



136 North Monroe Street, Waterloo, Wisconsin 53594-1198
Phone (920) 478-3025
Fax (920) 478-2021

**NOTICE OF A CITY OF WATERLOO
PLAN COMMISSION MEETING**

Pursuant to Section 19.84 Wisconsin Statutes, notice is hereby given to the public and the news media, the following meeting will be held:

MEETING: PLAN COMMISSION
DATE: TUESDAY, JANUARY 23, 2018 **TIME: 7:00 p.m.**
LOCATION: 136 N. MONROE STREET, MUNICIPAL BUILDING COUNCIL CHAMBERS

to consider the following:

PUBLIC HEARING #1

1. CALL TO ORDER -- CONDITIONAL USE PERMIT – HIEP, LLC, PROPERTY LOCATED AT 700 COMMERCIAL AVENUE
The Applicant, HIEP, LLC, Owner Of The Property Located At 700 Commercial Avenue, Is Requesting A Conditional Use Permit To Allow For Construction Of 65' building height
2. ADJOURN PUBLIC HEARING

PLAN COMMISSION REGULARLY SCHEDULED MEETING

1. CALL TO ORDER AND ROLL CALL
2. APPROVAL OF PREVIOUSLY UNAPPROVED MEETING MINUTES
3. CITIZEN INPUT
4. COMPLIANCE & ENFORCEMENT REPORT
5. NEW BUSINESS
 - a. Conditional Use Permit, HIEP, LLC, Owner Of The Property Located At 700 Commercial Avenue, Is Requesting A Conditional Use Permit To Allow For Construction Of 65' building height
6. FUTURE AGENDA ITEMS AND ANNOUNCEMENTS
 - a. Considering The Following Updates: Zoning Maps, Conditional Use Forms And Comprehensive Plan Map
7. ADJOURNMENT

Mo Hansen

Mo Hansen, Clerk/Treasurer

Posted, Distributed & Emailed: January 19, 2018

Members: Leisses, Thompson, Crosby, Butzine, Reynolds, Lannoy and Springer

PLEASE NOTE: It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above meeting(s) to gather information. No action will be taken by any governmental body other than that specifically noticed. Also, upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request such services please contact the clerk's office at the above location.



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**NOTICE OF PUBLIC HEARING FOR CONDITIONAL USE PERMIT UNDER PROVISIONS
OF CHAPTER §385-15 AND §385-21 OF THE ZONING CODE OF THE CITY OF
WATERLOO, JEFFERSON COUNTY, WISCONSIN**

Please take notice that the Plan Commission of the City of Waterloo, Jefferson County, Wisconsin, acting under provisions of Chapter §385-15 and §385-21 of the Zoning Code of the City of Waterloo, shall hold a public hearing on the matter of an application for a conditional use permit received from HIEP, LLC, owner of the property located at 700 Commercial Avenue, Waterloo.

The applicant is requesting a conditional use permit to allow the construction of a 65' building height. A conditional use permit is required for a building height exceeding 35' in a M-1 Limited Industrial District.

The property is described as follows:

Tax Parcel: #290-0813-0513-003

Legal Description: LOT 3, CSM 5683-32-066, DOC 1365338, City of Waterloo, Jefferson County, Wisconsin

Also known as 700 Commercial Avenue.

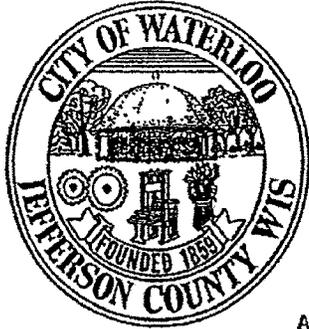
Be further notified that the Plan Commission will hear all persons interested or their agents or attorneys concerning this conditional use permit application at a public hearing. The public hearing will be held at 7:00 p.m. on Tuesday, January 23, 2018 in the Council Chamber of the Municipal Building, 136 N. Monroe Street, Waterloo.

Subsequent to the public hearing, the Plan Commission shall recommend approval, denial, or conditional approval of the conditional use permit to the Common Council. The City Council will act on the Plan Commission's recommendation at its regularly scheduled meeting on Thursday, February 1, 2018.

M. Hansen

Morton J. Hansen
City Clerk/Treasurer

Pub: The Courier: January 18, 2018



136 NORTH MONROE STREET, WATERLOO, WISCONSIN 53594-1198
Phone (920) 478-3025
Fax (920) 478-2021

APPLICATION FOR CONDITIONAL USE PERMIT

(Review and Action by City Plan Commission/Common Council)

Number: _____ Date Filed: 01/09/2018 Fee Paid: \$285.00

Location of Property: lot located at north end of Commercial Ave, Waterloo, WI, 53594

Applicant: Eric Salm / HIEP LLC

Address: 505 S. Rosa Rd Suite 123 Madison WI 53719 Telephone: 1-608-441-8373

Owner of Property: HIEP LLC

Address: 505 S. Rosa Rd Suite 123 Madison WI 53719 Telephone: 1-608-441-8373

Contractor: JP-Cullen & Sons, Inc.

Address: 330 E Delavan Dr, Janesville, WI 53545 Telephone: 608-754-6601

Architect or Professional Engineer: Dimension IV

Address: 6515 Grand Teton Plaza, Suite 120, Madison, WI 53719 Telephone: 608-829-444

Legal Description of Property: Approximately 15.02 acres identified as parcel number 290-0813-0513-003

Land Parcel Size: 15.02 acres Present Use: Vacant/used farmland Zoning District: M-1

Type of Existing Structure (if any): None

Proposed Use of the Structure or Site: MnPA: Feed Ingredient Process Number of Employees: >20

TERMS OF MUNICIPAL CODE

385-15: Building Height 35'

CONDITIONAL USE REQUESTED

Building Height 65'

Specify Reason(s) for Application: (for example, insufficient lot area, setback, etc.)

The major piece of equipment required to produce our product is roughly 60' tall. Without this piece of equipment in place, we would not be able to utilize the site as we have intended.

ATTACH THE FOLLOWING:

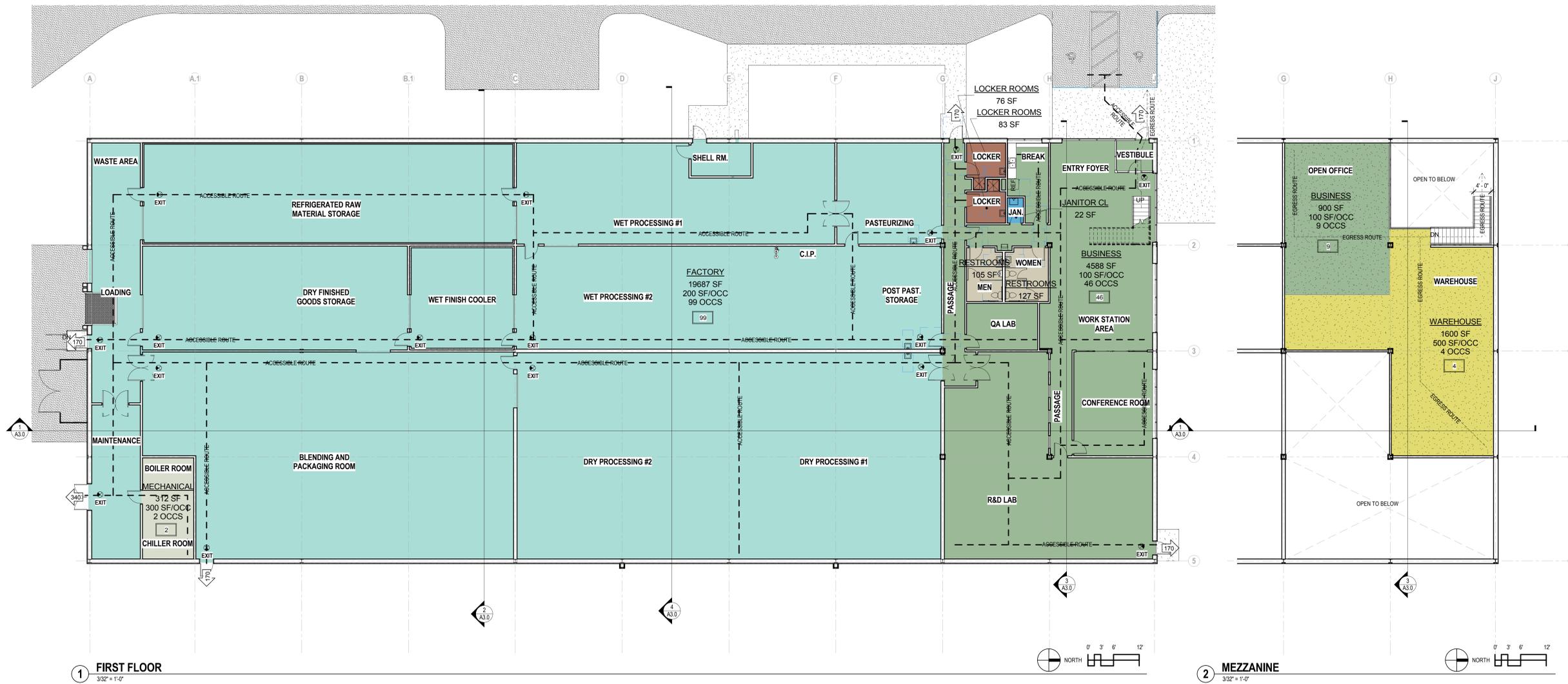
1. Adjoining owners, all names and addresses of all abutting and opposite property owners within 200 feet.
2. Site plan showing the area involved, its location, dimensions, elevations, drainage, parking, etc., and location of adjacent structures within 200 feet.

Date: 1/5/2018

[Signature]
Signature of Applicant

**AB E DISCOVERY -
NEW HIEP FACILITY**

COMMERCIAL AVE.
WATERLOO, WI



OCCUPANCY LEGEND

- BUSINESS
- FACTORY
- JANITOR CL
- LOCKER ROOMS
- MECHANICAL
- RESTROOMS
- WAREHOUSE

AREAS AND OCCUPANCIES

OCCUPANCY TYPE	AREA	OCC FACTOR	OCC TOTAL
BUSINESS (B)	5487 SF	100	55
FACTORY (F-1)	19687 SF	200	99
JANITOR CLOSET	22 SF	0	0
LOCKER ROOMS	159 SF	50	4
MECHANICAL	312 SF	300	2
RESTROOMS	232 SF	0	0
WAREHOUSE	1600 SF	500	4
TOTALS	27500 SF		164

PLUMBING FIXTURE COUNT

TOTAL OCCUPANTS: 164
MEN: 82
WOMEN: 82

FIXTURE	MEN		WOMEN	
	REQ'D	PROVIDED	REQ'D	PROVIDED
LAV	2	2	2	2
WC	1	1	2	2
URINAL	1	1		
SERVICE SINK	1	1		
DRINKING FOUNTAIN	1	1		

CODE COMPLIANCE GENERAL NOTES

- A. REFER TO SHEET A7.0 FOR ACCESSIBLE MOUNTING AND CLEARANCES INFORMATION.
- B. ALL FIRE EXTINGUISHER CABINETS SHALL BE IN APPROVED LOCATIONS WITH A MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER TO BE 75 FEET PER I.F.C.
- C. COMMON PATH OF EGRESS TRAVEL SHALL NOT EXCEED 300' PER 1014.3.
- D. EXIT ACCESS TRAVEL DISTANCE IS 'XXX' WITH SPRINKLERS PER TABLE 1016.1.
- E. FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED IN THE FIELD WITH SIGNS OR STENCILING PER IBC 703.6

CODE COMPLIANCE SYMBOLS LEGEND

- FEC INDICATES FIRE EXTINGUISHER CABINET LOCATION
- XXX INDICATES OCCUPANCY CAPACITY
- INDICATES ADA ACCESSIBLE ROUTE
- XXX INDICATES EXIT AND EXIT CAPACITY
- EXIT INDICATES EXIT SIGN
- INDICATES PATH OF EGRESS ROUTE

DATE OF ISSUE: 12/20/17

PRELIMINARY
Not for
Construction

PROJECT # 17112

CODE
COMPLIANCE PLAN

G1.1

03 3000 CAST-IN-PLACE CONCRETE

1.1 SUMMARY
1.1.1 Section Includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement, protection, and finishes.
1.1.2 Related Requirements:
1.1.2.1 Section 31 2000 "Earth Moving" for drainage fill under slabs-on-grade.
1.1.2.2 Section 32 1313 "Concrete Paving" for concrete walks.
1.2 REFERENCE STANDARDS
1.2.1 American Concrete Institute (ACI):
1.2.1.1 ACI 211.1, Proportioning Concrete Mixtures
1.2.1.2 ACI 301, Specifications for Structural Concrete
1.2.1.3 ACI 303.1, Specification for Cast-in-Place Architectural Concrete
1.2.1.4 ACI 306, Hot-Weather Concreting
1.2.1.5 ACI 306, Specifications for Cold-Weather Concreting
1.2.1.6 ACI 308, Specifications for Curing Concrete
1.2.1.7 ACI 309, Consolidation of Concrete
1.2.1.8 ACI 318, Building Code Requirements for Structural Concrete
1.3 DEFINITIONS
1.3.1 Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.
1.3.2 W/C Ratio: The ratio by weight of water to cementitious materials.
1.4 ACTION SUBMITTALS
1.4.1 Product Data: For each type of product.
1.4.2 Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
1.4.2.1 Indicate amounts of mixing water to be withheld for later addition at Project site.
1.4.3 Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and arrangement. Include bar sizes, length, material, grade, bar schedules, bar spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
1.4.4 Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
1.4.4.1 Location of construction joints is subject to approval of the Architect.
1.5 INFORMATIONAL SUBMITTALS
1.5.1 Welding certificates.
1.5.2 Material Certificates: For each of the following, signed by manufacturers:
1.5.2.1 Cementitious materials.
1.5.2.2 Admixtures.
1.5.2.3 Steel reinforcement and accessories.
1.5.2.4 Fiber reinforcement.
1.5.2.5 Curing compounds.
1.5.3 Material Test Reports: For the following, from a qualified testing agency:
1.5.3.2 Aggregates: Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.
1.5.4 Floor surface flatness and levelness measurements indicating compliance with specified tolerances.
1.5.5 Field quality-control reports.
1.5.6 Minutes of preinstallation conference.
1.6 QUALITY ASSURANCE
1.6.1 Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
1.6.2 Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
1.6.2.1 Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
1.6.3 Testing Agency Qualifications: An independent agency qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
1.6.3.1 Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician, Grade I, and testing agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician, Grade II.
1.6.4 Welding Qualifications: Quality procedures and personnel according to AWS D1.4/D 1.4M.
1.7 DELIVERY, STORAGE, AND HANDLING
1.7.1 Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Avoid damaging coatings on steel reinforcement.
1.8 FIELD CONDITIONS
1.8.1 Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1.8.1.1 When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
1.8.1.2 Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
1.8.1.3 Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
1.8.2 Hot-Weather Placement: Comply with ACI 301 and ACI 305.1, and as follows.
1.8.2.1 Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature; provide water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
1.8.2.2 Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.
2.1 CONCRETE, GENERAL
2.1 ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
2.1.1 ACI 301.
2.1.2 ACI 117.
2.2 FORM-FACING MATERIALS
2.2.1 Smooth-Formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
2.2.1.1 Plywood, metal, or other approved panel materials.
2.2.1.2 Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows: (Confirm desired finish with Architect.)
a. For standard finish, use Structural 1, B-B or better; mill oiled and edge sealed.
OR
b. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.
2.2.2 Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
2.3 STEEL REINFORCEMENT
2.3.1 Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
2.4 REINFORCEMENT ACCESSORIES
2.4.1 Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
2.4.1.1 For concrete surfaces exposed to view, where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.
2.5 CONCRETE MATERIALS
2.5.1 Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
2.5.2 Cementitious Materials:
2.5.2.1 Portland Cement: ASTM C 150/C 150M, Type III.
2.5.2.2 Fly Ash: ASTM C 618, Class F or C.
2.5.2.3 Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
2.5.2.4 Blended Hydraulic Cement: ASTM C 595/C 595M, Type IS, Portland blast-furnace slag, Type IP, Portland-pozzolan, Type IL, Portland-limestone, Type IT, ternary blended cement.
2.5.2.5 Silica Fume: ASTM C 1240, amorphous silica.
2.5.3 Normal-Weight Aggregates: ASTM C 33/C 33M, Class 35 coarse aggregate or better, graded. Provide aggregates from a single source with documented service record date of at least 10 years' satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.
2.5.3.1 Maximum Coarse-Aggregate Size: 1 inch nominal.
2.5.3.2 Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
2.5.4 Air-Entraining Admixture: ASTM C 260/C 260M.
2.5.5 Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
2.5.5.1 Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2.5.5.2 Retarding Admixture: ASTM C 494/C 494M, Type B.
2.5.5.3 Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
2.5.5.4 High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
2.5.5.5 High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
2.5.5.6 Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
2.5.6 Water: ASTM C 94/C 94M and potable.
2.6 FIBER REINFORCEMENT
2.6.1 Synthetic Macro-Fiber: Polyolefin or polypropylene macro-fibers engineered and designed for use in concrete, complying with ASTM C 1116/C 1116M, Type III, 2.14 inches long.
2.6.1.1 Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. BASF Corp. - Construction Chemicals.
b. Eudil Chemical Company (The), an RPM company.
c. FORTA Corporation.
d. GCP Applied Technologies Inc. (formerly Grace Construction Products).
e. Nycon, Inc.
f. Propex Operating Company, LLC.
2.7 VAPOR RETARDERS
2.7.1 Sheet Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils thick.

2.8 CURING MATERIALS
2.8.1 Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
2.8.2 Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
2.8.3 Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
2.8.4 Water: Potable.
2.8.5 Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering, where concrete is to receive flooring.
2.9 RELATED MATERIALS
2.9.1 Expansion and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
2.9.2 Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:
2.9.2.1 Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
2.10 REPAIR MATERIALS
2.10.1 Repair Underlayment for slabs beneath floor coverings: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.
2.10.1.1 Cement Binder: ASTM C 150/C 150M, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2.10.1.2 Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
2.10.1.3 Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by underlayment manufacturer.
2.10.1.4 Compressive Strength: Not less than 4100 psi at 28 days when tested according to ASTM C 109/C 109M.
2.10.2 Repair Overlayment for slabs with no floor covering: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch and that can be filled over a scarified surface to match adjacent floor elevations.
2.10.2.1 Cement Binder: ASTM C 150/C 150M, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2.10.2.2 Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
2.10.2.3 Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by topping manufacturer.
2.10.2.4 Compressive Strength: Not less than 5000 psi at 28 days when tested according to ASTM C 109/C 109M.
2.11 CONCRETE MIXTURES, GENERAL
2.11.1 Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
2.11.1.1 Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
2.11.2 Cementitious Materials: For concrete to receive deicing salts, use fly ash, pozzolan, slag cement, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 35 percent.
For concrete exposed to deicing salts, limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows:
1. Fly Ash: 25 percent.
2. Combined Fly Ash and Pozzolan: 25 percent.
3. Slag Cement: 50 percent.
4. Combined Fly Ash or Pozzolan and Slag Cement: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.
5. Silica Fume: 10 percent.
6. Combined Fly Ash, Pozzolans, and Silica Fume: 35 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.
7. Combined Fly Ash or Pozzolans, Slag Cement, and Silica Fume: 50 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.
2.11.3 Limit water-soluble chloride-ion content in hardened concrete to 0.06 percent by weight of cement for prestressed concrete.
0.15 percent by weight of cement for reinforced concrete exposed to chlorides.
0.30 percent by weight of cement for reinforced concrete not protected from moisture.
1.00 percent by weight of cement for reinforced concrete protected from moisture.
Admixtures: Use admixtures according to manufacturer's written instructions.
2.11.4.1 Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.
2.11.4.2 Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
2.11.4.3 Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a w/c ratio below 0.50.
2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS
2.12.1 Footings: Normal-weight concrete.
2.12.1.1 Minimum Compressive Strength: As indicated at 28 days; 4000 psi min.
2.12.1.2 Maximum W/C Ratio: 0.45.
2.12.1.3 Slump Limit: 6 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
2.12.1.4 Air Content: 3 percent, plus or minus 1.5 percent at point of delivery for 3/4 inch to 1-inch nominal maximum aggregate size.
2.12.2 Foundation Walls: Normal-weight concrete.
2.12.1.1 Minimum Compressive Strength: As indicated at 28 days; 4000 psi min.
2.12.1.2 Maximum W/C Ratio: 0.45.
2.12.1.3 Slump Limit: 6 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
2.12.1.4 Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 3/4 inch to 1-inch nominal maximum aggregate size.
2.12.3 Interior Slabs-on-Grade: Normal-weight concrete.
2.12.3.1 Minimum Compressive Strength: As indicated at 28 days; 3000 psi min.
2.12.3.2 Maximum W/C Ratio: 0.47.
2.12.3.3 Maximum Water Content: 27 gal/cu yd.
2.12.4 As an alternate to Item 1 of 27 gal/cu yd. water content, provide documentation of the shrinkage tests the proposed concrete mix conducted in accordance with ASTM C157 for specimens cured for 7 days in water and placed in drying environment for 21 days--slump change should be less than 0.04% at 28 days age.
Maximum 8.5 cubic feet of sand per cubic yard of concrete. Sand shall have a fineness modulus of between 2.8 and 3.1.
2.12.6 8/16 total aggregate gradation with minimum percent retained on standard sieve sizes as recommended in ACI 302-2010, section 5.4.3, add intermediate aggregate if required.
2.12.7 Slump Limit: 6 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
2.12.8 Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.
2.12.9 Synthetic Macro-Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than a rate of 4 lb/cu yd.
2.13 FABRICATING REINFORCEMENT
2.13.1 Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."
2.14 CONCRETE MIXING
2.14.1 Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M, and furnish batch ticket information.
2.14.1.1 When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.
3.1 FORMWORK INSTALLATION
3.1.1 Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
3.1.2 Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
3.1.3 Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
3.1.3.1 Class A, 1/8 inch for smooth-formed finished surfaces.
3.1.3.2 Class B, 1/4 inch for rough-formed finished surfaces.
3.1.3.3 Construct forms tight enough to prevent loss of concrete mortar.
3.1.4 Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
3.1.5.1 Install keyways, reglets, recesses, and the like, for easy removal.
3.1.5.2 Do not use rust-stained steel form-facing material.
3.1.6 Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
3.1.7 Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
3.1.8 Chamfer exterior corners and edges of permanently exposed concrete.
3.1.9 Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
3.1.10 Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
3.1.11 Righten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
3.1.12 Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.
3.2 EMBEDDED ITEM INSTALLATION
3.2.1 Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
3.2.1.1 Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303.
3.3 REMOVING AND REUSING FORMS
3.3.1 General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations, and curing and protection operations need to be maintained.
3.3.1.1 Leave formwork for beam soffits, joists, slabs, and other structural elements that support weight of concrete in place until concrete has achieved at least 80 percent of its 28-day design compressive strength.
3.3.1.2 Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
3.3.2 Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material are not acceptable for exposed surfaces. Apply new form-release agent.
3.3.3 When forms are reused, clean surfaces, remove fins and lallance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.
3.4 VAPOR RETARDER INSTALLATION
3.4.1 Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
3.4.1.1 Lap joints 6 inches and seal with manufacturer's recommended tape.
3.5 STEEL REINFORCEMENT INSTALLATION
3.5.1 General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
3.5.1.1 Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.
3.5.3 Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
3.5.3.1 Weld reinforcing bars according to AWS D1.4/D 1.4M, where indicated.
3.5.4 Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
3.5.5 Install welded-wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.
3.5.6 Epoxy-Coated Reinforcement: Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D 3963/D 3963M. Use epoxy-coated steel wire ties to fasten epoxy-coated steel reinforcement.
3.6 JOINTS
3.6.1 General: Construct joints true to line with faces perpendicular to surface plane of concrete.
3.6.2 Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
3.6.2.1 Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
3.6.2.2 Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations when possible.
3.6.2.3 Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
3.6.2.4 Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
3.6.3 Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
3.6.3.1 Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groove tool marks on concrete surfaces.
3.6.3.2 Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
3.6.4 Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
3.6.4.1 Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.
3.6.4.2 Terminate full-width joint-filler strips not less than 12 inch or more than 1 inch below finished concrete surface where joint sealants, specified in Section 07 9200 "Joint Sealants," are indicated.
3.6.4.3 Install joint-filler strips in lengths as long as practical. Where more than one length is required, lace or clip sections together.
3.6.5 Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.
3.7 CONCRETE PLACEMENT
3.7.1 Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.
3.7.2 Do not add water to concrete during delivery, at Project site, or during placement unless approved by Engineer.
3.7.3 Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
3.7.3.1 Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
3.7.4 Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
3.7.4.1 Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid indirect contraction joints.
3.7.4.2 Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
3.7.4.3 Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
3.7.5 Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
3.7.5.1 Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
3.7.5.2 Maintain reinforcement in position on chairs during concrete placement.
3.7.5.3 Soreed slab surfaces with a straightedge and strike off to correct elevations.
3.7.5.4 Slope surfaces uniformly to drains where required.
3.7.5.5 Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
3.8 FINISHING FORMED SURFACES
3.8.1 Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
3.8.1.1 Apply to concrete surfaces not exposed to public view.
3.8.2 Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
3.8.2.1 Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.
3.8.3 Related Uniformed Surfaces: At tops of walls, horizontal offsets, and similar uniformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent uniformed surfaces unless otherwise indicated.
3.9 FINISHING FLOORS AND SLABS
3.9.1 General: Comply with ACI 302.1R recommendations for screeding, reststraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
3.9.2 Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbed. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in one direction.
3.9.2.1 Apply scratch finish to surfaces indicated and to receive concrete floor toppings, to receive mortar setting beds, and for bonded cementitious floor finishes.
3.9.3 Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and reststraightening until surface is left with a uniform, smooth, granular texture.
3.9.3.1 Apply float finish to surfaces indicated to receive trowel finish and to be covered with fluid-applied or sheet waterproofing, bull-ups or membrane roofing, or sand-bed terrazzo.
3.9.4 Trowel Finish: After applying float finish, apply first trowelling and consolidate concrete by hand or power-driven trowel. Continue trowelling passes and reststraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through finished coatings or floor coverings.
3.9.4.1 Apply a trowel finish to surfaces indicated, exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
3.9.4.2 Finish surfaces to the following tolerances, according to ASTM E 1155, for a randomly trafficked floor surface:
a. Specified overall values of flatness, F(F) 30; and of levelness, F(L) 20; with minimum local values of flatness, F(F) 24; and of levelness, F(L) 20, for slabs.
3.9.5 Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated, and where ceramic or quarry tile is to be installed by either thickest or thinnest method. While concrete is still plastic, slightly scarify surface with a fine broom.
3.9.5.1 Comply with flatness and levelness tolerances for trowel-finished floor surfaces.
3.9.6 Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.
3.9.6.1 Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.
3.10 MISCELLANEOUS CONCRETE ITEM INSTALLATION
3.10.1 Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

3.11 CONCRETE PROTECTING AND CURING
3.11.1 General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 305.1 for hot-weather protection during curing.
3.11.2 Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbing concrete, but before float finishing.
3.11.3 Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for remainder of curing period.
3.11.4 Uniformed Surfaces: Begin curing immediately after finishing concrete. Cure uniformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
3.11.5 Cure concrete according to ACI 308.1, by one or a combination of the following methods:
3.11.5.1 Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
a. Water.
b. Continuous water-fog spray.
c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
3.11.5.2 Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies does not interfere with bonding of floor covering used on Project.
3.11.5.3 Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
a. Removal After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound does not interfere with bonding of floor covering used on Project.
3.11.5.4 Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.
3.12 JOINT FILLING
3.12.1 Prepare, clean, and install joint filler according to manufacturer's written instructions.
3.12.1.1 Defect joint filling until concrete has aged at least one month. Do not fill joints until construction traffic has permanently ceased.
3.12.2 Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joints clean and dry.
3.13 FIELD QUALITY CONTROL
3.13.1 Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
3.13.2 Inspections:
1. Steel reinforcement placement.
2. Steel reinforcement welding.
3. Verification of use of required design mixture.
4. Concrete placement, including conveying and depositing.
5. Curing procedures and maintenance of curing temperature.
6. Verification of concrete strength before removal of shores and forms from beams and slabs.
3.13.3 Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements:
1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one for each additional 50 cu. yd. or fraction thereof.
2. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
3. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
4. Air Content: ASTM C 231/C 231M, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
5. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.
6. Unit Weight: ASTM C 567/C 567M, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
7. Compression Test Specimens: ASTM C 31C 31M.
a. Cast and field cure two sets of two standard cylinder specimens for each composite sample.
8. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
a. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
10. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
11. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
12. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
13. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by bored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.
14. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
15. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.
3.13.4 Measure floor and slab flatness and levelness according to ASTM E 1155 within 48 hours of finishing.

07 2100 - FOUNDATION INSULATION
1.1 Submittals:
1.1.1 Product Data: For each type of product indicated, include product test reports and research/evaluation reports.
2.2 Vapor Retarders:
2.2.1 Polyethylene Vapor Retarders: ASTM D 4397, 10 mils thick.
2.2.2 Vapor Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
3.1 Installation:
3.1.1 Comply with insulation manufacturer's written instructions applicable to products and application indicated. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.
3.1.2 Install insulation in areas and in thicknesses indicated or required to produce R-value indicated. Cut and fit tightly around obstructions and fill voids with insulation. Tape joints on exterior walls to assure tight joints.
3.1.3 Verify that site conditions are ready to receive insulation materials.
3.1.4 Protect insulation board from damage and UV exposure.
3.1.5 Protect below-grade insulation on vertical surfaces from damage during backfilling by applying protection course with joints butted. Set in adhesive according to insulation manufacturer's written instructions.
3.1.6 Protect top surface of horizontal insulation from damage during concrete work by applying protection course with joints butted.
3.1.7



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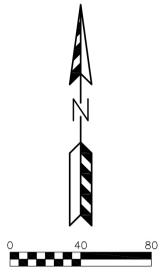
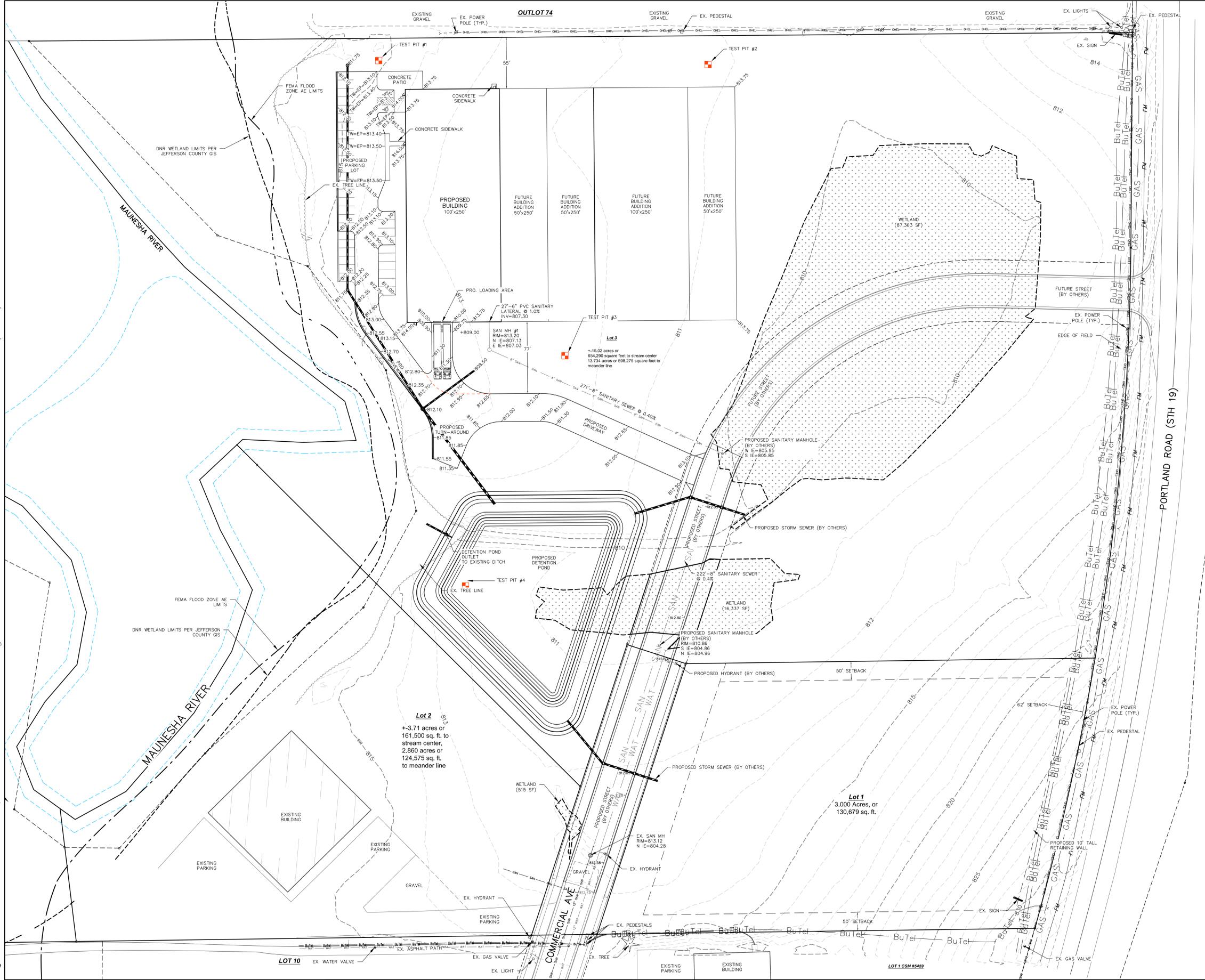


AB E DISCOVERY - NEW HIEP FACILITY
COMMERCIAL AVE.
WATERLOO, WI

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PROJECT # 17112

SPECIFICATIONS
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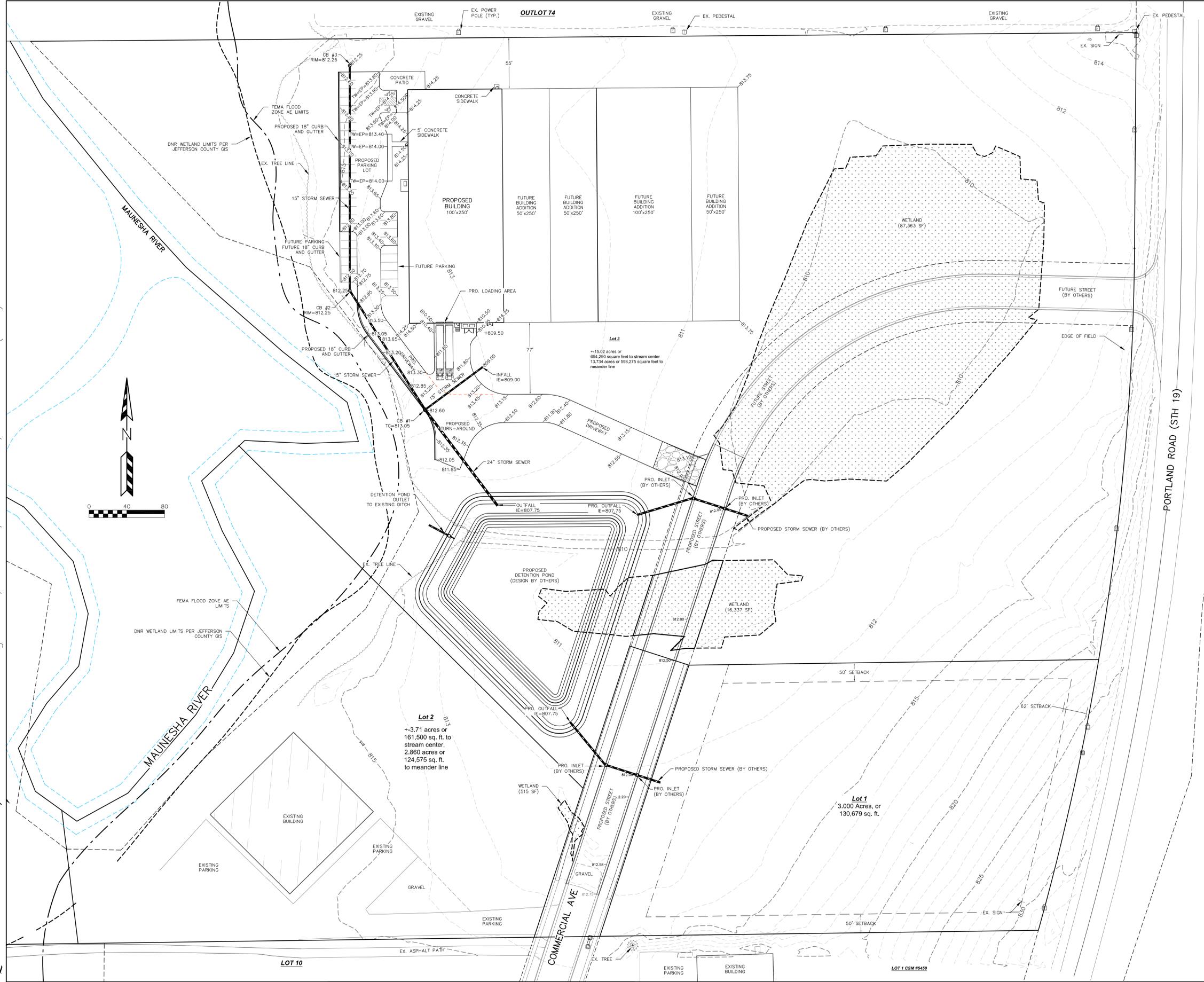


Ab E DISCOVERY, LLC - WATERLOO
 OVERALL SITE PLAN
 DATED: NOVEMBER 8, 2017

C-101

QUAM ENGINEERING, LLC
 Residential and Commercial Site Design Consultants

1519 E Washington Street, Suite A; West Bend, Wisconsin 53095
 Phone (262) 338-6641; www.quamengineering.com



EROSION NOTES:
 THE STONE TRACKING PAD SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE TRACKING PAD IS TO BE MAINTAINED BY THE CONTRACTOR IN A CONDITION, WHICH WILL PREVENT THE TRACK OF MUD OR DRY SEDIMENT ONTO THE ADJACENT PUBLIC STREETS. SEDIMENT REACHING THE PUBLIC ROAD SHALL BE REMOVED BY STREET CLEANING (NOT HYDRAULIC FLUSHING) BEFORE THE END OF EACH WORKDAY.
 SOIL STOCKPILES SHALL BE LOCATED A MINIMUM OF 75 FEET FROM LAKES, STREAMS, WETLANDS, DITCHES, DRAINAGE WAYS, CURBS AND GUTTERS OR OTHER STORMWATER CONVEYANCE SYSTEM, UNLESS OTHERWISE APPROVED BY THE ENGINEER. MEASURES SHALL BE TAKEN TO MINIMIZE EROSION AND RUNOFF FROM ANY SOIL STOCKPILES THAT WILL LIKELY REMAIN FOR MORE THAN FIVE WORKING DAYS. ANY STOCKPILE THAT REMAINS FOR MORE THAN 30 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.
 EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO GRADING OPERATIONS AND SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS ESTABLISHED. ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF A 0.5 INCH RAIN EVENT. ALL MAINTENANCE WILL FOLLOW AN INSPECTION WITHIN 24 HOURS.
 CUT AND FILL SLOPES SHALL BE NO GREATER THAN 3:1.
 EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ACCEPTANCE OF THIS PROJECT. EROSION CONTROL MEASURES AS SHOWN SHALL BE THE MINIMUM PRECAUTIONS THAT WILL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECOGNIZING AND CORRECTING ALL EROSION CONTROL PROBLEMS THAT ARE A RESULT OF CONSTRUCTION ACTIVITIES. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE DEVELOPER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.
 ALL DISTURBED SLOPES OF 4:1 OR GREATER AND DRAINAGE SWALES SHALL BE STABILIZED WITH CURLEX EROSION CONTROL FABRIC (INSTALL PER MANUFACTURER'S SPECIFICATIONS).

TIME SCHEDULE:
 APRIL 15, 2018 INSTALL WET DETENTION POND AND INITIAL EROSION CONTROL DEVICES
 APRIL 16 - MAY 15, 2018 CONSTRUCT PROPOSED BUILDING, PARKING LOT AND UTILITIES.
 MAY 16 - 31, 2018 COMPLETE FINAL LANDSCAPING AND RESTORE ALL PVIOUSLY DISTURBED AREAS.

RESTORATION NOTES:
 ALL DISTURBED AREAS, EXCEPT STREET PAVEMENT AND SIDEWALK AREAS, SHALL RECEIVE A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, FERTILIZER, SEED AND MULCH. RESTORATION WILL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. LAWN AREAS WITH SLOPES GREATER THAN 4:1 SHALL BE SEED WITH OLS "NOMO" MIX OR EQUAL. ALL OTHER DISTURBED AREAS SHALL BE SEED WITH MADISON PARKS MIX OR EQUAL MIXTURES SHALL BE IN ACCORDANCE WITH SECTION 630 OF D.O.T. SPECIFICATIONS.
 AN EQUAL AMOUNT OF ANNUAL RYEGRASS SHALL BE ADDED TO THE MIX. SEED MIXTURES SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. FERTILIZER SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. FERTILIZER SHALL MEET THE MINIMUM REQUIREMENTS THAT FOLLOW: NITROGEN, NOT LESS THAN 16%; PHOSPHORIC ACID, NOT LESS THAN 6%; POTASH, NOT LESS THAN 6%.
 ALL FINISH GRADED AREAS SHALL BE SEED AND MULCHED BY SEPTEMBER 15TH. IF THE SITE DOES NOT HAVE FINISH GRADED AREAS COMPLETED BY OCTOBER 15TH, ALL DISTURBED AREAS SHALL BE RESTORED WITH TEMPORARY SEEDING (COVER CROPS). AREAS NEEDING PROTECTION DURING PERIODS WHEN PERMANENT SEEDING IS NOT APPLIED SHALL BE SEED WITH ANNUAL SPECIES FOR TEMPORARY PROTECTION. SEE TABLE 1 OF THE WISCONSIN DNR CONSERVATION PRACTICE STANDARD 1009, FOR SEEDING RATES OF COMMONLY USED SPECIES. THE RESIDUE FROM THIS CROP MAY EITHER BE INCORPORATED INTO THE SOIL DURING SEEDBED PREPARATION AT THE NEXT PERMANENT SEEDING PERIOD OR LEFT ON THE SOIL SURFACE AND THE PLANTING MADE AS A NO-TILL SEEDING.
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SATISFACTORY STAND OF GRASS ON ALL SEEDBED AREAS FOR ONE YEAR AFTER THE PROJECT'S FINAL ACCEPTANCE.

OWNER:
 P2 DEVELOPMENT COMPANY, LLC
 ATTN: ROBERT BACH
 2544 CEDAR SAUK ROAD
 SAUKVILLE, WI 53080

ENGINEER:
 QUAM ENGINEERING, LLC
 ATTN: KEVIN PARRISH
 544 SOUTH MAIN STREET, SUITE B
 WEST BEND, WI 53095

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND UTILITIES BEFORE YOU DIG IN WISCONSIN
CALL DIGGERS HOTLINE
 1-800-242-8511
 TOLL FREE
 TDD(FOR THE HEARING IMPAIRED)(800)542-2289
 WS. STATUTE 182.0175 (1974)
 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

