receiver in tested unit triggers simulation of loss of its normal power supply, providing visual confirmation of either proper or failed emergency response.
   9. Integral Self-Test: Factory-installed electronic device automatically initiates code-required test of unit emergency operation at required intervals. Test failure is annunciated by an integral audible alarm and flashing red LED.

2.6 FLUORESCENT LAMPS

A. T8 rapid-start low-mercury lamps, rated 32 W maximum, nominal length of 48 inches 2800 initial lumens (minimum), CRI 75 (minimum), color temperature 3500 K, and average rated life 20,000 hours, unless otherwise indicated.
B. Match existing lamping in existing fixtures to be relocated.

2.7 LIGHTING FIXTURE SUPPORT COMPONENTS

A. Comply with Division 16 Section "Electrical Supports and Seismic Restraints" for channel- and angle-iron supports and nonmetallic channel and angle supports.
B. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated steel, 12 gage.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Lighting fixtures: Set level, plumb, and square with ceilings and walls. Install lamps in each fixture.
B. Support for Lighting Fixtures in or on Grid-Type Suspended Ceilings: Use grid as a support element.
   1. Install a minimum of four ceiling support system rods or wires for each fixture. Locate not more than 6 inches from lighting fixture corners.
   2. Support Clips: Fasten to lighting fixtures and to ceiling grid members at or near each fixture corner with clips that are UL listed for the application.
   3. Fixtures of Sizes Less Than Ceiling Grid: Install as indicated on reflected ceiling plans or center in acoustical panel, and support fixtures independently with at least two 3/4-inch metal channels spanning and secured to ceiling tees.
   4. Install at least one independent support rod or wire from structure to a tab on lighting fixture. Wire or rod shall have breaking strength of the weight of fixture at a safety factor of 3.
C. Connect wiring according to Division 16 Section "Conductors and Cables."

3.2 FIELD QUALITY CONTROL

A. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery and retransfer to normal.

END OF SECTION 16511

SECTION 16800 - ELECTRICAL DEMOLITION AND REPAIR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes electrical demolition and repair. Work includes removal of obsolete wiring and electrical apparatus; relocation, reconnection or replacement of existing wiring affected by demolition or new construction; capping off concealed wiring abandoned due to demolition or new construction.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Conductors and Cables: Refer to Section 16120 - Conductors and Cables.
B. Raceways and Boxes: Refer to Section 16130 - Raceways and Boxes.

PART 3 - EXECUTION

3.1 DEMOLITION

A. Protect existing electrical equipment and installations indicated to remain. If damaged or disturbed in the course of the work, remove damaged portions and install new products of equal capacity, quality, and functionality.
B. Accessible Work: Remove exposed electrical equipment and installations, indicated to be demolished, in their entirety. Completely remove all exposed traces, hardware, wiring and conduit systems to the source. All knockouts and holes shall be patched or plugged.
C. Contractor shall re-use existing straight conduit runs and factory bends for conduits 2" and larger, provided that they are not damaged in any way and are installed in accordance with Section 16130.
D. Re-use of all other electrical apparatus and material is subject to approval by engineer
E. Abandoned Work: Cut and remove buried raceway and wiring, indicated to be abandoned in place, 2 inches below the surface of adjacent construction. Cap raceways and patch surface to match existing finish.
F. Remove demolished material for recycling as directed by owner.
G. Remove, store, clean, reinstall, reconnect, and make operational components indicated for relocation.

END OF SECTION 16800

ELECTRICAL SPECIFICATIONS

NOT TO SCALE

ROGERS MOTOR'S DEALERSHIP ADDITION
PHASE 2: CAR WASH
Lewiston Idaho

ELECTRICAL SPECIFICATIONS

Bott & Associates
ARCHITECTS
LEWISTON
0309 2nd Street Lewiston, Idaho 83501
Ph: (208) 746-9871 Fax: (208) 746-3523
COTTONWOOD
402-B King Street Cottonwood, Idaho 83522
Ph: (208) 962-5458 Fax: (208) 962-7178

PROFESSIONAL ENGINEER REGISTERED 13053 STATE OF IDAHO SHAWN A. MEADOR

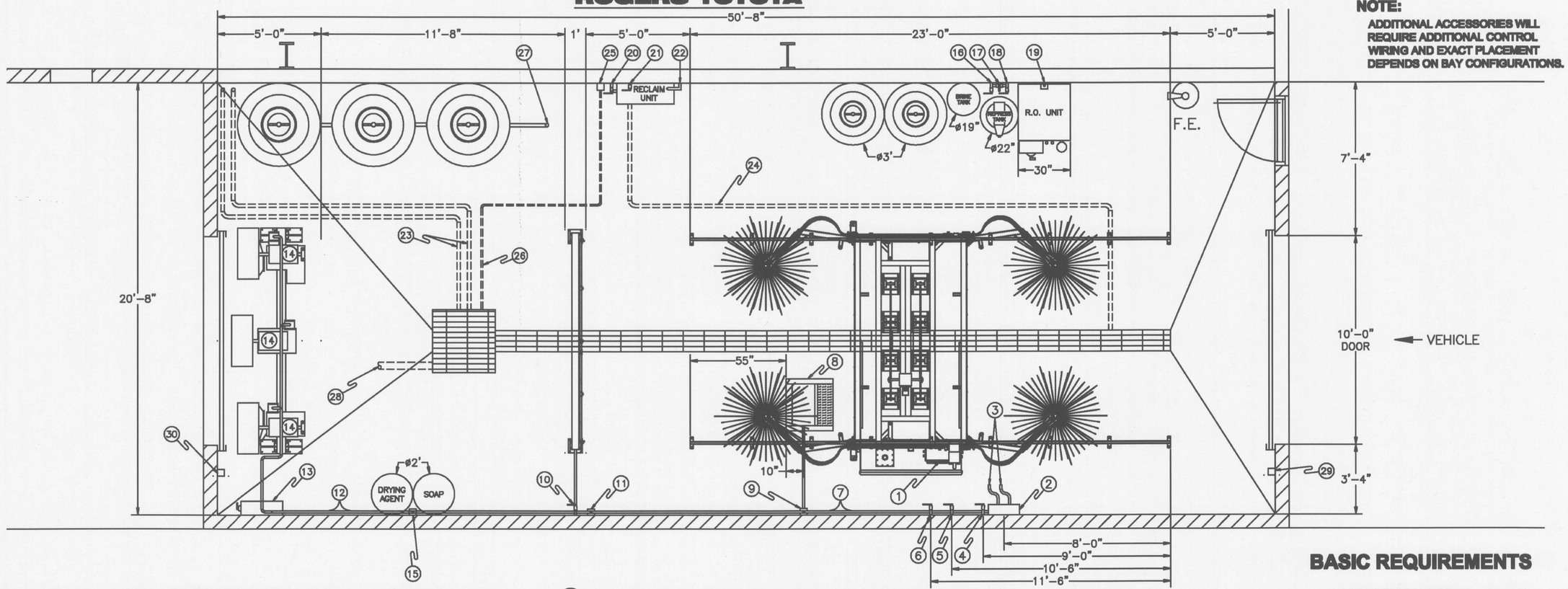
e2co electricalengineeringcompany
engineering4tomorrow
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fax: 208.378.4451
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CHECKED BY: JVS
DATE: 06/05/08
JOB NO.: 080429
REVISION DATE:

SHEET: E4.2

BROADWAY'S ALL CLOTH ROLLOVER CAR WASH WITH RECLAIM SYSTEM, SPOTFREE RINSE ARCH AND 45 H.P. BLOWER

ROGERS TOYOTA



NOTE:
ADDITIONAL ACCESSORIES WILL REQUIRE ADDITIONAL CONTROL WIRING AND EXACT PLACEMENT DEPENDS ON BAY CONFIGURATIONS.

FLOOR PLAN 1- ELECTRICAL/PLUMBING

SCALE: 3/8" = 1'-0"

Purchaser Must Provide and Install The Following Equipment.
Electrician/Plumber Must Make All FINAL Connections.

(1) THE CAR WASH CONTROL BOX CONTAINS AN INTERNAL 3PHASE DISCONNECT SWITCH FOR POWER TO THE CAR WASH AND TERMINALS FOR CONTROL WIRING. (CAR WASH MANUFACTURER WILL PROVIDE)

(2) 12"x12"x6" DEEP NEMA 4X JUNCTION BOX W/SCREW COVER POSITIONED 8'–0" FROM THE ENTRANCE END OF THE TRACK AND APPROX. 14' UP FROM FLOOR OR AS CLOSE TO THE CEILING AS POSSIBLE.

(3) 2 S.O. CORDS TO LOOP CONNECT FROM ITEM#2 TO ROLLOVER CAR WASH.
1 CORD FOR 3PHASE WIRING TO CONNECT TO CONTACTORS INSIDE CAR WASH CONTROL BOX.
1 CORD FOR CONTROL WIRING TO CONNECT TO TERMINALS INSIDE CAR WASH CONTROL BOX.
THE CAR WASH MANUFACTURER WILL PROVIDE THE S.O. CORDS WHICH ARE TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR.

(4) 1/2" AIR LINE WITH BALL VALVE SHUT–OFF TO CONNECT TO ROLLOVER CAR WASH. POSITIONED 9'–0" FROM THE ENTRANCE END OF THE TRACK AND APPROX. 14' UP FROM FLOOR OR AS CLOSE TO THE CEILING AS POSSIBLE.

(5) 1" RECLAIM WATER LINE WITH BALL VALVE SHUT–OFF TO CONNECT TO ROLLOVER CAR WASH FED FROM ITEM#21. POSITIONED 10'–6" FROM THE ENTRANCE END OF THE TRACK AND APPROX. 14' UP FROM FLOOR OR AS CLOSE TO THE CEILING AS POSSIBLE.

(6) 1" WATER LINE WITH BALL VALVE SHUT–OFF TO CONNECT TO ROLLOVER CAR WASH. POSITIONED 11'–6" FROM THE ENTRANCE END OF THE TRACK AND APPROX. 14' UP FROM FLOOR OR AS CLOSE TO THE CEILING AS POSSIBLE.

(7) USE PVC CONDUIT WITH GASKET CONNECTIONS TO ALL JUNCTION BOXES AND DISCONNECTS.

(8) FLOOR MOUNTED TREADLE PAD PROVIDED BY CAR WASH MANUFACTURER. PURCHASER MUST CONNECT 3/4" CONDUIT FROM ITEM#8 TO ITEM#9 THEN TO ITEM#2 AND WIRE 2–16 AWG WIRES THROUGH TO ITEM#2. FINAL POSITIONING OF TREADLE PAD MADE BY CAR WASH SUPPLIER.

(9) 4"x4" NEMA 4X SPLICE BOX POSITIONED 65" FROM EXIT END OF TRACK AND 2'–0" UP FROM FLOOR.

(10) 1" R.O. WATER LINE WITH BALL VALVE SHUT–OFF TO CONNECT TO RINSE ARCH FED FROM ITEM#18. POSITIONED ACROSS FROM THE RINSE ARCH AND APPROX. 10'–0" UP FROM FLOOR.

(11) 4"x4" NEMA 4X SPLICE BOX POSITIONED NEXT TO THE RINSE ARCH AND 10'–0" UP FROM FLOOR. 2–16 AWG WIRES AND GROUND WILL CONNECT FROM ITEM#10 TO ITEM#11 THEN TO ITEM#2 THROUGH 3/4" CONDUIT FOR CONTROL OF THE RINSE ARCH.

(12) BLOWER ACTIVATION DONE THROUGH CONTROL WIRE CONNECTIONS TO CAR WASH COMPUTER FROM BLOWER CONTROL BOX, 2–16 AWG WIRES TO CONNECT TO J–BOX (ITEM#2).

(13) 24"x24"x6"DEEP BLOWER CONTROL BOX 4' UP FROM FLOOR AT EXIT END OF TRACK NEAR BLOWERS. THE BLOWER CONTROL BOX CONTAINS AN INTERNAL 3PHASE DISCONNECT SWITCH FOR POWER TO BLOWER. THE CAR WASH MANUFACTURER WILL PROVIDE THE BLOWER CONTROL BOX WHICH IS TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR.

(14) FROM EACH OF 3, 15HP, 3ø, 208/230/460V BLOWER MOTORS EXTEND IN 1" CONDUIT TO CONTROLS INSTALLED IN ITEM#12. ALSO, 4 WIRES OF 16 AWG AND GROUND TO CONNECT TO OSCILLATING MOTOR.

(15) DUPLEX RECEPTACLE IN WEATHER PROOF ENCLOSURE 5'–0" UP FROM FLOOR. 3–16 AWG WIRES AND GROUND FROM CAR WASH JUNCTION BOX (ITEM#2) WILL PROVIDE POWER.

(16) 1" CITY WATER LINE WITH BALL VALVE SHUT–OFF TO CONNECT TO R.O. UNIT INCOMING WATER TANK. POSITION LINE 5'–0" UP FROM FLOOR.

(17) BYPASS 1" WATER LINE WITH BALL VALVE SHUT–OFF TO CONNECT ITEM#16 AND ITEM#18. POSITION LINE 5'–0" UP FROM FLOOR. (IF R.O. FAILURE OCCURS BYPASS SHALL BE USED)

(18) 1" WATER LINE WITH BALL VALVE SHUT–OFF TO CONNECT TO RINSE ARCH AT ITEM#10. (PVC PIPE RECOMMENDED) POSITION LINE 5'–0" UP FROM FLOOR.

(19) TWO 20AMP NON GFI 110V POWER SOURCE WITH 4 GROUNDED PLUG INS. POSITION OUTLET 5'–0" UP FROM FLOOR.

(20) 1" CITY WATER LINE WITH BALL VALVE SHUT–OFF TO CONNECT TO RECLAIM UNIT INCOMING WATER OUTLET. POSITION LINE 5' UP FROM FLOOR.

(21) 1" LINE FROM CYCLONE SEPERATOR OUTLET TO CONNECT TO ROLLOVER CAR WASH AT ITEM#5. POSITION LINE 9' UP FROM FLOOR.

(22) INCOMING 3 PHASE POWER TO RECLAIM UNIT. ALSO, 3 WIRES OF 16 AWG TO CONNECT TO J–BOX (ITEM#2).

(23) QTY. OF 2: 2" FILL (SUMP PUMP) LINE UNDER CONCRETE FLOOR FROM CATCH BASIN/SUMP PIT TO POSITION NEXT TO 1ST RECLAIM HOLDING TANK. END OF LINE NEAR HOLDING TANK TO BE STUBBED 2" UP FROM FLOOR.

(24) 2" RETURN LINE UNDER CONCRETE FLOOR FROM RECLAIM SEPARATOR TO TRENCH DRAIN. END OF LINE NEAR RECLAIM TO BE STUBBED 2" UP FROM FLOOR.

(25) 30A 110V POWER SUPPLY TO PROVIDE POWER FOR SUMP PUMP ON/OFF SWITCH.

(26) 1" CONDUIT UNDER CONCRETE FLOOR TO PROVIDE POWER FOR SUMP PUMP ON/OFF SWITCH.

(27) 2" SUCTION LINE FROM LAST RECLAIM HOLDING TANK TO RECLAIM PUMP.

(28) 4" OVERFLOW DRAIN LINE UNDER CONCRETE FLOOR FROM TOP OF 3'x3'x3' CATCH BASIN TO CONNECT TO SAND/OIL SEPARATOR AND CITY SEWER.

(29) ENTRANCE GARAGE DOOR – 4 WIRES OF 16 AWG TO CONNECT TO ITEM#2. — OPTIONAL

(30) EXIT GARAGE DOOR – 2 WIRES OF 16 AWG TO CONNECT TO ITEM#2.

NOTE: MANUFACTURER RECOMMENDS ALL CONNECTIONS BE PVC CONDUIT GASKETED WATER TIGHT CONNECTIONS.

BASIC REQUIREMENTS

MACHINE HEIGHT: 10' - 6"

CAR WASH ELECTRIC:
(DISCONNECT PROVIDED BY CAR WASH MANUFACTURER)
(CHOOSE ONE)
60 AMP 3PHASE 208V
60 AMP 3PHASE 230V
30 AMP 3PHASE 460V

BLOWER ELECTRIC:
(DISCONNECT PROVIDED BY CAR WASH MANUFACTURER)
(CHOOSE ONE)
150 AMP 3PHASE 208V
150 AMP 3PHASE 230V
100 AMP 3PHASE 460V

RECLAIM ELECTRIC:
(DISCONNECT PROVIDED BY CAR WASH MANUFACTURER)
(CHOOSE ONE)
20 AMP 3PHASE 208V
20 AMP 3PHASE 230V
10 AMP 3PHASE 460V

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DRAWING	FLOOR PLAN
TOLERANCE, INCHES (MM) UNLESS OTHERWISE SPECIFIED	DEC. .XX .010; DEC. .XXX .005; ANGULAR ± 5'; RADII .015 MAX; SURFACE MICROFINISH 125
Broadway Equipment Company	
DRAWN BY	DWF
DATE	03/17/08
APPV'D BY	–
DATE	–
TITLE NAME	RogersToyota–CarWashBay
SIZE	D
THIRD ANGLE PROJECTION	
EQUIPMENT	RollOver Car Wash
REV	0
SCALE 3/8"=1'–0"	DO NOT SCALE DRAWING
SHEET	1 OF 1

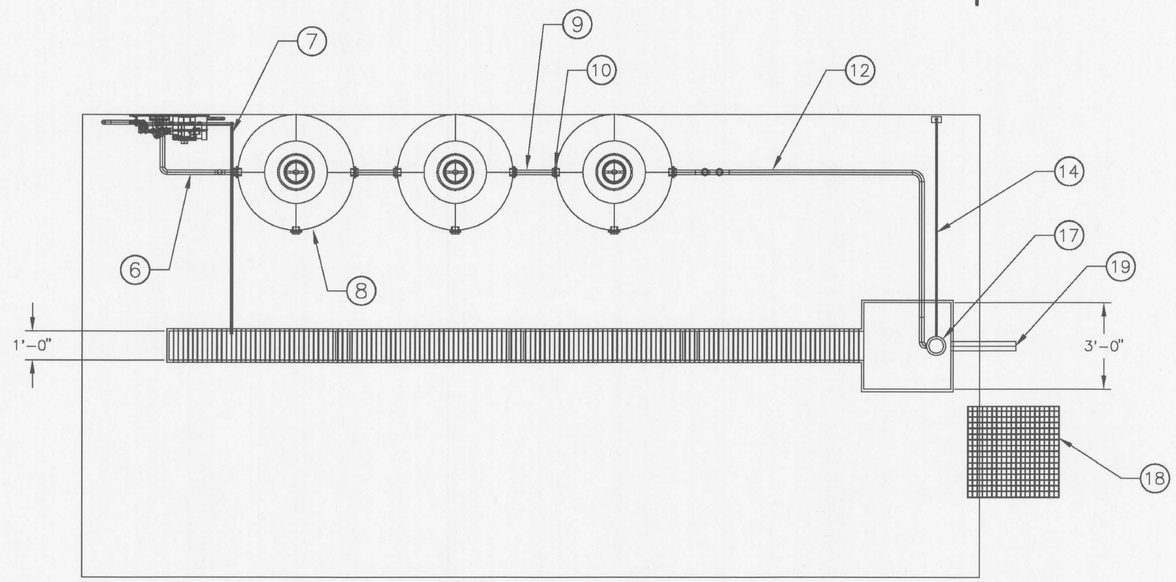
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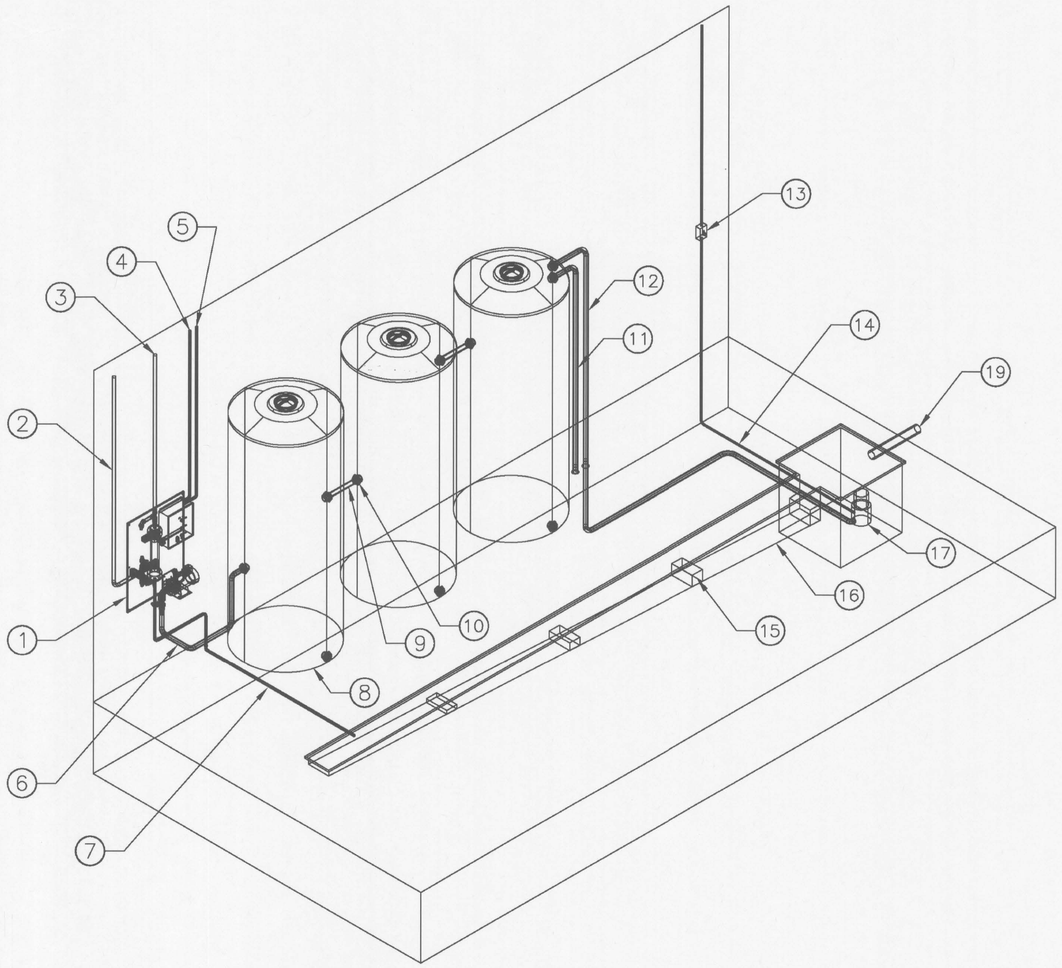
BILL OF MATERIALS			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	–	WATER RECLAIM SYSTEM
2	1	–	1" CITY WATER LINE TO RECLAIM
3	1	–	1" RECLAIM WATER LINE TO CAR WASH
4	1	–	3/4" CONDUIT TO CAR WASH COMPUTER (CONTROL WIRES)
5	1	–	3/4" CONDUIT (INCOMING ELECTRICAL, 3 PHASE 208/230/460)
6	1	–	2" WATER LINE TO RECLAIM (SUCTION LINE)
7	1	–	1" RETURN LINE (SEPARATOR DRAIN LINE)
8	3	–	750 GALLON HOLDING TANK
9	2	–	2" PVC CONNECTOR – 18" LONG
10	7	–	2" UNION CONNECTOR
11	1	–	2" DRAIN TO SEWER LINE
12	1	–	2" LINE TO TANKS FROM DRAIN PIT SUMP PUMP
13	1	–	SUMP PUMP SWITCH, 110V 20AMP
14	1	–	3/4" CONDUIT FOR SUMP PUMP ELECTRICAL
15	4	–	SAND TRAP WEIRS
16	1	–	DRAIN PIT, 12" WIDE x APPROX LENGTH OF BAY
17	1	–	DRAIN PIT SUMP PUMP
18	1	–	FLOOR GRATE
19	1	–	4" PIT OVERFLOW DRAIN TO SEWER

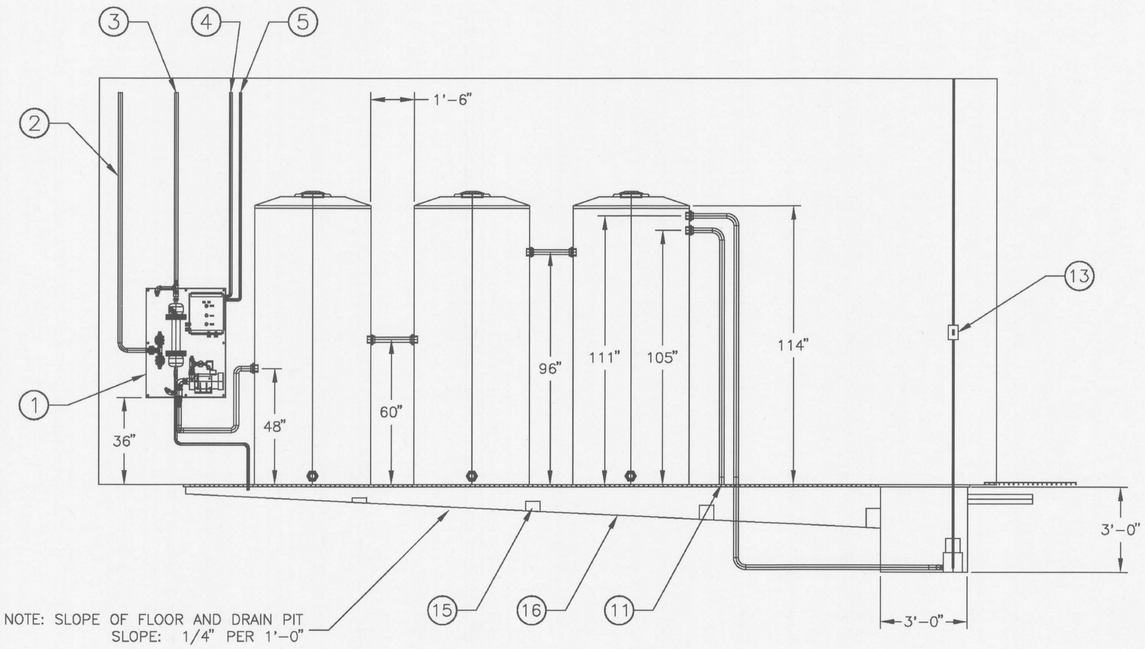
REVISIONS			
REV	ECO NUMBER	DATE	BY
–	–	–	–

NOTE: THIS IS AN EXAMPLE DRAWING OF AN ABOVE GROUND WATER RECLAIM SYSTEM.
(USE AS EXAMPLE ONLY, EXACT POSITION OF LINES AND EQUIPMENT DEPENDS ON SPECIFIC BAY CONFIGURATIONS).

NOTE: TRENCH SLOPES IN OPPOSITE DIRECTION.







NOTE: SLOPE OF FLOOR AND DRAIN PIT
SLOPE: 1/4" PER 1'–0"

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DRAWING: ISOMETRIC

TOLERANCE, INCHES (MM) UNLESS OTHERWISE SPECIFIED
DEC. .XX .010
DEC. .XXX .005
ANGULAR ± 5'
RADII .015 MAX
SURFACE MICROFINISH 125

Broadway Equipment Company

DRAWN BY CDC
DATE 10/18/02
APPV'D BY –
DATE –

TITLE NAME
WATER RECLAIM SYSTEM w/750GAL. TANKS IN BAY

SIZE D | THIRD ANGLE PROJECTION | EQUIPMENT WRS3–750GAL–3FTPIT–TANK3DRAIN | REV 0
SCALE N/A | DO NOT SCALE DRAWING | SHEET 1 OF 1

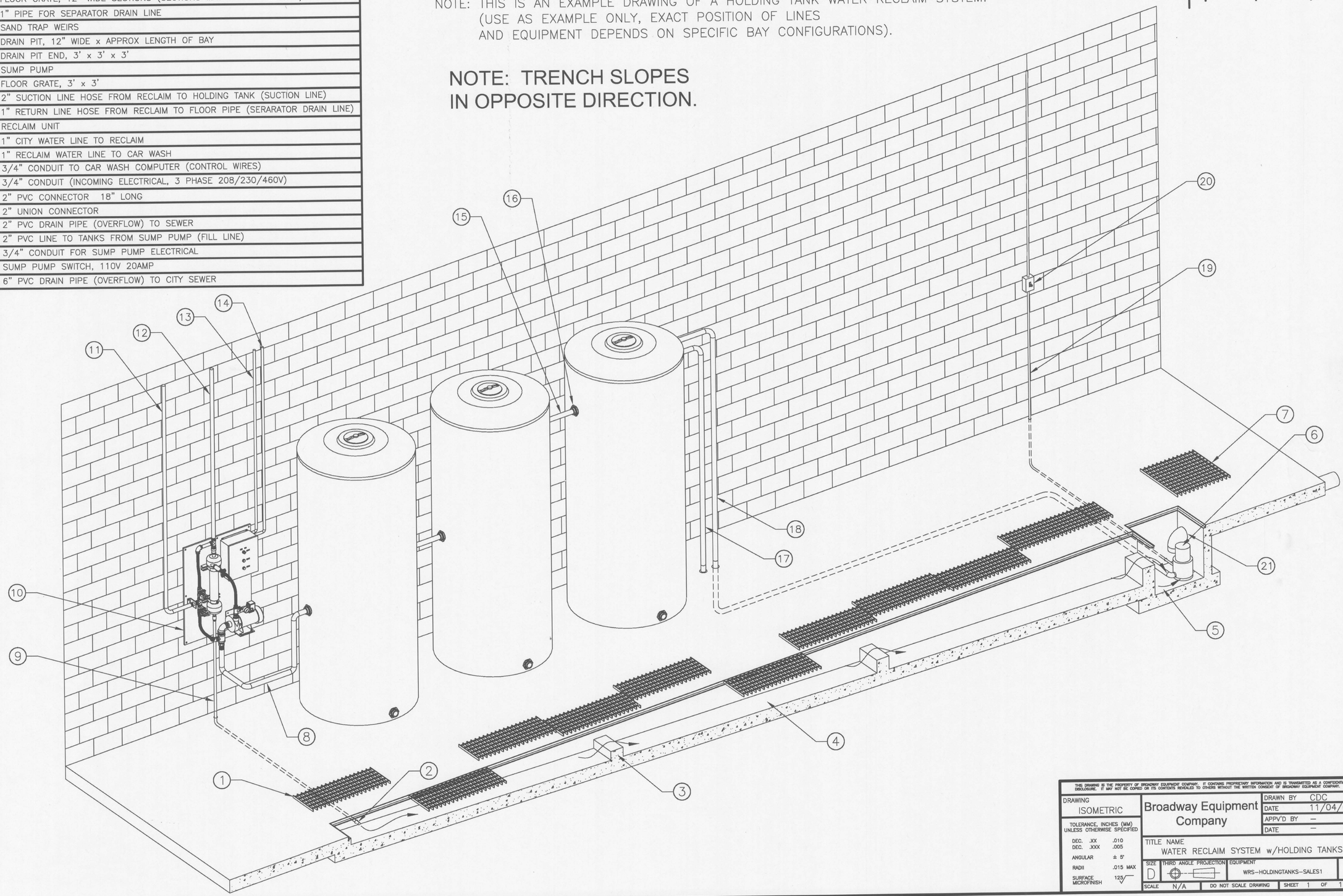
BID SET 6/20/08 Sheet 2

BILL OF MATERIALS			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	–	FLOOR GRATE, 12" WIDE SECTIONS (SECTIONS MAY VARY IN LENGTH)
2	1	–	1" PIPE FOR SEPARATOR DRAIN LINE
3	3	–	SAND TRAP WEIRS
4	1	–	DRAIN PIT, 12" WIDE x APPROX LENGTH OF BAY
5	1	–	DRAIN PIT END, 3' x 3' x 3'
6	1	–	SUMP PUMP
7	1	–	FLOOR GRATE, 3' x 3'
8	1	–	2" SUCTION LINE HOSE FROM RECLAIM TO HOLDING TANK (SUCTION LINE)
9	1	–	1" RETURN LINE HOSE FROM RECLAIM TO FLOOR PIPE (SERARATOR DRAIN LINE)
10	1	–	RECLAIM UNIT
11	1	–	1" CITY WATER LINE TO RECLAIM
12	1	–	1" RECLAIM WATER LINE TO CAR WASH
13	1	–	3/4" CONDUIT TO CAR WASH COMPUTER (CONTROL WIRES)
14	1	–	3/4" CONDUIT (INCOMING ELECTRICAL, 3 PHASE 208/230/460V)
15	2	–	2" PVC CONNECTOR 18" LONG
16	7	–	2" UNION CONNECTOR
17	1	–	2" PVC DRAIN PIPE (OVERFLOW) TO SEWER
18	1	–	2" PVC LINE TO TANKS FROM SUMP PUMP (FILL LINE)
19	1	–	3/4" CONDUIT FOR SUMP PUMP ELECTRICAL
20	1	–	SUMP PUMP SWITCH, 110V 20AMP
21	1	–	6" PVC DRAIN PIPE (OVERFLOW) TO CITY SEWER

REVISIONS			
REV	ECO NUMBER	DATE	BY
–	–	–	–

NOTE: THIS IS AN EXAMPLE DRAWING OF A HOLDING TANK WATER RECLAIM SYSTEM.
(USE AS EXAMPLE ONLY, EXACT POSITION OF LINES
AND EQUIPMENT DEPENDS ON SPECIFIC BAY CONFIGURATIONS).

NOTE: TRENCH SLOPES
IN OPPOSITE DIRECTION.



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DRAWING: ISOMETRIC

TOLERANCE, INCHES (MM) UNLESS OTHERWISE SPECIFIED
DEC. .XX .010
DEC. .XXX .005
ANGULAR ± 5'
RADII .015 MAX
SURFACE MICROFINISH 125

Broadway Equipment Company

DRAWN BY CDC
DATE 11/04/02
APPV'D BY –
DATE –

TITLE NAME
WATER RECLAIM SYSTEM w/HOLDING TANKS

SIZE D | THIRD ANGLE PROJECTION | EQUIPMENT WRS–HOLDINGTANKS–SALES1 | REV 0
SCALE N/A | DO NOT SCALE DRAWING | SHEET 1 OF 1