#2015-39
Sparta Gas Station – Special Use Permit
Project Review for Planning and Zoning Commission

Meeting Date: September 2, 2015

Requests:

1. Special Use Permit to allow a Gasoline Service Station and Convenience Store with a Gasoline Electronic Pricing signs.
2. Variations from:
   a. Article 2-400 13 d. Special Use Criteria for Gasoline Stations from the requirement to construct a peaked canopy and from the required 15-foot setback to allow a flat canopy and a 10-foot setback along Brink Street and a 6-foot setback along Crystal Lake Avenue.
   b. Article 3-200 Density and Dimensional Standards from the required 20-foot rear yard setback to allow 6 inches.
   c. Article 4-400 Landscape and Screening from the requirement to provide a landscape island every 10 parking spaces and at the ends of the parking rows.
   d. Article 4-800 Exterior Lighting from the requirement not to exceed 0.5 foot candles of light at the property line allowing up to 9 foot candles and the requirement not to exceed 30 foot candles of light under the gas station canopy to allow up to 40.3 foot candles.
   e. Article 4-900 Design Standards from the requirement to meet at least six of the standards.

Location: 90 Brink Street

Acreage: Approximately 15,105 square feet

Existing Zoning: B-4 Downtown Commercial

Surrounding Properties:

North:	B-4 Downtown Commercial
South:	B-4 Downtown Commercial
East:	B-4 Downtown Commercial
West:	B-4 Downtown Commercial

Staff Contact: Elizabeth Maxwell (815.356.3615)

Background:

- The Sparta Brothers gas station has operated in the City since 1982 receiving approval as **Carl's Gas Station/Clark Oil Co. (82-41) - Ord. 2325.**
- The current property owners desire to expand the convenience store and modernize the pumps and the site. The changes to the site require them to seek the Special Use Permit for the new changes and to include the electronic pricing sign.
- The new convenience store would be 1,700 square feet, which is much larger than the store that is there presently. There would also be four new dispenser pumps and a new canopy. The changes to the site and store will create better site access and traffic flow, dedicated parking, better access to the convenience store for customers and a modern new development.

Development Analysis:

Land Use/Zoning

- The site is currently zoned B-4 Downtown Business. This is the appropriate zoning district for a gasoline service station, which requires a Special Use Permit in this district.
- The land use map shows the area as Commerce. This is an appropriate land use designation for Gasoline Service Station and Convenience Store.

Site Layout

- The existing 600 square foot convenience store will be demolished and rebuilt with a 1,700 square-foot convenience store.
- The existing pumps and canopy will also be removed and new equipment installed.
- Engineering has reviewed the access points and driveway design along both Brink Street and Crystal Lake Avenue.

Building Elevations

- The convenience store is constructed with Quik-Brick which is a concrete product made to look like a brick. A faux stone looking material covers the base of the building.
- The front and left elevation also contains hardi-board siding and blue banding and awnings. The entry feature projects out one-foot from the main front wall plane and projects up over the top of the parapet wall creating a noticeable and welcoming entry area.
- The canopy would be metal posts. The petitioner has requested the variation from the peaked canopy. Staff had also recommended that the posts be wrapped to match the materials and look of the building.
- New buildings are required to meet at least 6 of the architectural design criteria; this building meets 5 of the 10 criteria.

Parking

- Parking for a convenience store and gas station is as follows: 1/350 sq. ft. of convenience store space and 1 per every 4 gas pumps. This requires a total of 7 parking spaces.
- This remodel would provide 11 customer parking spaces. This would improve the site circulation providing a dedicated place for customers to park rather than possibly blocking driveways or gas pumps.

Landscape

- Additional landscape is being added to the intersection corner, the south side along Crystal Lake Avenue, adjacent to the building along Brink Street, and west of the new parking spaces.
- The owner will work with staff to better enhance the landscape improvements on the intersection corner when the City completes the intersection work.
- Even with the additional landscaping being provided, the petitioner would not meet the landscape island requirements and a variation has been requested.

Signage

- The petitioner would be retaining their existing 32 square-foot free-standing signs and modifying the cabinet to have the electronic pricing component.
- Sites are permitted a total of 150 sq. ft. of wall signage. There are two wall signs requested at 70 square feet total.
- The gas station canopy also has signage. Non-illuminated single color banding is not considered signage. The blue banding would not be counted as signage. There is a 14-square-foot "Mobile" sign on two sides of the canopy for a total of 28 square feet.
- The total wall signage is 98 square feet.

Findings of fact:

SPECIAL USE PERMIT

The petitioner is requesting approval of a Special Use Permit to allow a Gasoline Service Station and Convenience store and Gasoline Electronic Pricing Sign. A Special Use requires separate review because of its potential to impact surrounding properties and the orderly development of the City.

Section 2-400 B General Standards for all special uses in the Unified Ordinance establishes standards for all special uses in Crystal Lake. Briefly, the criteria are as follows:

1. The use is necessary or desirable, at the proposed location, to provide a service or facility which will further the public convenience and general welfare.
   ☐ *Meets* ☐ *Does not meet*

2. The use will not be detrimental to area property values.
   ☐ *Meets* ☐ *Does not meet*

3. The use will comply with the zoning districts regulations.
   ☐ *Meets* ☐ *Does not meet*

4. The use will not negatively impact traffic circulation.
   ☐ *Meets* ☐ *Does not meet*

5. The use will not negatively impact public utilities or municipal service delivery systems. If required, the use will contribute financially to the upgrading of public utilities and municipal service delivery systems.
   ☐ *Meets* ☐ *Does not meet*

6. The use will not negatively impact the environment or be unsightly.
   ☐ *Meets* ☐ *Does not meet*

7. The use, where possible will preserve existing mature vegetation, and provide landscaping and architecture, which is aesthetically pleasing, compatible or complementary to surrounding properties and acceptable by community standards.
   ☐ *Meets* ☐ *Does not meet*

8. The use will meet requirements of all regulating governmental agencies.
   ☐ *Meets* ☐ *Does not meet*

9. The use will conform to any conditions approved as part of the issued Special Use Permit.
   ☐ *Meets* ☐ *Does not meet*

10. The use will conform to the regulations established for specific special uses, where applicable.
    ☐ *Meets* ☐ *Does not meet*

Gasoline Stations have specific Special Use Criteria they have to meet. Gasoline stations must comply with the following standards:

1. Location: Gasoline stations are not permitted within the City's wellhead protection areas. Stations in the Crystal Lake watershed require a site specific analysis by the City's watershed consultant
   ☐ *Meets* ☐ *Does not meet*

2. Environmental impact: No gasoline station shall commence operations unless it has first provided an environmental impact statement from a qualified expert in the related field that the use will not negatively affect ground water resources or contaminate the soil.
   ☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

Since this is an existing gas station location, the Environmental Impact Statement is not necessary. The Engineering Division is requiring any soil testing reports to be submitted to the City for review.

3. Screening: Gasoline stations adjacent to residential properties shall provide an 6 foot tall solid screen consisting of a solid wooden fence, in accordance with the provisions of Article 4-700, Fences, Walls and Screening or opaque landscaping along the perimeters of the property abutting the residential district or use, in accordance with the provisions of Article 4-400, Landscaping and Screening Standards.

   ☐ *Meets* ☐ *Does not meet*

4. Canopy: Flat canopies are not permitted. Canopies must have a minimum 4:12 pitch (Amended per Ord. 6970, 11-5-2013).The edge of the pump canopy shall be setback at least 15 feet from all property lines.

   ☐ *Meets* ☐ *Does not meet*

5. Curb cuts: There shall be a maximum of 2 curb cuts per property. Corner lots shall be limited to 1 curb cut per street frontage. Curb cuts for corner lots shall be located at least 75 feet from the intersection, or as deemed appropriate by the City Engineer.

   ☐ *Meets* ☐ *Does not meet*

6. Vending machines: One vacuums and one air compressors shall be permitted on-site. Vending machines are treated as outside sales and display. Refer to the handout on Outdoor Sales, Service, Storage and Display available through the Planning and Economic Development Department for further clarification.

   ☐ *Meets* ☐ *Does not meet*

7. Outside sales: Outside product display and sales of seasonal items are prohibited. Propane tanks stored in 1 locked metal cage are not treated as outside sales and permitted subject to the approval of the City's Fire Prevention Bureau. For any other outside display and sales, refer to the handout on Outdoor Sales, Service, Storage and Display available through the Planning and Economic Development Department for further clarification.

   ☐ *Meets* ☐ *Does not meet*

8. Monitoring: Monitoring wells finished at appropriate depths and locations best suited to detect a contaminate plume are required to be designed and located by a groundwater professional for stations within the Crystal Lake watershed or as determined by the City Engineer.

   ☐ *Meets* ☐ *Does not meet*

9. Electronic Pricing Signs: Electronic pricing signs must be requested as part of the Special Use Permit.

   ☐ *Meets* ☐ *Does not meet*

DESIGN CRITERIA

The UDO specifies specific design criteria for new development. There are 10 criteria groups and the site must meet a minimum of 6 of those. Staff has reviewed the proposed development against the standards listed and has made a determination that the project meets XXXX of 10 of the criteria. The results are as follows:

1. Building Form

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

[must meet a-d to meet this criteria]

a. In developments with multiple structures, recurring forms and materials should be used to tie the development together, while establishing an overall hierarchy of buildings for visual interest and to aid in orientation.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The petitioner has made an effort to utilize the same materials, the Quik-Brik, faux stone and top cornice color on the trash enclosure. Also, the blue band on the canopy would tie in with the blue band and awning on the convenience store.

b. Where a shopping street is to be created, structures should be built with minimal retail storefront setbacks at internal roadways and plazas to create a pedestrian oriented "street wall." Structures in this alignment should include inviting storefront windows, easily identifiable entrances, and prominent display areas.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The building is set close to Brink Street, unfortunately there is no pedestrian access inside the building from the brink street side – this is a solid wall without windows.

c. Where compatible with adjoining uses and designed to minimize the appearance of building bulk and mass, taller buildings may be acceptable. Compatibility can be accomplished through upper story setbacks, changes in building materials, and the articulation of building details. The City Council may grant variations to the maximum allowable building height where they feel that compatibility with surrounding uses has been achieved.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The building is a single story structure and does illustrate a banding/awning at 2/3rd of the height of the front façade to provide a more pedestrian scale.

d. Along storefronts and at building entrances, generous walkways should be provided that establish a comfortable pedestrian zone adjacent to storefronts and allow for the addition of planters or green areas.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

A minimum 5-foot sidewalk is provided. No planters or foundation base landscape is planned along the front of the building.

2. Building Massing and Articulation
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*
[must meet a-e to meet this criteria]

a. The apparent mass and bulk of a large building should be reduced by structural articulation, windows or other architectural and functional elements and by landscaping. Structural articulation can include breaking the plane of the building by off sets (horizontal and vertical), insets for entryways or balconies, step backs, and consideration of alternative roof structures.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The front façade does a great job of breaking up the bulk of the building with the change of materials, the windows and storefront, and projections. Some of these elements are replicated in the other façades.

b. Long front facades must demonstrate a rhythm and articulation of "storefront" modules, to lend a pedestrian scale to the development.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

A storefront is created. There is a 1-foot projection to the storefront.

c. Building forms should be articulated by varying roof heights and wall planes. Upper-story setbacks and false second stories can be utilized to add visual interest. Long, unbroken volumes and large, unarticulated wall and roof planes are not permitted.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

This is demonstrated with the varying heights of the parapet roof and the projections.

d. All facades shall incorporate wall offsets in the form of projections and/or recesses in the facade plane, a minimum of every 50 feet of frontage that has a differential in horizontal plane of at least two feet.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

Off-sets/reveal lines have been provided that are 6" to 1'6". They do not meet the 2-foot minimum, but the petitioner is stating that these are more appropriate for this size of building.

e. Where gable, hip or mansard roofs are used they shall be scaled to the face of the building so as not to dominate the elevation nor be so small as to appear disproportionate.

☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

3. Rooflines and Parapets
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*
[must meet four of the options to meet this criteria]

a. Roof lines should be varied in height and long horizontal roof lines should be broken up.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The parapet roof has varying heights.

b. Large expanses of roof shall be avoided. Visual diversity can be achieved by varying the roof line and/or the addition of dormers. Diversity can also be achieved by staggering the facade of the building thereby breaking up an otherwise potentially monotonous roof and front facade as well as reduce the visual mass of the building.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

Projections in the façade have been provided. Also, the size of this building is very small so would not create a large expanse.

c. Pitched roofs shall have overhangs. Eaves should project at least 12 inches beyond the facade line.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

d. Specialized architectural details are encouraged on both flat and pitched roofs, to the extent compatible with the building's overall architectural style. Examples of such features include, but are not limited to, the following: Crenellation (flat roofs), Finials (pitched roofs), Dormers (pitched roofs), Cupolas.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

No crenellation has been illustrated for the flat parapet roof.

e. Parapet walls should have a defined top, framing the building facade. A narrow piece of metal flashing or stone cap is considered inadequate to create this distinction. Brick patterns, deeper stone caps with an over hang and shadow line, and contrasting color for flashing are examples of treatments which may be considered to meet this guideline.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

A darker top cornice has been illustrated.

f. Parapets should not appear to be "tacked on." Parapets should provide sufficient articulation of detail such as precast treatments, continuous banding, projecting cornices or corner details.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The wood parapet extension of the storefront extends back into the building providing depth.

g. Faux-pitched roofs (through the use of parapets) are discouraged except to the extent minimally necessary to shield roof-based mechanical equipment.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

h. If mansard roofs are utilized, they will wrap around the entire building perimeter.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

4. Building Materials
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*
[must meet a-f to meet this criteria]

a. The primary building material (accounting for at least 60% of the facade area) for any new construction shall be traditional masonry building materials like brick or stone utilizing traditional construction techniques. These materials shall be used on all sides of the building expressing consistent architectural character and detail.
☒ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The main building material is the Quik-Brik,, which is a masonry/concrete product. They are cast full size bricks that would be constructed using traditional techniques.

b. Exterior insulation finish systems (EIFS)/Drivit® is not permitted as the primary building material, but permitted as an accent material.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

c. Stucco, consisting of three-coat Portland cement is permitted on approximately 25% of the building, preferably limited to areas more than 10 feet above the adjacent ground or paved surface.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

d. The use of metal as a primary building material shall be permitted only where appropriate to the architectural style of the building and when exceptional building design warrants the use of the material. When used, metals will have an anodized, painted or powder coated finish in muted, non-bright colors that are aesthetically pleasing. The use of unfinished, exposed metals is not permitted.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

It is unclear what the blue material is on the building. This may be a metal product. The awnings above the windows would be metal awnings.

e. Stone, simulated stone, terra cotta, wood and metal are recommended as accent materials. Metal may be used for gutters, downspouts, railings, trim, grills, panels and flashing.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The building utilizes faux stone, siding looking like wood and metal as accent materials.

f. Where transitions in material are made, the transition will not occur at an outside corner edge. All materials on the front will turn the corner and carry over to the side elevation to a point at which the corner looks solidly finished. Material changes at the outside corners of structures give an impression of thinness and artificiality and should be avoided.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The materials wrap around any corners.

5. Roof Materials
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*
[must meet a-e to meet this criteria]

a. Slate, wood shingle, shake or close substitutes shall be preferred roof materials. Where asphalt shingles are used, "Architectural" shingles must be used.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

b. Clay or ceramic roof tiles are appropriate when complementary with the overall facade design in color, tone, and architectural style.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

c. Polished, glossy, shiny or reflective surfaces are not permitted.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

d. Where metal surfaces are used, the finish and color of the metal surface shall be approved by staff.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

e. Skylights are discouraged, except when subtly integrated into the roof design or where they are integral to active or passive solar energy system designs.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

6. Building Colors
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*
[must meet a-e to meet this criteria]

a. Colors should be muted and complement each other. While complementary colors for different elements are encouraged, a multitude of varying colors on each facade is not permitted.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The designers have chosen several colors including the deep reddish color for the Quik-Brik, the light sand color for the faux stone and a tan wood color for the Hardi-board siding. A sample material board must be provided at the Planning and Zoning meeting to better verify the colors and if they complement each other.

b. The natural color of the material should be maintained wherever possible. Where materials are painted, a neutral color should be chosen.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The Quik-Brik is a colored concrete product. The stone is a faux stone product. The Hardi-board is a cement board product colored to look like a wood siding.

c. Contrasting trim colors should be used to highlight architectural elements such as window and door surrounds. Harsh, jarring contrasts should be avoided, except where true to the architectural style of the building.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The blue accent color is used around the windows and for the awnings.

d. Applied elements such as awnings, light fixtures, downspouts, railings and signage should coordinate with, rather than dominate the color scheme of the building. The elements may be the same color as the background wall, a contrasting shade of the same color, or a more distinctive contrasting color. The important thing is to blend with the building's color palette.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The awnings use the blue accent color rather than the main body color of the building to provide a distinct contrast to the main elevation.

e. Primary, fluorescent or neon colors are not permitted for use as accent colors, including awning body color.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The blue color being used is a primary color, it does not appear to be "neon."

7. Building Fenestration
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*
[must meet a-d to meet criteria]

a. Buildings should meet the ground with a solid base treatment that creates a visual transition from sidewalk to building wall. Glass storefront wall systems that extend to the ground are not permitted.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The base treatment is unknown. The stone material was explained as not a stone but stone looking product. This may not produce the solid feel that is necessary. A sample material board illustrating this material would be helpful.

b. In larger developments (over 20,000 square feet), a variety of window sizes and styles should be utilized to create interest.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

c. Monotonous grids of repeated windows should be avoided. The window pattern should add variety and interest to the architecture.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The station has been designed with a solid band of repeating windows on either side of the main entry feature.

d. Wood or dark anodized window framing is encouraged to add depth and richness to the appearance of the building.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

Dark anodized frames are being used.

8. Entrance Design
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*
[must meet a-e to meet criteria]

a. Recessed or projected entries and articulation in storefront mass is required. Recesses or projections shall be at least 12 inches.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The front entry treatment projects one-foot from the main façade.

b. Entrances should be highlighted by a change in the wall plane. Wall articulation around the door and projecting beyond the door is recommended.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

There is a change in wall plane in both depth and height. Also, the materials around the entryway change.

c. A projecting element above the entrance is recommended to highlight the entrance.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

There is an awning above the door.

d. Entrances should be highlighted by implementation of architectural elements such as flanked columns or decorative fixtures.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The Hardi-board siding creates a column type effect.

e. Varied paving textures and/or elevation changes are recommended techniques to define entrances.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The height of the entryway projects above the main parapet wall.

9. Canopy/Awning Design
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*
[must meet a-f to meet criteria]

a. Awnings should not be wrapped around buildings in continuous bands.
☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The awnings do not wrap around the building. But due to the design on the continuous windows the awnings are a continuous band above them.

b. Awnings should only be placed on top of doors, on top of windows, or within vertical elements when the facade of a building is divided into distinct structural bays.
☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The awnings are above the windows and doors.

c. When awnings are lit externally with direct lighting, architecturally interesting fixtures, such as goosenecks shall be utilized.
☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

Awnings are not illuminated

d. Awning colors should complement the overall building color scheme. Colors should coordinate with, rather than dominate, the color scheme for the building. Awnings may be the same color as the background wall, a contrasting shade of the same color, or, a more distinctive contrasting color. Bold Primary, Fluorescent or Neon colors are not permitted as the awning body color.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The awnings are a distinctive contrasting color, but they are a bold primary color.

e. Plexiglas, glossy vinyl and canvas awnings are not permitted. Metal, matte finish vinyl, fabric and treated canvas awnings are required.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The awnings would be a painted metal.

f. The use of fan/umbrella shaped awnings is not permitted.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

Flat metal awnings would be used.

10. Overall Façade Design

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

a. Building facades should be organized to have a clear base, middle, and top.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

There is a clear base, middle and top to the front elevation. The rear elevation has no break in the main wall plane. The left side elevation continues the blue banding, but the right does not. The faux stone base is also questionable if it provides a solid base.

b. Changes in vertical and horizontal planes should be used to provide relief from a box like appearance.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The parapet roof changes in vertical height. Also, reveal joints and projections have been added along the wall planes.

c. On facades longer than 100 feet, the use of pilasters is recommended to create the appearance of smaller "bays.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The rear elevation is the least decorated. This faces the adjacent property and would

not easily be seen.

d. Vertical elements such as towers can be used to accent horizontal massing and provide visual interest, especially on corner buildings.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The front left and back right corners of the building have been designed to look like a column element as there is a revel joint and a break and change in elevation of the parapet roof.

e. Details such as wall surfaces constructed with patterns, changes in materials, building popouts, columns, and recessed areas should be used to create shadow patterns and depth on the wall surfaces.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

No substantial design elements are illustrated. The front entryway with the one-foot projection would be the most significant.

f. Blank walls on facades visible from public or private rights-of-way will not be permitted. Consider utilizing windows, wall articulation, arcades, changes in materials, or other features.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The rear and right elevation are solid. The rear elevation would be slightly visible from Brink Street. The main pedestrian traffic would pass adjacent to the right side elevation.

g. Minor surface detailing should not be substituted for distinctive building massing. Minor surface detailing includes score lines or changes in color rather than a change or relief in the wall plane.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The changes in the wall plan are between 6" and 1'6". The 6" change would be very minor and not create any type of shadowing along the wall plane. A detailed foundation plan is needed to determine the actual wall projections.

h. Downspouts shall blend with the architecture or act as an accent, not a dominant feature. Coordinate downspouts with horizontal features (like banding or coursing), and vertical elements (like pilasters, columns, and corners). Downspouts shall not be the only relief feature in a wall.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

Downspouts have not been shown.

i. False fronts and false roof structures applied to generic buildings are not appropriate. Facade treatments should be applied to all sides of a structure and be integral to the overall massing of the building.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

The front entry acts like a false front, but has been extended back providing depth. This is the only place there is this treatment. No banding or Hardi-board siding is provided on the right and rear elevations.

j. Applied veneer "movie set" storefronts, token panels of brick on building fronts and blank masonry walls on the rear of buildings are not permitted.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

It is difficult to tell if the blue banding area will be tied into the wall plane or appear stuck on.

k. Drive through elements should be architecturally integrated into the building, rather than appearing to be applied or "stuck on" to the building.

☐ *Meets* ☐ *Does not meet* ☒ *Not Applicable*

l. Ornamentation should be avoided except as an enhancement of the overall facade design and ornamental details should complement the surrounding facade in color and material.

☐ *Meets* ☒ *Does not meet* ☐ *Not Applicable*

Very little ornamentation is shown, except for the wall lights, decorative awnings and trim around the Hardi-board siding.

m. Ornamentation should not be used as a substitute for quality architectural facade design.

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

The façade has been designed with a variety of materials and options for breaking up the expansive feel of a box.

n. New construction and renovated building designs should reflect local, unique and traditional designs rather than chain or franchise designs. Franchise architecture is a building design that is trademarked, branded, or easily identified with a particular chain or corporation and is ubiquitous in nature. Some typical issues and negative impacts often associated with national chain or commercial franchise designs include:

- Large logos and/or colors used over large expanses of a building;
- Branded buildings are difficult to reuse if vacated by the primary business promoting vacancies and blight;
- Buildings lack architectural elements and design consistent with local

community's architectural composition, character, vernacular, and historic context

☒ *Meets* ☐ *Does not meet* ☐ *Not Applicable*

This design is unique to this location and designed for the owners.

Findings of Fact:

ZONING ORDINANCE VARIATION

The petitioner is requesting several variations:

a. Article 2-400 13 d. Special Use Criteria for Gasoline Stations from the requirement to construct a peaked canopy and from the required 15-foot setback to allow a flat canopy and a 10-foot setback along Brink Street and a 6-foot setback along Crystal Lake Avenue.
b. Article 3-200 Density and Dimensional Standards from the required 20-foot rear yard setback to allow 6 inches.
c. Article 4-400 Landscape and Screening from the requirement to provide a landscape island every 10 parking spaces and at the ends of the parking rows.
d. Article 4-800 Exterior Lighting from the requirement not to exceed 0.5 foot candles of light at the property line allowing up to 9 foot candles and the requirement not to exceed 30 foot candles of light under the gas station canopy to allow up to 40.3 foot candles.
e. Article 4-900 Design Standards from the requirement to meet at least six of the standards.

The Unified Development Ordinance lists specific standards for the review and approval of a variation. The granting of a variation rests upon the applicant proving practical difficulty or hardship caused by the Ordinance requirements as they relate to the property. To be considered a zoning hardship, the specific zoning requirements; setbacks, lot width and lot area must create a unique situation on this property. It is the responsibility of the petitioner to prove hardship at the Planning and Zoning Commission public hearing.

Standards

When evidence in a specific case shows conclusively that literal enforcement of any provision of this Ordinance would result in a practical difficulty or particular hardship because:

a. The plight of the property owner is due to unique circumstances, such as, unusual surroundings or conditions of the property involved, or by reason of exceptional narrowness, shallowness or shape of a zoning lot, or because of unique topography, or underground conditions.
   ☐ *Meets* ☐ *Does not meet*

b. Also, that the variation, if granted, will not alter the essential character of the locality.
   ☐ *Meets* ☐ *Does not meet*

For the purposes of supplementing the above standards, the Commission may take into consideration the extent to which the following facts favorable to the application have been established by the evidence presented at the public hearing:

a. That the conditions upon which the application for variation is based would not be applicable generally to other property within the same zoning classification;
☐ *Meets* ☐ *Does not meet*

b. That the alleged difficulty or hardship has not been created by any person presently having interest in the property;
☐ *Meets* ☐ *Does not meet*

c. That the granting of the variation will not be detrimental to the public welfare or injurious to other property or improvements in the neighborhood in which the property is located; or
☐ *Meets* ☐ *Does not meet*

d. That the proposed variation will not impair an adequate supply of light or air to adjacent property, will not unreasonably diminish or impair the property values of adjacent property, will not unreasonably increase congestion in the public streets, substantially increase the danger of fire or otherwise endanger public safety.
☐ *Meets* ☐ *Does not meet*

Where the evidence is not found to justify such conditions, that fact shall be reported to the City Council with a recommendation that the variation be denied.

Comprehensive Land Use Plan 2020 Vision Summary Review:

The Comprehensive Plan designates the subject property as Commerce, which allows for existing and future business uses. The following goal is applicable to this request:

Land Use - Commerce

Goal: Maintain a dynamic and sustainable base of commercial uses that provides a solid tax base, goods, services and jobs to the City as well as the surrounding region through coordination in the Unified Development Ordinance, Comprehensive Land Use Plan and Economic Development Strategic Plan.

This can be accomplished with the following supporting action:
Supporting Action: Promote, retain and attract businesses that provide a diverse tax base.
Success Indicator: The number of new “mom & pop” / small independent business occupancies.

Recommended Conditions:

If a motion to recommend approval of the petitioner's request is made, the following conditions are recommended:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Anagnostopoulos, received 06/30/15)
   B. Architectural Plans [Sheets G001, A001, A002, A003, and A202] (CDG, dated 08/03/15, received 08-03-15)
   C. Elevations [Sheet EL-1] (CDG, dated 08/14/15, received 08/14/15)
   D. Landscape Plans [Sheets L1, L2] (Brusseau Design Group, dated 08/03/15, received 08/03/15)
   E. Engineering Plans [Sheets C-1 through C-6.3] (WMA, dated 07/30/15, received 08/03/15)
   F. Plat of Dedication (W-T Land Survey, dated 07/31/15, received 08/03/15)
   G. Photometric Plan (Ledco America LLC, undated, received 08/03/15)

2. Site and Landscape Plan
   A. With the building permit submittal, provide a detailed foundation plan that illustrates the wall projections.
   B. Add landscape shrubs 3 feet in height at the southwest corner of the site in front of the parking area to screen headlights from shining onto the adjacent property.
   C. Add landscape shrubs in the small parking island created adjacent to the parking row along Brink Street.

3. When the existing tanks are removed, the results of the soil testing must be provided to the City of Crystal Lake.

4. Any banding on the canopy shall be non-illuminated.

5. The top cap to the cornice shall be stone.

6. The petitioner shall address all of the review comments and requirements of the Community Development, Fire Rescue, Police, and Public Works Departments and of the City's Stormwater Consultant.

2015 39

City of Crystal Lake
Development Application

Office Use Only
File # _____

RECEIVED
JUN 30 2015
BY:

Project Title: Sparta Brothers Oil, 90 Brink St., Crystal Lake

Action Requested

__	Annexation	__	Preliminary PUD
__	Comprehensive Plan Amendment	__	Preliminary Plat of Subdivision
__	Conceptual PUD Review	__	Rezoning
__	Final PUD	X	Special Use Permit
__	Final PUD Amendment	X	Variation
__	Final Plat of Subdivision	__	Other

Petitioner Information

Name: Nick and Mike Anagnostopoulos

Address: 90 Brink St.
Crystal Lake, IL, 60014

Phone: 847.567.5177 and 847.987.4054

Fax: N/A

E-mail: clmarathon@gmail.com

Owner Information (if different)

Name: _____

Address: _____

_____

Phone: _____

Fax: _____

E-mail: _____

Property Information

Project Description: Existing C-Store and Auto Canopy

Project Address/Location: 90 Brink St. Crystal Lake, IL, 60014

PIN Number(s): 14-32-483-016

Development Team

Please include address, phone, fax and e-mail

Developer: Nick and Mike Anagnostopoulos-Owner

Architect: Chris Kalischefski-CD+DG

Attorney: N/A

Engineer: Benedict Bussman-WMA

Landscape Architect: Brusseau Design Group

Planner: Elizabeth Mackwell

Surveyor: WT Land Surveying

Other: Project Designer: Kimberly Strnad

Signatures

PETITIONER: Print and Sign name (*if different from owner*) Date

As owner of the property in question, I hereby authorize the seeking of the above requested action.

NICK ANAGNOSTOPOULOS 6-26-15

OWNER: Print and Sign name Date

NOTE: If the property is held in trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust.

PUBLIC NOTICE

BEFORE THE PLANNING AND ZONING COMMISSION OF THE CITY OF CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

IN THE MATTER OF THE PETITION OF Nick and Mike Anagnostopoulos

LEGAL NOTICE

Notice is hereby given in compliance with the Unified Development Ordinance (UDO) of the City of Crystal Lake, Illinois that a public hearing will be held before the Planning and Zoning Commission on the application by Corporate Design and Development Group, LLC on behalf of Nick and Mike Anagnostopoulos, seeking a Special Use Permit for a Gas Station at 90 Brink Street, Crystal Lake, Illinois. PIN: 14-32-483-016.

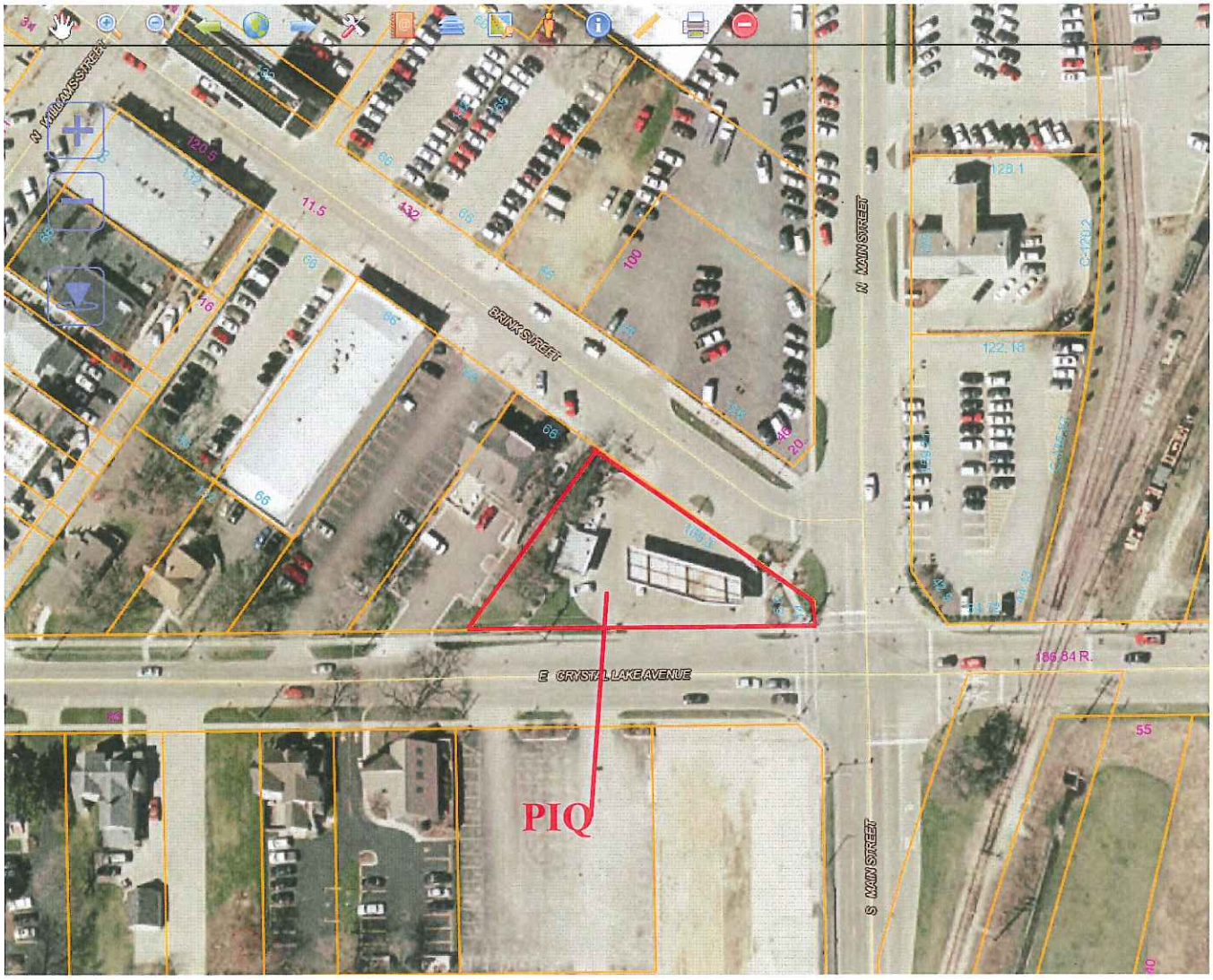
This application is filed for the purpose of seeking a Special Use Permit with an Electronic pricing sign pursuant to Article 2-400 and Article 9-200 D and Variations from Article 2-400 13 Gas Stations, Article 3-200 Minimum rear yard setback, Article 4-400 F. Site Landscaping, Article 4-800 Exterior Lighting Standards, Article 4-900 Commercial Design Standards, as well as any other variations as necessary to approve the plans as presented to allow a Gasoline Station. Plans for this project can be viewed at the Crystal Lake Community Development Department at City Hall.

A public hearing before the Planning and Zoning Commission on this request will be held at 7:30 p.m. on Wednesday, September 2, 2015, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

/s/ Tom Hayden, Chair
City of Crystal Lake
Planning and Zoning Commission

(Published in the Northwest Herald August 18, 2015.)
NW 7199

CITY OF Crystal Lake Illinois



nVicinity

2015 39

CORPORATE
DESIGN + DEVELOPMENT
GROUP, LLC

2675 Pratum Avenue
Hoffman Estates, IL 60192
224.293.6960 Office
224.293.6966 Fax

RECEIVED
AUG 03 2015
BY:

August 3, 2015

Attn: Elizabeth Maxwell, Planner
Crystal Lake, IL
100 W. Woodstock St.
Crystal Lake, IL

RE: First Round Zoning Review Comments – Sparta Brothers, Crystal Lake, IL

To Ms. Maxwell:

Please find below the response to the **first** round comment review letters dated July 15-17, 2015.

Planning Review Comments:

1. The modifications to the site require a Special Use Permit (SUP). As part of the SUP, you can also request variations. It appears that a rear yard setback variation from 20 feet to 1 foot is being requested. Also, the canopy is required to be peaked, this would be a variation from the standards.

   Response: *A request for a variation for the flat canopy and the reduction of the rear setback will be requested.*

2. The required parking is 1 per 350 SF of gross area and 1 per 4 pumps, this site requires 7 parking spaces. Some of the illustrated parking could be eliminated. The dumpster cannot be behind a parking space. Also, this area to the southwest of the building could be used for the air fill up and truck loading.

   Response: *The parking has been reduced to 11 spaces. The southern end parking space was eliminated and striped over and the dumpster has been moved to this location.*

3. Landscape islands are required at the ends of the parking rows. Striping is shown this needs to be landscape with 1 tree and 5 shrubs.

   Response: *Additional Landscaping has been added on the north and south ends of the building. The landscape Island in this location could reduce visibility for both customers pulling out of parking spots and the gas station attendant.*

4. The canopy should match the building with similar materials along the columns.

   Response: *The canopy columns are designed to be as narrow as possible*

to increase visibility on the site. It is a very tight site so the goal is to limit as many visual obstructions as possible.

5. Clarify the elevations, the plan drawing looks like a peaked roof, whereas the elevations show a flat roof. If a flat roof the front parapet cannot appear stuck on. The sides need to wrap or it needs to be more integrated into the front elevation somehow.

   Response: *The site plan has been revised to reflect the flat roof. The parapet around the main section of the building wraps around the entire building and the entry tower has been extended back to have a more integrated look.*

6. The location for the fuel filling tanks would cause the tanker to block all the required parking when filling. This could cause a problem; can the tanks be located in another location? If the tanks were located along the south end of the property the tanker could pull in towards the dumpster to fill. It would need to back up inside the site to turn back towards Crystal Lake Avenue to exit.

   Response: *There really is not another suitable location for the tanks. It is extremely dangerous to have a tanker truck back up, especially on such a tight site. Fuel deliveries will come in the early morning and late night to avoid blocking the parking while it is being used. Also, double drop tubes will be utilized to speed the fuel delivery process.*

7. There can be an opportunity to square off the southeast corner of the site and make a larger landscape area, relocating the sign and adding tables or bike racks for people utilizing the bike path.

   Response: *This area of the paving is necessary for circulation. Additional landscaped area is already being added to the southeast corner of the site compared to what it is now. Also, this location at the irregular corner of a busy intersection would be both an unsafe and uncomfortable place for pedestrians to congregate.*

8. Originally it was discussed to have an "old time" feel to the elevations. Looking at old pictures these service stations typically had peaked roofs and peaked canopies. They used one material with typically a base material. These elevations have quite a few different design elements from faux brick and stone to wood, then a blue awning. We would like to have the building tied together better. Also, please review Article 4-900 Design Standards, a minimum of 6 of the design standards.

   Response: *We feel that the design of the building is tied together and the colors and materials suit the architectural style of the building. A more modern look is desired to add visual interest while using more traditional materials to fit*

well into the character of the area. The building meets 8 of the 10 Design Standards including Building Form, Building Massing and Articulation, Rooflines and Parapet, Building Materials, Building Fenestration, Entrance Design, Canopy/Awning Design, and Overall Façade Design.

Cursory Review Comments:

1. Accessible parking space shall be located on the shortest accessible route of travel from adjacent parking. Please provide clarification why the accessible parking space is not located nearest to the front entrance.

   Response: *The accessible parking space has been moved next to the entrance of the building.*

9. How will the rooftop mechanical equipment be screened?

   Response: *The rooftop equipment will be screened by a combination of the small parapet around the building and screen paneling to match the building.*

The following are cursory comments to a Building Permit submittal:

1. Building Permit submittal is required (after the Development Review process has been completed). The submittal checklist and application can be found at City Hall or online at http://www.crystallake.org/.

   Response: *Noted.*

2. A demolition permit is required for the demolition of any existing structures. An asbestos report, utility disconnect letter, and permits from the McHenry County Department of Health for the septic and well abandonment are required. A submittal checklist can be found on the city website: http://www.crystallake.org/

   Response: *An asbestos report will be conducted and all required permits and letters will be obtained.*

3. Permit Drawings shall include complete design data including occupancy group, construction type, occupant load, allowable vs. actual height and area limitations, etc. This information is required so that an accurate review of code compliance can be completed.

   Response: *Design data will be included with Permit submittal.*

4. Submit geotechnical report and compaction reports for the parking lot, building pads and piers.

Response: *Geotechnical report will be obtained.*

5. Submit structural calcs. and all design loads (wind, snow, floor, frost, seismic…) for the structures. See 2006 IBC and City Amendments

   Response: *Noted.*

6. The wall adjacent to the Northwest property line is required to have a **2-hour fire rating** and a **parapet wall** minimum 30" above the roof. The parapet wall shall have at least the same fire rating as the wall, or the roof shall have a 1-hour fire rating, or the roof shall be of noncombustible materials including the sheathing.

   Response: *Noted.*

7. Submit written approval or copy of IL State Fire Marshal Permit for the underground storage tanks.

   Response: *Copy of State Fire Marshal Permit will be provided at time of permit submittal.*

8. McHenry County Department of Health (MCDH) approval required for any food or drink sales.

   Response: *Noted.*

9. MCDH Permit approval for any well or septic abandonment.

   Response: *Noted.*

10. Parking lot lighting shall comply with requirements of the Unified Development Ordinance (i.e. downlights, required light levels, etc.) and the Energy Conservation Code (i.e. lighting power allowance, etc.). As part of the building permit submittal include a **photometrics plan, light fixture and light pole cut sheets, COMcheck Exterior Lighting report and light pole base detail.** UDO, section 4-800 and 2009 IECC, section 505.6

    Response: *Lighting design will comply with the Energy Conservation Code. A variation will be sought for the light levels at the property lines, as the site is very tight and there will have to be more than 0.5 foot candles at some sections of the property line in order to have a safe lighting level on the site.*

11. Outdoor Sales should be clearly defined for the SUP. It is recommended that the petitioner follow the Limited Use provisions in Article 2-400.

    Response: *Outdoor sales is minimal. An ice and propane merchandiser are proposed outside.*

12. All exits are required to be accessible to a public way or parking lot.

    Response: *All exits are accessible and have an accessible route to the parking lot.*

13. Are there any recapture fees?

    Response: *No.*

14. Engineering review and Inspection fees; Infrastructure Availability Charges (sewer / water connection fees); will be added on to the Building Permit fees.

    Response: *Noted.*

15. The following require a separate permit submittal (application and plans) through the Community Development, Building Division (815 356-3605) or as noted:

    a. Demolition of existing buildings
    b. All exterior signage (comply with the PUD approvals)
    c. Fire sprinkler and Fire alarm systems.
    d. Contractor/office trailer (max. 2 trailers total)
    e. Lawn irrigation system (if applicable).

    Response: *Noted.*

Engineering Review Comments:

1. To ensure the public entities are within the public ROW, the City will require a ROW dedication along Main Street. Work with City staff to determine the exact dedication area.

   Response: *We have proposed a potential ROW dedication of 30 feet along Main Street.*

2. The Handicap parking stall should be moved as close to the door as possible.

   Response: *The parking stall has been moved next to the entrance of the building.*

3. For ease of access move trash enclosure to be adjacent to the hatched out area.

   Response: *Trash enclosure has been moved in front of a hatched area.*

4. Address accidental spill containment.

   Response: *The Facility will have staff on site who are trained on how to address a spill.*

5. Photometrics/lighting should be per UDO requirements.

   Response: *A variance will be sought for the light levels at the property lines, as the site is very tight and there will have to be more than 0.5 foot candles at some sections of the property line in order to have a safe lighting level on the site.*

6. Entrance island off of Brink Street should be larger to protect the street light pole.

   Response: *Entrance Island has been enlarged to protect the street light pole.*

7. Show lane lines on circulation plan.

   Response: *Lane lines are now shown on circulation plan.*

8. The City's consultant will furnish anticipated high water elevation in the event of a 100 year storm event to help protect the fuel pumps.

   Response: *There is no mapped floodplain on or near the site.*

9. An NPDES permit will be needed. A copy of the permit will be required before a stormwater permit can be issued. Please keep in mind it takes a minimum of 30 days to obtain this permit from the IEPA.

   Response: *An NPDES permit is not required. The site is less than 1 acre.*

10. Water main tap at main must be a pressure connection with a valve in a vault.

    Response: *Noted.*

11. Bollards should be placed around each of the gas pumps to ensure no vehicles hit them.

    Response: *Bollards have been placed around gas dispensers.*

12. Include standard details for permit submittal.

    Response: *City standard details are part of the plans.*

13. Detectable warnings are not required at driveways.

    Response: *Detectable warnings have been eliminated from driveway islands but are still proposed where the sidewalk meets the drive for safety to warn pedestrians they are entering a more hazardous area.*

14. Provide autoturns for the different options showing the different driveway widths.

    Response: *Additional options for the driveway will be shown, the minimum*

width for safe automobile and tanker truck circulation has been used.

15. The parking stall at the southwest corner of the property, directly adjacent to the curb will need to be signed as employee parking only as it will be difficult to get out of that parking stall.

    Response: *This parking space has been eliminated to allow easier access to the trash enclosure.*

Fire Prevention Review Comments:

1. The City's Fire Code is the International Fire Code (IFC), 2006 edition with City of Crystal Lake amendments. Information may be obtained from the City's web-site. Listed below are some highlights that may affect this project.

    Response: *Noted.*

2. All new buildings, except 1 and 2-family, require an approved NFPA 13 sprinkler system, 2006 IFC Section 903.2 as amended. Installation or alterations to a sprinkler system requires a separate submittal and permit. Work shall be completed by State licensed contractor. Plan approval and permit is required prior to start of work and before the above ceiling inspection.

    Response: *Building will be equipped with an approved NFPA 13 Sprinkler System.*

3. All new buildings, except 1 and 2-family, require an approved manual, automatic, or manual and automatic NFPA 72 fire alarm system, 2006 IFC Section 907.2 as amended. Installation or alterations to a fire alarm system requires a separate submittal and permit. Work shall be completed by State licensed contractor. Plan approval and permit is required prior to start of work and before the above ceiling inspection.

    Response: *Building will be equipped with an approved NFPA 72 fire alarm system.*

4. The fire alarm system is required to be monitored at the Fire Rescue Communication Center, 2006 IFC Section 903.4.2.1 as amended. Application and agreement can be obtained at the Fire Rescue Dept.

    Response: *The fire alarm system will be monitored as required.*

5. For buildings requiring the installation of a sprinkler system, the Professional Engineering Practice Act (225 ILCS 325/3) requires a technical submission prepared by a licensed design professional (minimum of P.E.) prior to the issuance of a building permit (see attachment). A technical submission of the fire sprinkler system prepared and sealed by a licensed design professional is needed. A technical submission should consist of the following:

a. Identify the scope of work.
b. Identify the applicable codes and standards.
c. Ensure conformance with applicable building codes.
d. Indentify the occupancy type and hazard classification.
e. Water based systems should include:
    i. Type of system and components.
    ii. Classification of hazard and commodities.
    iii. Establish the density/flow and design area.
    iv. Preliminary system layout and hydraulic calculations.

Response: *Sprinkler system will be designed by a professional engineer.*

6. Fire hydrant spacing will need to meet the requirements in 2006 IFC Section 508, Appendix B, and Appendix C.

    Response: *Will comply.*

7. A fire hydrant shall be available within 100 feet from the fire department connection and not closer than 1.5 times the height of the building, 2006 IFC Section 903.3.7.1 as amended. Show nearest fire hydrant and distance to Fire Department Connection (FDC).

    Response: *Fire hydrants are shown. Fire Department connection will be located at the south west corner of the building which is 84 feet to the nearest fire hydrant.*

8. Fire Department Connection shall be a 5 inch Storz fitting.

    Response: *A 5 inch Storz fitting will be provided.*

9. Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. Hydrant flow data used for the design of any sprinkler system shall not be more than one-year old. Flow testing of the City of Crystal Lake's water supply system for this purpose is the responsibility of the property owner. The City of Crystal Lake's Water Division shall be the sole operators of the City's fire hydrants during a flow test, 2006 IFC Section 903.3.5 as amended.

    Response: *Noted.*

10. A fire protection equipment room for installed controls of fire protection or detection is required, 2006 IFC Section 915.1 as amended.
    f. Exterior access to the room is required, 2006 IFC Section 915.2 as amended.
    g. An approved walk is required to access the room, 2006 IFC Section 915.2.1 as amended.
    h. The minimum size of the room is 6 feet by 8 feet, 2006 IFC Section 915.3.

i. The room shall have a minimum 1-hour wall separation from the rest of the building. Where required by other sections of this code, additional separation will be required. 2006 IFC Section 915.4.
j. The room is required to have a cabinet 14 inches by 14 inches by 4.5 inches deep or a 4 inch by 30 inch PVC tube to store fire protection plans, 2006 IFC Section 915.5 as amended.
k. The fire protection equipment room shall have a heater to prevent freezing of the sprinkler system. The heater shall have a thermostat and have the electrical switches locked in the "on" position, 2006 IFC Section 915.7 as amended.
l. A low temperature alarm shall be connected to the fire alarm to send a supervisory signal if the temperature falls below 40 degrees Fahrenheit, 2006 IFC Section 915.8 as amended.

Response: *A low temperature alarm shall be connected to the fire alarm per the amended 2006 IFC.*

11. Aerial apparatus access is required when any portion of a building is greater than 30 feet in height, 2006 IFC Appendix D105.

    Response: *Building is under 30 feet in height.*

12. Truck turning radius using the Fire Department's specifications is available from the Engineering Division.

    Response: *The city standard Fire Truck detail is on sheet A002 and a circulation path is shown.*

13. Fire lanes are noted on the plans; requirements for in 2006 IFC Section 503.2 and Appendix D will need to be met.

    Response: *Noted.*

14. HVAC/RTU replacements are reviewed to determine compliance with Fire Prevention Bureau requirements as they relate to: fire alarm system initiation and programming, occupant notification, sprinkler system activation, ventilation control operations, and other issues as designated. Duct smoke detectors are required in the return system with a design capacity greater than 2,000 CFM. All HVAC/RTUs with duct smoke detectors are required to have a test module installed. If a new duct smoke detector test module is being installed, it shall not be higher than 5' 0" above the finished floor. Duct smoke detector function test with on-site fire alarm contractor for final inspection.

    Response: *Noted.*

15. Sprinklers shall be permitted to be omitted where a canopy or roof is of non-combustible or limited combustible construction. 2002 NFPA 13 Section 8.14.7.2.

    Response: *Noted.*

16. No egress doors shall require a key or special knowledge to exit the building. The door shall fully unlatch with one motion even when in the locked position and/or multiple latches are present. 2006 IFC Section 1008.1.8.5.

    Response: *Noted.*

17. Permanently and legibly mark any room doors that the Fire Department must access for equipment or services.

    Response: *Noted.*

18. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 2006 IFC Section 1006.1.

    Response: *Means of egress will be illuminated.*

19. All pathways required for egress shall be provided with emergency illumination to at least an average of 1 foot candle (11 lux) and a minimum at any point of .1 foot candle (1 lux) measured at floor level. Will field verify and additional lights may be required at that time. 2006 IFC Section 1006.4.

    Response: *Pathways will be illuminated.*

20. Exits and exit access shall be marked by an approved exit sign readily visible from any direction of egress travel. Will field verify and additional signs may be required at that time. 2006 IFC Section 1011.

    Response: *Exit signage will be provided.*

21. The unit address shall be posted on the front and rear of unit with a minimum of 4 inch letters size and in a contrasting color. The address shall be visible from the street. 2006 IFC Section 505.

    Response: *Address will be properly posted.*

22. Electric Service Panel: Maintain 30" width and 36" depth clearance in front of panel.

    Response: *30" X 36" clearance will be provided at electrical service panels.*

23. Install fire extinguishers per NFPA 10 and accessibility requirements during demolition, construction and upon occupancy approval.

    Response: *Fire extinguishers will be provided.*

24. Keyed access required for all sides of the building where exterior doors allow.

    Response: *Keyed access will be provided.*

25. A key box (Knox Box) shall be provided. The key box will be used for emergency access only. Application is available at the Fire Rescue Dept.-City Hall complex.

    Response: *Key box will be provided.*

26. Keys for the KNOX box and updated emergency contact information are required at occupancy.

    Response: *Keys for the Knox Box and emergency contact information will be provided at occupancy.*

27. Any materials used for dust drapes during construction are required to be flame retardant and manufacturer specification sheets shall be kept on-site. 2006 IFC Section 803.

    Response: *Dust drapes will be flame retardant.*

28. Any construction dumpsters or debris shall be placed as not to block access for firefighting or emergency medical services. 2006 IFC Section 1410.

    Response: *Dumpsters and debris will be placed so they do not block access for emergency personnel.*

Contact the Fire Prevention Bureau at (815) 356-3640 with any questions or concerns regarding this review.

Respectfully submitted,

CORPORATE DESIGN + DEVELOPMENT GROUP, LLC



Matthew Ackerman
Project Designer

SPARTA BROTHERS OIL COMPANY
C-STORE
90 BRINK ST
CRYSTAL LAKE, IL 60014
ZONING SUBMITTAL 2015.08.03



2015 39

RECEIVED
AUG 03 2015
BY:

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STRUCTURAL ENGINEER
COMPANY NAME: TBD
CONTACT PERSON
ADDRESS
ADDRESS
TEL - EMAIL

MECHANICAL, ELECTRICAL, AND PLUMBING ENGINEER
COMPANY NAME: TBD
CONTACT PERSON
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CONTRACTOR
COMPANY NAME: TBD
CONTACT PERSON
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DRAWING INDEX

GENERAL	G001	COVER SHEET
ARCHITECTURAL	A001	ZONING SITE PLAN
	A002	CIRCULATION PLAN
	A002a	ALTERNATE CIRCULATION PLANS
	A003	SIGNAGE PLAN
	EL-1	C-STORE EXTERIOR ELEVATIONS
	EL-1	COLOR C-STORE EXTERIOR ELEVATIONS
	A202	CANOPY ELEVATIONS
	A202	COLOR CANOPY ELEVATIONS
LANDSCAPE	L1	LANDSCAPE PLAN
	LS2	LANDSCAPE SPECIFICATIONS
CIVIL ENGINEERING	C-1	COVER SHEET
	C-2	EXISTING CONDITIONS
	C-3	PAVING & LAYOUT PLAN
	C-4	GRADING & EROSION CONTROL PLAN
	C-5	UTILITY PLAN
	C-6.1	DETAILS - 1
	C-6.2	DETAILS - 2
	C-6.3	CITY NOTES AND SPECIFICATIONS
SURVEY	S-1	BOUNDARY & TOPOGRAPHIC SURVEY
	S-2	PLAT OF DEDICATION
PHOTOMETRIC		PHOTOMETRIC BY LEDCO

SCOPE OF WORK

THIS IS A NEW SITE DEVELOPMENT WHICH INCLUDES (1) 1700 SQFT. C-STORE, (1) AUTO CANOPY, (4) DISPENSERS, (11) PARKING STALLS INCLUDING (1) ACCESSIBLE STALL, (1) ID SIGN, AND OTHER TYPICAL SITE IMPROVEMENTS.

GENERAL BUILDING INFORMATION

BUILDING DATA

ZONING CLASSIFICATION:	B-4
OCCUPANCY:	XXX
CONSTRUCTION TYPE:	XXX
NUMBER OF STORIES:	1
BUILDING AREA:	Total 1,700 SQ. FT.

ADOPTED CODES

CURRENT 2015 ZONING ORDINANCE

2006	INTERNATIONAL BUILDING CODE
2006	INTERNATIONAL FIRE CODE
2006	INTERNATIONAL MECHANICAL CODE
2005	NATIONAL ELECTRICAL CODE
2014	ILLINOIS STATE PLUMBING CODE
1997	ILLINOIS ACCESSIBILITY CODE
2012	INTERNATIONAL ENERGY CODE
2006	INTERNATIONAL FUEL GAS CODE

MATERIAL AND SYMBOL LEGEND

- DEMOLITION KEY NOTE
- KEY NOTE
- DOOR TAG
- WALL TYPE TAG
- WINDOW TAG
- REVISION TAG
- ROUND OR DIAMETER
- CENTERLINE

SECTION CUT TAG: SECTION KEY, SHEET NUMBER

ELEVATION TAG: ELEVATION NUMBER, SHEET NUMBER

DETAIL TAG: DETAIL NUMBER, SHEET NUMBER

ELEVATION LEVEL LINE: B/CEILING XX'-X"

COLUMN LINE GRIDS: 1, A

ROOM TAG: ROOM NAME XXX

NORTH ARROW: N

LOCATION MAP



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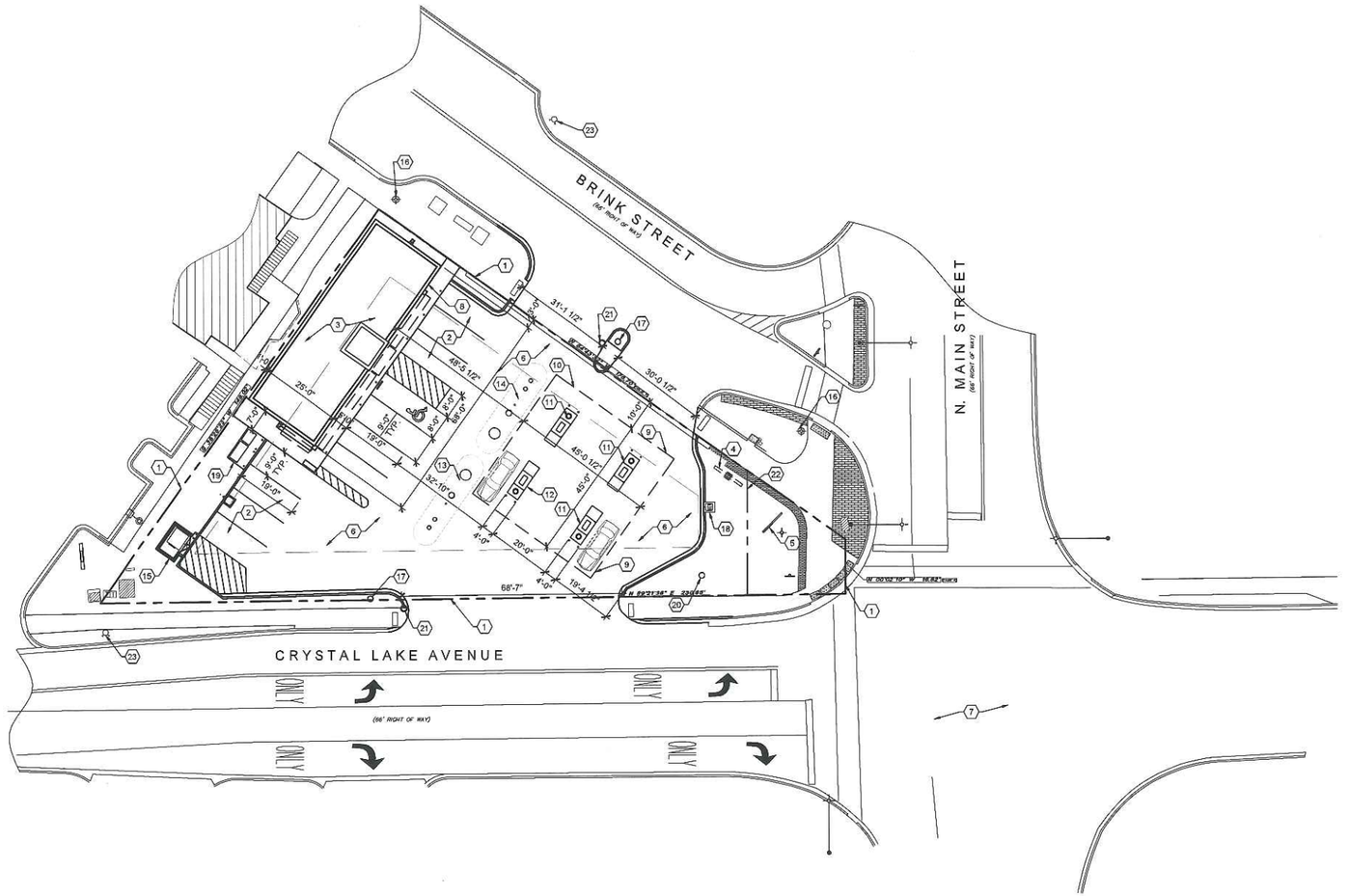
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FAX. 224.293.6968
WWW.CDDGROUP.COM
IL. PROFESSIONAL DESIGN FIRM NO.: 184.006313

SPARTA BROTHERS OIL
90 BRINK ST.
CRYSTAL LAKE, IL

COVER SHEET

START DATE: 05-04-2015
SCALE: AS SHOWN
DRAWN: PM
CHECK: CK
JOB: D15041
SHEET: G001

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A001 A ZONING SITE PLAN
SCALE: 1" = 20'-0"

N

ZONING INFORMATION

SITE ZONING (SECT 1-300-A)	MUNICIPALITY:	CITY OF CRYSTAL LAKE, ILLINOIS	
	EXISTING ZONING:	B-4 DOWNTOWN BUSINESS DISTRICT	
	REQUIRED ZONING:	B-4 DOWNTOWN BUSINESS DISTRICT	
MIXED USE (SECT 2-300) (SECT 2-300)			PROPOSED
	PERMITTED USE:		CONVENIENCE STORE
	SPECIAL USE:		GASOLINE STATION (WITH CONVENIENCE STORE)
SITE AREA (SECT 3-200-B)		ALLOWED	PROPOSED
	FAR:	1.5 FAR	0.1125 FAR (1700 GSF)
	GROSS LOT AREA:	5,000 GSF MIN.	15,105 GSF
	IMPERVIOUS AREA:	95% MAX.	85%
	BUILDING COVERAGE:	70% MAX.	11.3%
BUILDING HEIGHT (SECT 3-200-B)		REQUIRED	PROPOSED
	C-STORE BLDG HT:	36' MAX.	19'-10" MAX.
	ACCESSORY STRUCTURE:	25' MAX.	19'-0" MAX.
BUILDING SETBACKS (SECT 3-200-B)		REQUIRED	PROPOSED
	REAR YARD	20'	1'-0"
	SIDE YARD(BRINK ST):	0'	3'-0"
	SIDE YARD(CRYSTAL LAKE):	0'	5'-10"
	FRONT (N MAIN ST):	0'	52'-4"
PARKING / LOADING (SECT 4-200-D)		REQUIRED	PROPOSED
	C-STORE PARKING:	1 STALL PER 4 PUMPS + 1 STALL PER 350SF = 7 SPACES	11 SPACES
(SECT 4-200-H)	STALL SIZE (90°):	9' X 19'-0"	9' X 19'-0"
(SECT 4-200-E)	ACCESSIBLE:	1 SPACE (8' X 16'-0")	1 SPACE
(SECT 4-200-G)	STACKING:	30' FROM EACH END OF OUTERMOST ISLAND	16'-0"

SITE PLAN KEY NOTES: ⊖ (ALL ITEMS NEW UNLESS OTHERWISE NOTED)

1. PROPERTY LINES
2. PARKING STALLS: (10) STANDARD PARKING STALL AND (1) ADA PARKING STALL
3. 1700 SF C-STORE BUILDING
4. EXISTING ID POLE SIGN TO REMAIN: FACE PLATE TO BE REFACED
5. EXISTING CITY SIGN TO REMAIN
6. PROPERTY SIZE: 15,105 SF
7. SIGNALIZED INTERSECTION
8. WALL SIGNAGE: READERBOARD
9. CANOPY SIGNAGE
10. AUTO CANOPY: 45' X 45'
11. (3) 3+0 DISPENSERS
12. (1) 3+1 DISPENSERS
13. 20,000 GALLON REG UNDERGROUND STORAGE TANK
14. 10,000 GALLON DIESEL AND PREMIUM UNDERGROUND STORAGE TANK
15. TRASH ENCLOSURE
16. EXISTING STREET LIGHT TO REMAIN
17. RELOCATED EXISTING STREET LIGHT
18. AIR STATION
19. ICE AND PROPANE MACHINE
20. FLAG POLE
21. EXISTING STREET LIGHT TO BE RELOCATED
22. PROPOSED NEW PROPERTY LINE BASED ON PROPOSED ROW DEDICATION
23. EXISTING FIRE HYDRANT

GENERAL NOTES

1. PROPERTY SIZE: (15,105,1349 SF)
2. AUTO & TRUCK CIRCULATION HAS BEEN PERFORMED ON SITE. PLEASE SEE SHEET (A002) CIRCULATION PLAN

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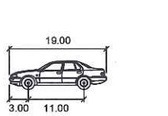
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HOFFMAN ESTATES, ILLINOIS 60192
PH: 224.293.6888
FAX: 224.293.6958
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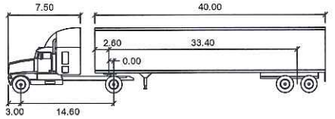
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CRYSTAL LAKE, IL

ZONING SITE PLAN

START DATE:	05-04-2015
SCALE:	AS SHOWN
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CHECK:	CK
JOB:	D15041
SHEET	A001

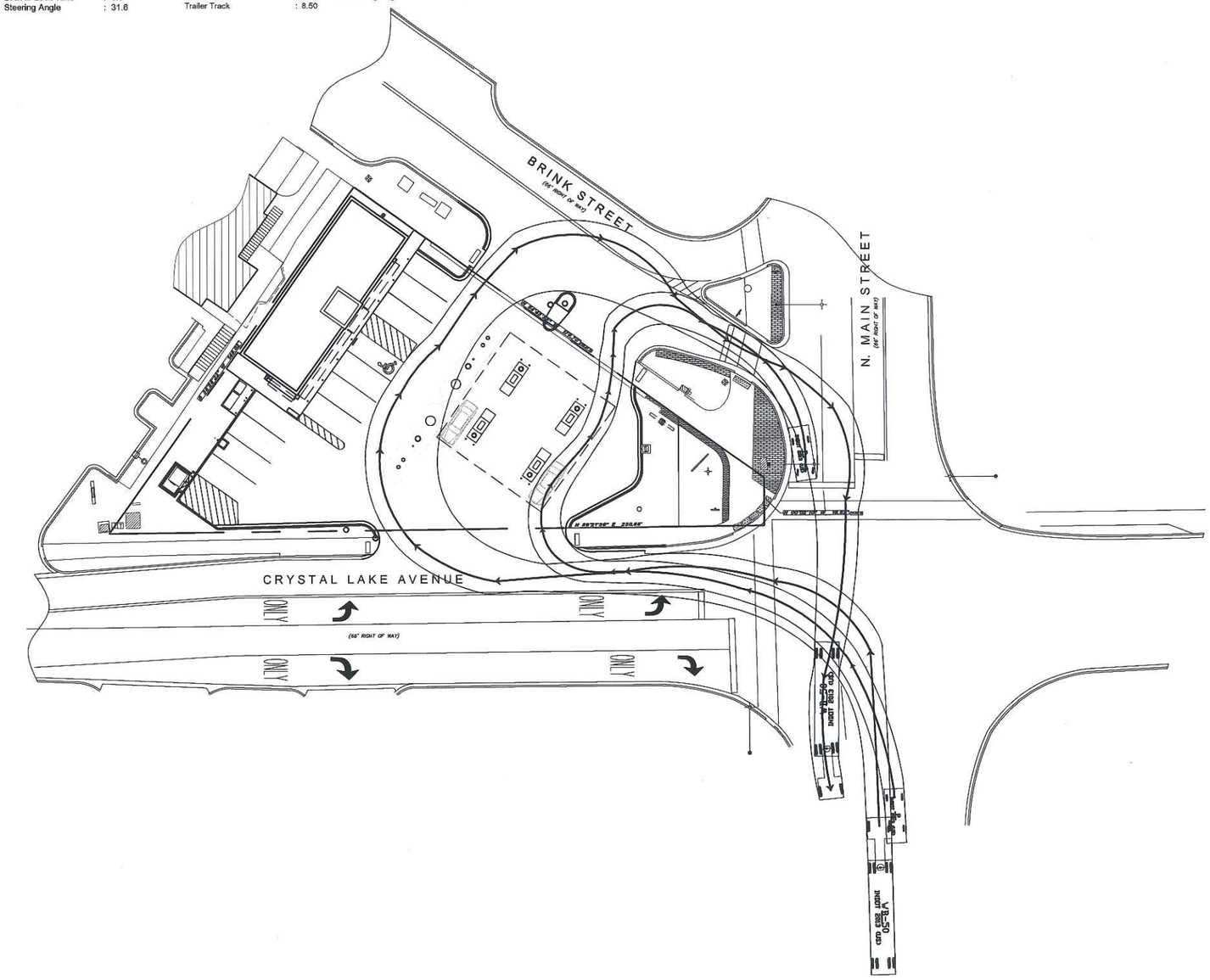
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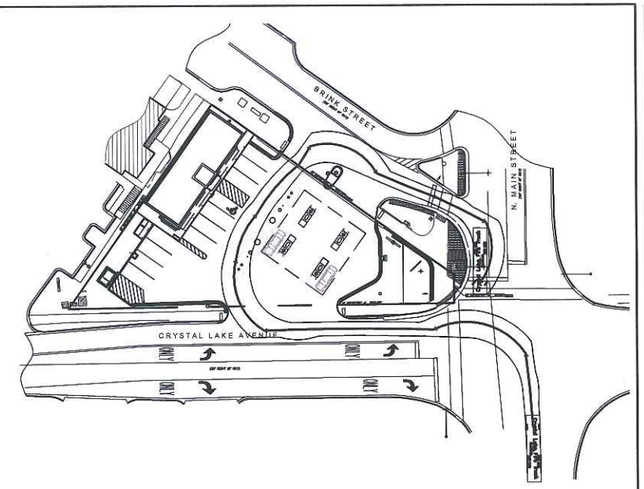


P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

WB-50	feet		
Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 20.8
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		



A A002 CIRCULATION PLAN
SCALE: 1" = 20'-0"



B A002 FIRE TRUCK CIRCULATION PLAN
SCALE: 1" = 40'-0"

N

TR-05a

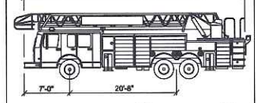
TRUCK 381

INSIDE RADIUS
= 32.5 FEET

CRYSTAL LAKE FIRE RESCUE FIELD MEASUREMENTS

EMERGENCY ONE INC. TURN RADIUS DIAGRAM
HP-100
AERIAL
LADDER

DESIGN VEHICLE DIMENSIONS



Width	: 8'-0"
Front Track	: 97"
Rear Track	: 95"
Lock to Lock Time	: 6.00 sec.
Steering Angle	: 37.00

NOTES

1. THIS DESIGN VEHICLE SHALL BE USED AS THE BASIS FOR ROADWAY AND PARKING LOT GEOMETRICS IN THE ABSENCE OF A SPECIFIC DESIGN TRUCK (e.g., WB-65)
2. THIS INFORMATION IS PROVIDED FOR REFERENCE ONLY.
3. A VEHICLE MANEUVERABILITY ANALYSIS SHOULD BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER TO VERIFY THE TURNING CAPABILITIES OF THIS DESIGN VEHICLE.

Approved: City Engineer	Drawing Name	Drawing Number	City of
Victor C. Ramirez, P.E. Director of Engineering and Building	TURNING TEMPLATES: LADDER TRUCK (CITY DESIGN VEHICLE)	TR-05a Date: 4/15/2007 Drawn EM Checked RD	Crystal Lake Illinois Engineering Division

Filepath: L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

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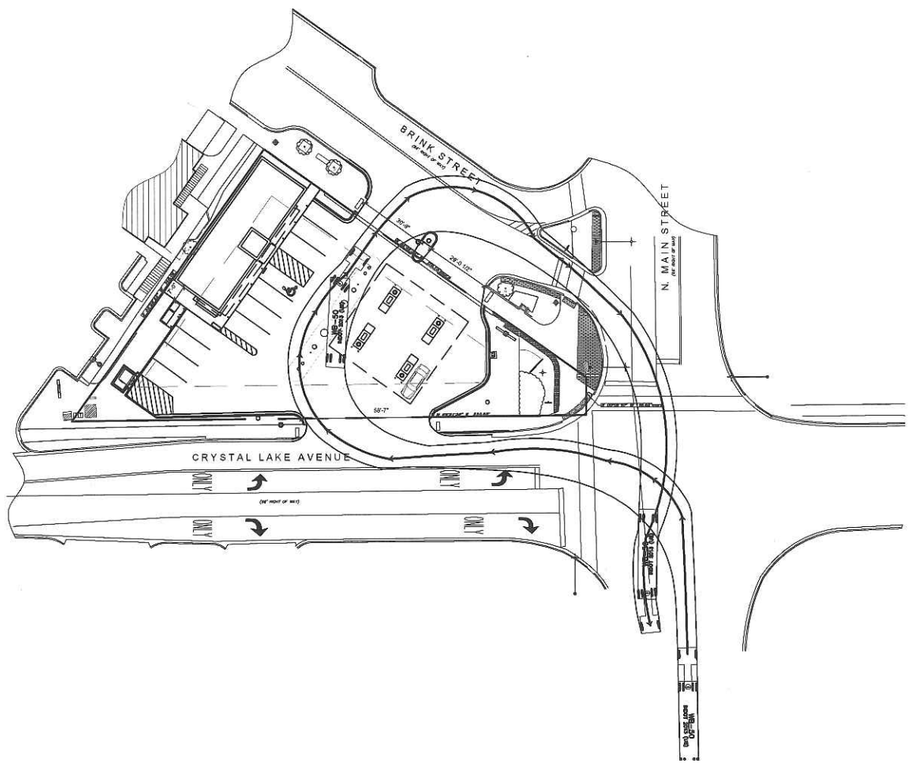
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IL PROFESSIONAL DESIGN FIRM NO: 184.006213

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CRYSTAL LAKE, IL

CIRCULATION PLAN

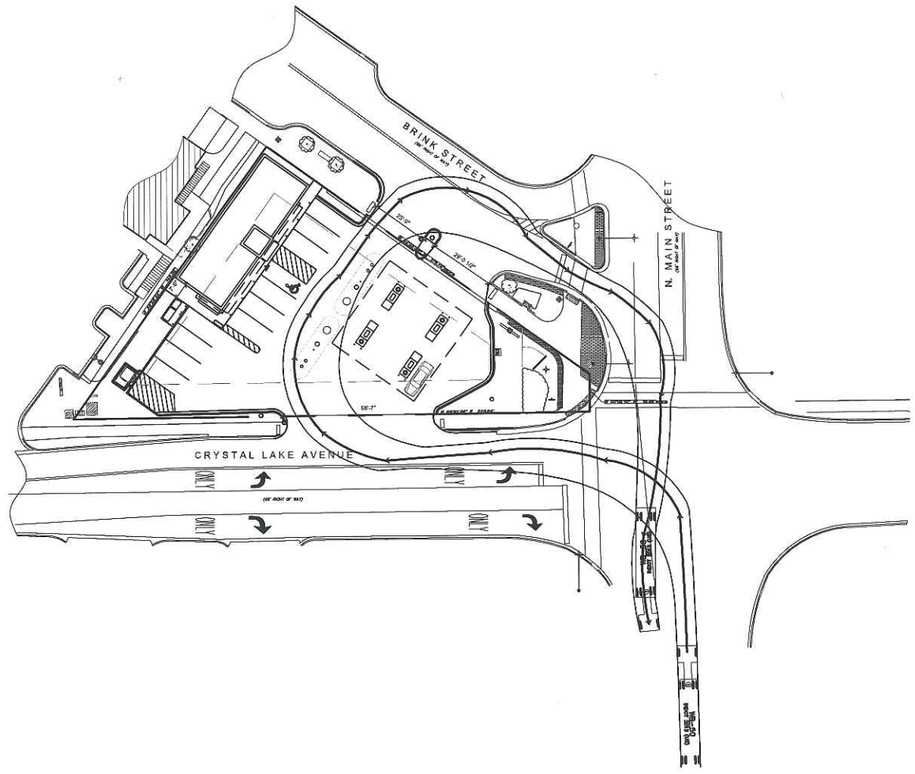
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SCALE:	AS SHOWN
DRAWN:	PM
CHECK:	CK
JOB:	D15041
SHEET	A002

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A / A002a ALTERNATE CIRCULATION PLAN WITH NARROW ENTRY @ CRYSTAL LAKE AVE.
SCALE: 1" = 30'-0"

N



B / A002a ALTERNATE CIRCULATION PLAN WITH NARROW ENTRY @ BRINK ST
SCALE: 1" = 30'-0"

N

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FAX: 224.293.8996
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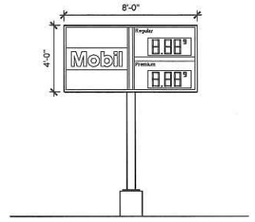
SPARTA BROTHERS OIL

90 BRINK ST.
CRYSTAL LAKE, IL

ALTERNATE CIRCULATION PLANS

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CHECK:	CK
JOB:	D15041
SHEET:	A002a

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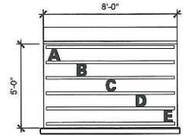
SIGN CABINET: 32 SF

1 A003 EXISTING POLE SIGN: NEW GRAPHICS
SCALE: 1/4" = 1'-0"



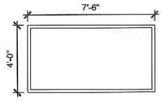
SIGN AREA: 14 SF

2 A003 CANOPY GRAPHICS
SCALE: 1/4" = 1'-0"



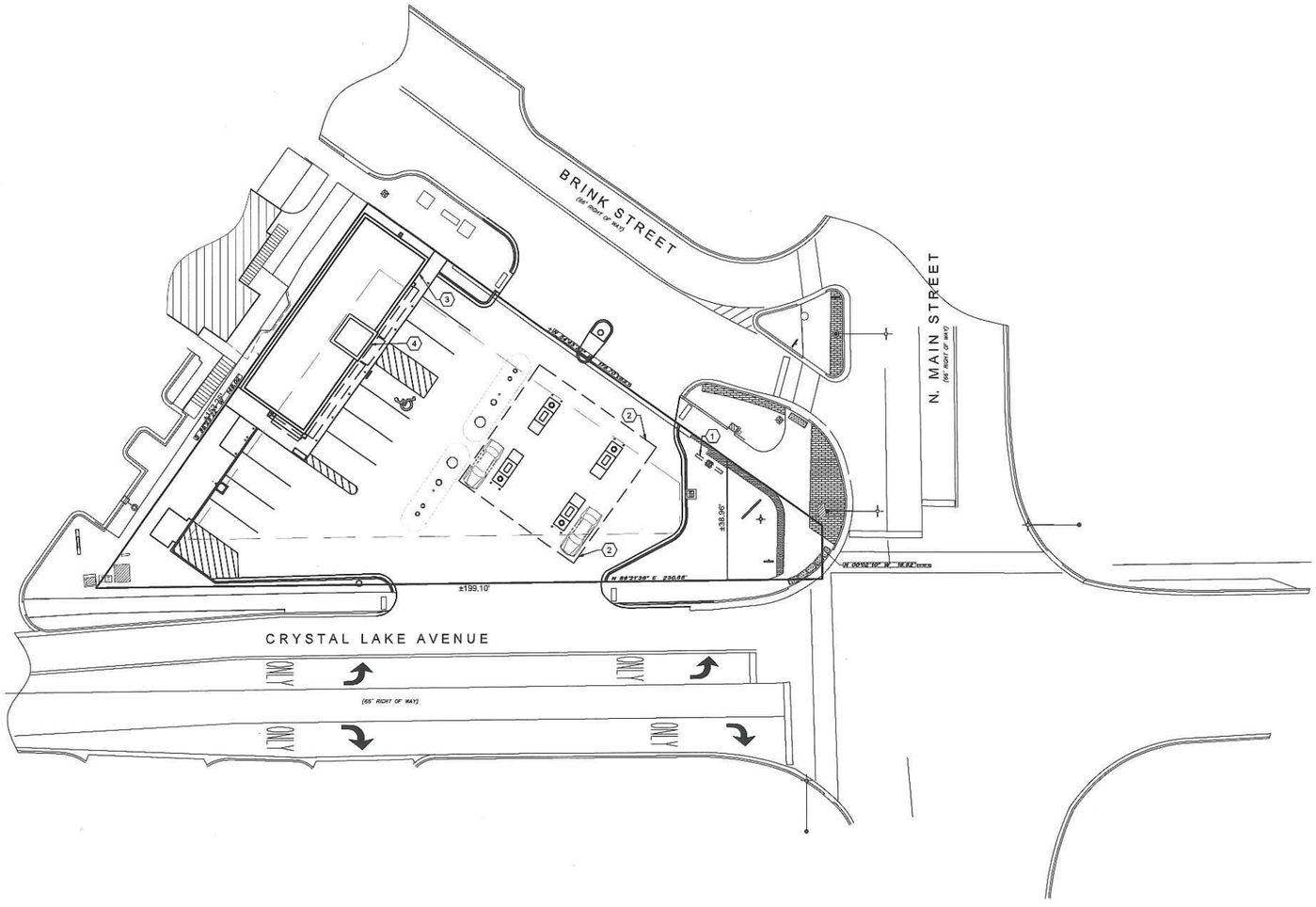
SIGN AREA: 40 SF

3 A003 READER BOARD SIGN
SCALE: 1/4" = 1'-0"



SIGN AREA: 30 SF

4 A003 BUILDING SIGN
SCALE: 1/4" = 1'-0"



A A003 SIGNAGE SITE PLAN
SCALE: 1" = 20'-0"

N

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SPARTA BROTHERS OIL
90 BRINK ST.
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SIGNAGE
SITE PLAN

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JOB:	D15041
SHEET	A003

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RIGHT SIDE ELEVATION
SCALE: 1/4" = 1-0"



REAR ELEVATION
SCALE: 1/4" = 1-0"



LEFT SIDE ELEVATION
SCALE: 1/4" = 1-0"



FRONT ELEVATION
SCALE: 1/4" = 1-0"

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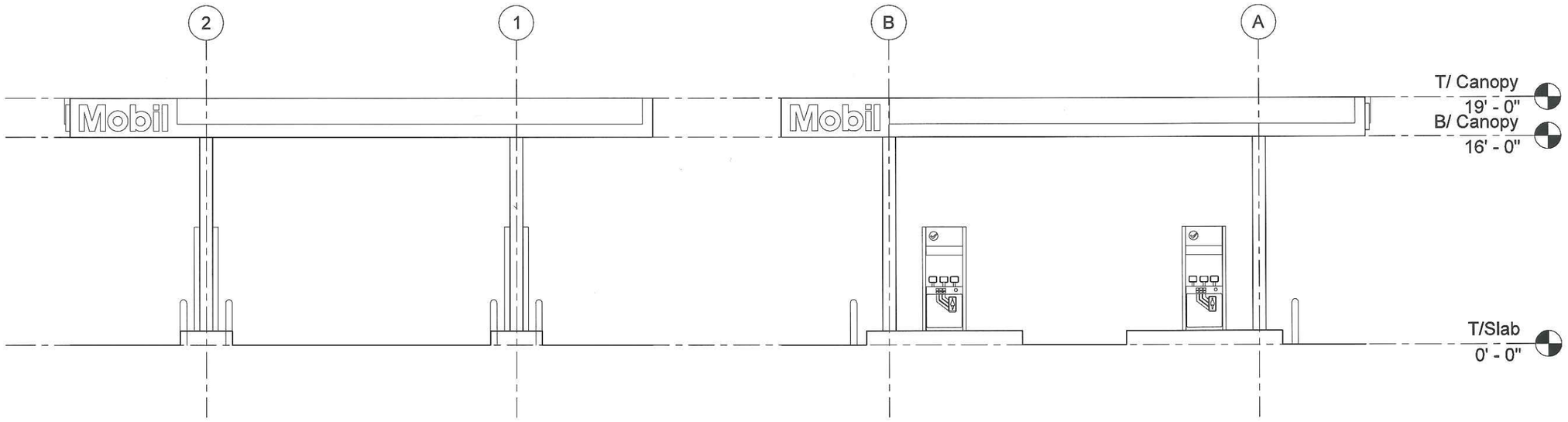
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C-STORE EXTERIOR ELEVATIONS

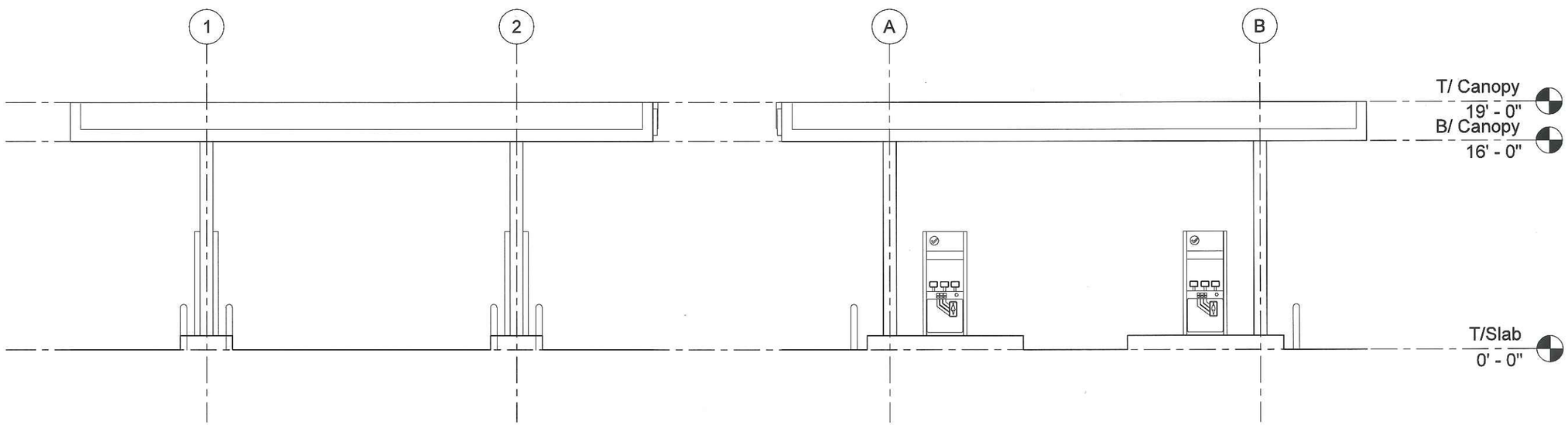
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CHECK:	CK
JOB	D15041
SHEET	EL-1

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1 A202 NORTHEAST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"

2 A202 SOUTHEAST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"



3 A202 SOUTHWEST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"

4 A202 NORTHWEST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"

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-	REVISIONS PER CITY COMMENTS	08/03/15	MA
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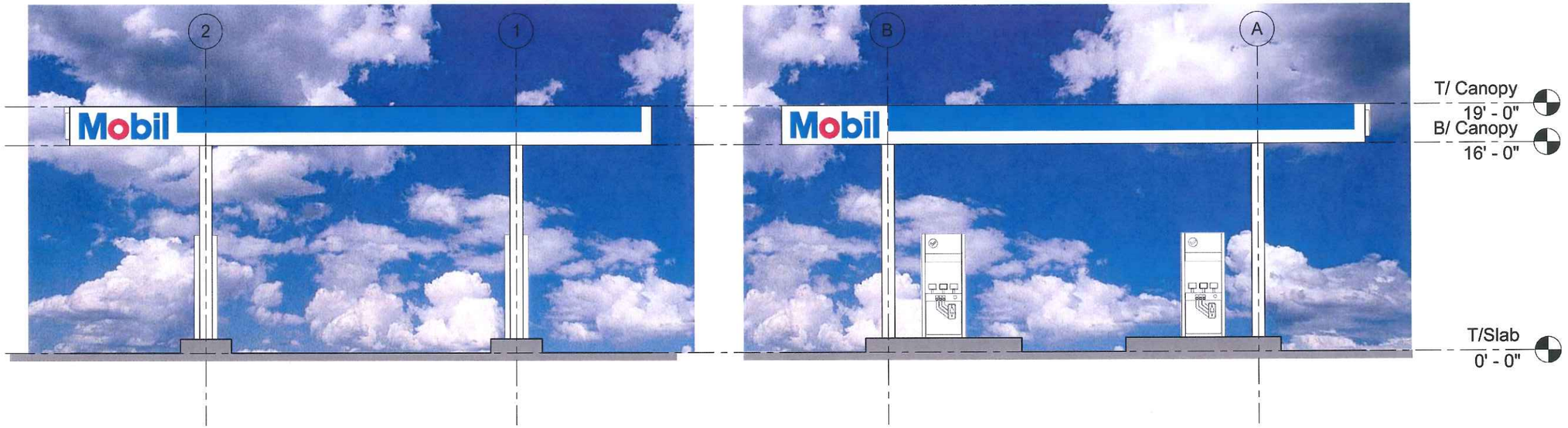
SPARTA BROTHERS OIL

90 BRINK ST.
CRYSTAL LAKE, IL

CANOPY ELEVATIONS

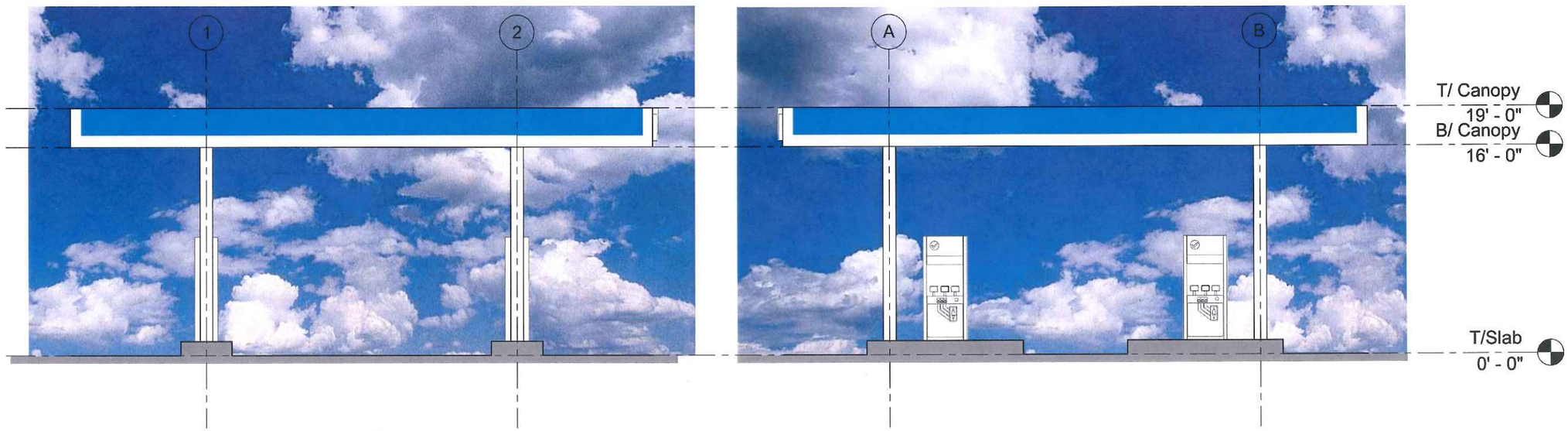
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1 / A202 NORTHEAST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"

2 / A202 SOUTHEAST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"



3 / A202 SOUTHWEST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"

4 / A202 NORTHWEST CANOPY ELEVATION
SCALE: 1/4" = 1'-0"

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-	ISSUED FOR ZONING	05/29/15	KS
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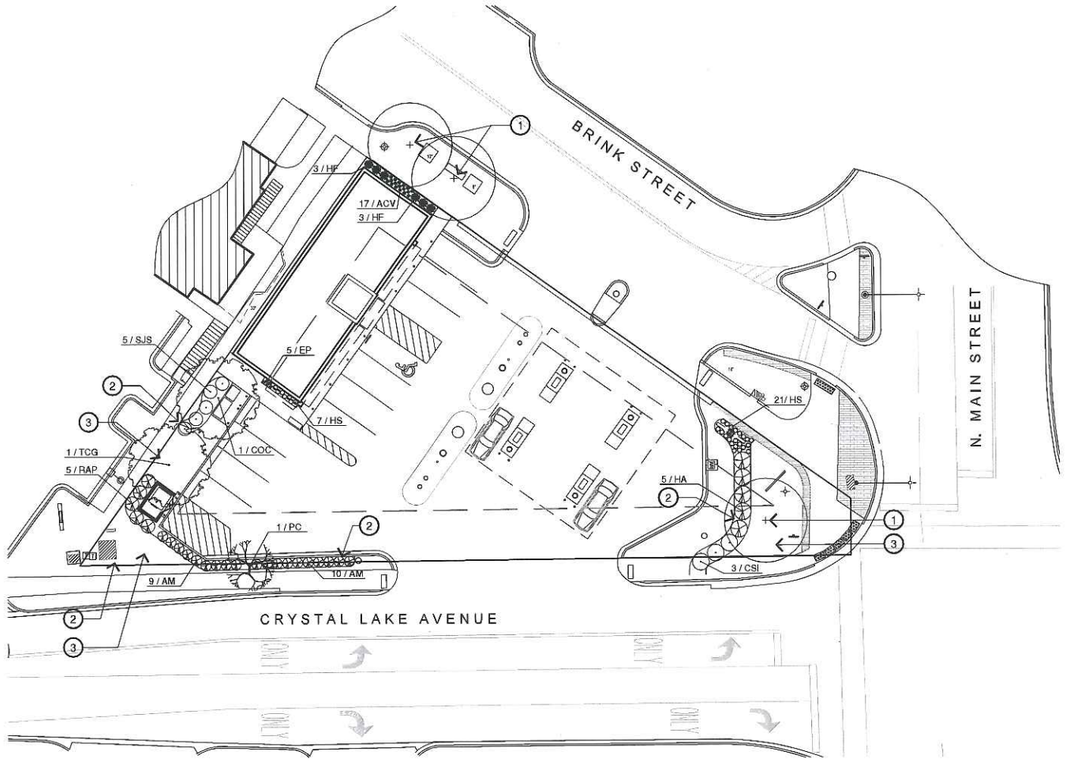
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SPARTA BROTHERS OIL
90 BRINK ST.
CRYSTAL LAKE, IL

CANOPY ELEVATIONS

START DATE:	05-04-2015
SCALE:	AS SHOWN
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CHECK:	CK
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SHEET	A202

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Landscape Requirements

Area	Required	Proposed
Crystal Lake Ave. Perimeter Yard: (1 Tree / 40 LF)	1	1
Northwest Perimeter Yard: (1 Tree / 40 LF)	2	2
Northwest Perimeter Yard: (5 shrubs / 40 LF)	10	10

Notes

1. Existing trees to remain. Protect during Construction.
2. Remove all turf encountered within bed limits and haul from site. Furnish and install 3" minimum layer of double shredded hardwood bark mulch in all planting beds and tree rings.
3. Fine grade, fertilize and seed all disturbed areas using Common Area bluegrass seed. (See Specifications)

Plant List & Key

Key	Botanical Name (Common Name)	Size	Quantity
Shade Trees			
COC	Celtis occidentalis 'Chicagoland' (Chicagoland Hackberry)	2 1/2"	1
TCG	Tilia cordata 'Greenspire' (Greenspire Linden)	2 1/2"	1
Ornamental Trees			
PC	Pyrus Calleryana 'Chanticleer' (Chanticleer Callery Pear)	2 1/2"	1
Deciduous Shrubs			
AM	Aronia melanocarpa (Black Chokeberry)	36"	19
CSI	Cornus sericea 'Isanti' (Isanti Dogwood)	36"	3
HA	Hydrangea arborescens (Smooth Hydrangea)	36"	5
RAP	Ribes alpinum 'Green Mound' (Green Mound Alpine Currant)	24"	5
SJS	Spiraea japonica 'Shirobana' (Shirobana Spiraea)	24"	5
Perennials & Groundcovers			
ACV	Astilbe chinensis 'Visions' (Visions False Spirea)	1 GAL.	17
EP	Echinacea pallida (Purple Coneflower)	1 GAL.	5
HS	Hemerocallis 'Stella-de-Oro' (Stella-de-Oro Daylily)	1 GAL.	28
HF	Hosta fortunei 'Francee' (Frances Hosta)	1 GAL.	6

Note: The quantities listed above are for reference only. The Contractor will be responsible for confirmation of all quantities, based on the plant materials shown and identified on the Landscape Plans.

North Project #: B15027

Scale: 1" = 20'

0 10 20 40 60

Brusseau Design Group, LLC

Landscape Architecture ▪ Land Planning ▪ Recreational Planning & Design

2675 Pratum Avenue, Hoffman Estates, IL 60192

NO.	REVISIONS	DATE	BY
-	ISSUED FOR OWNER REVIEW	05/08/15	PM
-	ZONING SUBMITTAL	06/25/15	KP
-	REVISIONS PER CITY COMMENTS	08/03/15	KP

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SPARTA BROTHERS OIL

90 BRINK ST.
CRYSTAL LAKE, IL

LANDSCAPE PLAN

START DATE: 05-04-2015
SCALE: AS SHOWN
DRAWN: PM
CHECK: CK
JOB: D15041
SHEET: L1

Specifications

Section 32 92 00 - Turf and Grasses

1.0 General Description

This work shall consist of cultivating and fine grading of topsoil, rock and debris removal, fertilizing and seed installation or sod installation.

1.1 Submittals

The Contractor must submit fertilizer mixture tags, seed mixture tags or sod specifications from the sod nursery for approval by the Landscape Architect or the Owner's Representative. Products must be approved by the Landscape Architect or the Owner's Representative prior to any installation.

1.2 Product Delivery, Storage and Handling

All sod, seed, fertilizer and other materials to be used for the installation must be protected from weather, damage during transit and vandalism while stored at the project site. Any materials that have been damaged by any of the above will not be acceptable for use on the project.

1.3 Protection

The Contractor will be responsible for the protection of any seeded or sodded areas until the final acceptance of the installation. The Contractor may only use barricades, devices or products that are acceptable to the Owner or the Landscape Architect for protection of seeded or sodded areas

2.0 Products

A. Water: The Contractor will be required to supply water including all meters, hoses and connections, etc. necessary to water the turf areas.

B. Sod:

1. All sod used for this project must be blended Blue Grass as specified below, with no more than 5% weeds or other grasses. The sod must be free of rocks, stones or debris and must have a 1 minimum thickness of soil and an adequate root system. Sod must be cut into one (1) square yard sections. Big roll sod in widths of 30" are also acceptable.
2. All sod used must contain equal percentages of at least four different varieties of the following:

   a. Midnight
   b. Columbia
   c. NuGlade
   d. Rugby II
   e. Bluemoon
   f. Nubles

3. All sod must be supplied by growers within a fifty (50) mile radius of the project site. The sod must be delivered to the project site on skids or pallets. Dumping of sod from any vehicle is not permitted. Damaged sod or any sod that appears to be dry or in decline will not be accepted. All sod must be planted within forty-eight (48) hours after it has been harvested.

C. Seed:

1. Grass seed mixture must be composed of the following seeds mixed in proportions by weight, with the following minimum percentages of purity and germination:

General or Common Areas:

Proportion By Weight	Name of Grass	Purity Percent	Germination
80%	Blended Blue Grass (Midnight, Columbia, NuGlade, Rugby II, or Bluemoon) Use at least 4 varieties.	90%	80%
20%	Perennial Rye (Roadrunner Manhattan III, Charger II And Catalina10%	98%	80%

Athletic Fields:

Proportion By Weight	Name of Grass	Purity Percent	Germination
15%	Banff Kentucky Blue	98%	85%
15%	Touchdown Kentucky Blue	98%	85%
15%	Challenger Kentucky Blue	98%	85%
15%	Rugby Kentucky Blue	97%	80%
10%	Limousine Kentucky Blue	98%	85%
30%	Alliance Rye	98%	90%

2. All seed must be delivered to the project site in unopened bags, which include identification tags or labels.

D. Fertilizer:

1. Commercial fertilizers must contain the following percentages by weight:

Prior to Seeding 10-18-18 with 30% Nutralene

Nitrogen	10%
Phosphoric Acid	18%
Potash	18%

After Seeding 25-0-10

Nitrogen	25%
Phosphoric Acid	00%
Potash	10%
Sulfur	10%

2. All fertilizer must be delivered to the project site in unopened bags, which include identification tags or labels.

Section 32 92 00 - Turf and Grasses, continued

3.0 Execution

A. The Contractor must inspect all final grading prepared by the Grading Contractor and request approval from the Landscape Architect or the Owner's Representative to begin seed or sod installation. Any disparities noted in the final topsoil grades must be reviewed by the Landscape Architect and resolved prior to the commencement of seed or sod installation.

B. Fine Grading:

1. All areas to be seeded or sodded shall be prepared by pulverizing the soil to a minimum depth of three (3) inches. This process shall include rototilling and/or dicking, and raking and dragging the soil to produce a smooth bed for seeding or sod installation. Regardless of whether the area will receive seed or sod, the soil preparation must be consistent. All rocks and other debris 3/4 inch in diameter or greater must be removed from the surface prior to seeding or sodding.
2. Should previously conditioned soil become compacted by weather, construction equipment or other means, the area shall be re-conditioned as indicated above.

3.1 Installation

A. Planting Seasons:

1. Seeded Areas: Seed may be installed from March 15th through May 14th and from August 15th through October 1st.
2. Sodded Areas: Sod may be installed from March 1st through June 15th and from August 15th through November 1st.
3. If requested in writing and approved by the Landscape Architect or the Owner's Representative, the planting seasons listed above may be extended due to favorable weather conditions.

B. Fertilizing:

Fertilizer must be mechanically broadcast or spread and tilled into the top three (3) inches of soil at the rate of 5.5 lbs. per 1,000 square feet or 240 lbs/acre.

C. Seeding:

Common Area and Athletic Field Seed shall be mechanically applied at the rate of 5.0 lbs. per 1,000 square feet of area or 220 lbs/acre. The seed shall be spread evenly and lightly raked into the soil.

E. Sodding:

1. Sod shall be installed tightly together with the joints on the long dimension of the sod staggered in a fashion equal to running bond brick.
2. After the sod is laid, it must be watered thoroughly and rolled if necessary to adhere the sod to the soil.

3.2 Maintenance, Clean-Up and Acceptance

A. Maintenance: The Contractor must provide maintenance of seeded or sodded areas until the date of final acceptance, including the following:

1. Seeded Areas:
   a. Watering of turf.
   b. Re-filling with topsoil and the overseeding of washed out or rutted areas.
   c. Re-fertilizing with a commercial fertilizer at the rate of 5.5 lbs. per 1,000 square feet (240 lbs/acre) on one occasion after sufficient germination.
   d. Overseeding any turf areas that haven't germinated sufficiently or which fail to support a uniform and consistent stand of grass. Any such areas must be re-seeded with the similar seed mixture and rate initially applied. Re-seeding must continue until all turf areas are covered with a uniform and consistent stand of grass. A uniform and consistent stand of turf will be defined as turf that is full and even with no bare areas.
   e. All seeded areas must be maintained as noted above for a period of Sixty (60) days after installation or until a uniform and consistent stand of grass has been established.
2. Sodded Areas:
   a. Watering of turf.
   b. Re-fertilizing with a commercial fertilizer at the rate of 5.5 lbs. per 1,000 square feet (240 lbs/acre) on one occasion.
   c. Replacement of sod, which fails to grow or is in a state of decline using the same sod mixture as previously installed.
   d. All sodded areas must be maintained as noted above for a period of Thirty (30) days after installation or until a uniform and consistent stand of grass has been established. A uniform and consistent stand of turf will be defined as turf that is full and even with no bare areas.

B. Clean Up:

1. All debris generated by this work shall be removed from the site.
2. All pavements and walks must be clean and washed of any mud or heavy concentration of soil.
3. All planting beds must be edged or spaded to form a smooth curvilinear shape.

C. Final Inspection and Acceptance:

Upon completion of the required maintenance period, the Contractor must make a written request to the Landscape Architect to schedule a final inspection of the turf areas. The Contractor will be required to make this request a minimum of ten (10) working days prior to the inspection. If upon inspection, the Landscape Architect feels that the turf areas are not established within specification, the Contractor will be required to re-work and maintain those unacceptable areas until a final acceptance has been granted.

Section 32 93 00 - Plants

1.0 General

1.01 Description

A. This work shall consist of the excavation, installation, backfilling, care and maintenance of landscape plantings.

B. The size and grading standards of plant materials in this specification must conform with the "American Standard for Nursery Stock" by the American Association of Nurserymen.

1.02 Submittals

A. When required in the plan notes or details, material or product samples must be submitted by the Contractor for approval by the Landscape Architect.

B. The Landscape Architect shall review the materials or product samples submitted and shall reserve the right to compare the submitted materials with the materials delivered to the project site. If the materials delivered to the project site are not of the same type, consistency and quality as the submitted samples, the Landscape Architect will have the right to reject said products and require the Contractor to provide materials from another source.

Section 32 93 00 - Plants, continued

1.03 Product Delivery, Storage & Handling

A. Storage of Materials: Plant materials will be permitted to be stored at the project site in location determined by the Owner, but must be protected by the Contractor from theft, damage or vandalism. Plant materials that are stolen, or damaged in any way must be replaced by the Contractor at no additional expense to the Owner. Supplies, including but not limited to marking paint, fertilizer, insecticides, or other chemicals must be stored off site and transported to the site each day for use.

B. Inspections:

1. All plant materials shall be subject to inspection and approval by the Landscape Architect or the Owner's Representative at the point of growth nursery or the project site, prior to installation. Should any plant materials be installed prior to inspection, then the Contractor will assume full responsibility for their replacement, including excavation, hauling and new materials, should they be found to be unacceptable.
2. Should any plant materials be found to be unacceptable during the on-site inspection, then they shall be replaced by the Contractor at no additional expense to the Owner.
3. The Contractor, at their expense can also arrange for the inspection of plant materials at local point of growth nurseries, which must be located within a fifty (50) mile radius of the project site. The Contractor must pre-tag all shade, ornamental and evergreen trees and a sample of shrubs and perennial materials to be used for the project. The Landscape Architect will review the pre-tagged plant materials and make a decision regarding their acceptability for the project. Should any pre-tagged plant materials not be acceptable, then the Contractor will be responsible for locating another samples for review.
4. The Contractor must request the Landscape Architect's attendance at least ten (10) working days in advance for all point of growth nursery inspections.
5. The entire cost of the inspections will be borne and paid for the Contractor including Architect's hourly cost of $150.00/hour, unless otherwise waived by the Architect or paid for directly by the Owner.
6. A representative of the Contractor must be present during all plant material inspections.

C. Digging and Handling of Plant Material

1. All shade trees, ornamental trees and evergreen trees must be balled and burlapped. Shrubs may be balled and burlapped or container grown. Perennials and groundcovers shall be grown in flats or pots.
2. Plant materials with cracked or broken balls will not be accepted.
3. All balled and burlapped plants that cannot be planted immediately upon delivery shall be heeled-in with mulch material and must be watered daily until planted. Plant materials that have been stored on site for a period longer than thirty (30) days will not be accepted.
4. All plant materials must be delivered to the project site in covered trailers or protected by a tarps or appropriate coverings during transit.
5. Plant materials must be marked for identification with their name or their appropriate key symbol, which can be found on the plant list.

1.03 Protection

A. All plant materials must be protected by the Contractor from theft or vandalism until the completed planting has received Preliminary Acceptance. Any plant material that is stolen or vandalized will be replaced by the Contractor at no additional expense to the Owner.

1.04 Guarantee

A. Plant materials must be guaranteed to grow and thrive for a period of one year from final acceptance. Any plant materials that are in decline as determined by the Landscape Architect or die during this Guarantee Period must be replaced by the Contractor at no additional expense to the Owner, and will be guaranteed for an additional one (1) year period.

B. The Contractor will be responsible for repairing any damage to turf or pavements caused by plant material replacement.

2.0 Products and Materials

A. Water: The Contractor will be required to supply water including all meters, hoses and connections, etc. necessary to water the landscape plantings.

B. Peat Moss or Humus: Commercial type sphagnum Peat Moss.

C. Fertilizer: Agriform Tablets by the Scotts Company, LLC. with the following analysis:

Nitrogen	20%
Phosphoric Acid	10%
Potash	5%

D. Mulch: A double shredded hardwood bark much material shall be used. Submit sample to the Landscape Architect for approval.

E. Topsoil: Topsoil required for planting mixture must be pulverized, clean soil, free of weeds, roots, stalks, and other debris. Submit sample to Landscape Architect for approval.

F. Planting Mixture: Planting mix soil shall consist of topsoil, topped with three (3) inch layer of One Step Soil Conditioner with Mycorrhizae as produced by Midwest Trading Horticultural Supplies, Inc, Till in three (3) inch layer of One Step Soil Conditioner to a depth of twelve (12) inches within topsoil fill. Fertilizer Tablets shall be included in the installation in accordance with manufacturer's instructions.

G. Plant Materials: All plant materials used for the project must be nursery grown at a location within a fifty (50) mile radius of the project site.

1. All plant materials used for this project must be freshly dug or container grown.
2. All plant materials must have a typical growth habit, be appropriately branched and densely foliated and shall be disease and pest free.
3. All plants must conform to the sizes contained on the plant list and the requirements set forth in the American Standard for Nursery Stock.
4. Plant material substitutions may only be made with the written approval of the Landscape Architect. The Contractor must submit all requests for plant material substitutions in writing to the Landscape Architect.

H. Pre-Emergence Herbicide: Shall be a granular form of Preen Garden Weed Preventer. This granular weed preventer will be applied after mulch installation in all planting beds at a rate of one (1) ounce per ten (10) square feet. Immediately water in after installation. Follow manufacturer's installation instructions.

3.0 Execution

A. Plant Material Layout and Location:

1. Prior to any installation, the Contractor must locate all plant materials using wooden lathe or flags. The Landscape Architect or the Owner's Representative will review and approve plant material locations.
2. The Contractor must utilize J.U.L.I.E. the local municipality or the Owner's representative to locate all utilities prior to any excavation.

B. Planting Hole Excavation:

1. The Contractor must excavate as necessary for installation of plant materials. All rock, broken concrete and similar debris must be removed from planting holes and hauled from the site at no additional expense to the Owner.
2. All excess soils generated from planting operations must be hauled from the site at no additional expense to the Owner.

Section 32 93 00 - Plants, continued

3.01 Installation

A. Planting Seasons:

1. Deciduous Plants must be planted during the following dates: April 1st to June 1st and October 1st to December 15th.
2. Evergreen Plants must be planted during the following dates: April 1st to May 15th and September 1st to October 1st
3. The planting periods indicated may be extended due to weather conditions or other factors, which must be approved by the Landscape Architect.
4. The Contractor will be relieved for his guarantee responsibility should the Owner require plant material installations to be completed during other times than the planting periods indicated.

B. Planting:

1. All shade trees, ornamental trees, evergreen trees, shrubs and perennials shall be planted in holes excavated at least twice the width of the diameter of the ball or container and deep enough so that the top of the ball or soil in the container is at or just above existing grade.
2. Install Agriform fertilizer tablets in excavated holes after filling half way up the root ball. Follow manufacturer's Application Rates.
3. All twine or rope must be cut and removed and the burlap folded away from the top of the ball. The excavation must be backfilled with the planting mixture and watered. Any settlement will be filled with planting mixture.
4. A 4 deep saucer, similar to the diameter of the planting hole shall be created using planting mix.
5. Groundcovers: All perennial and groundcover beds shall be tilled to a depth of six (6) inches. Three (3) inches of mushroom or similar compost must then be tilled into the soil and the planting bed raked smooth prior to planting.

C. Pruning:

1. All trees and shrubs shall be pruned to enhance the natural character of the plant, and to remove any broken or damaged branches.

D. Mulching:

1. All shade trees, ornamental trees, and evergreen trees shall be mulched. The mulch shall cover the planting area with a minimum of three (3) inches and not more than four (4) inches in depth. No mulch material may cover the trunk or plant stem.
2. All massed plantings will be mulched with a minimum of three (3) inches and not more than four (4) inches of mulch. The entire bed shall be mulched under the plants. A spaded edge must be produced in the bed shape as indicated on the plans.
3. Groundcover areas will not receive any mulch.

E. Pre-Emergence Herbicide Application:

1. Granular weed preventer will be applied after mulch installation in all planting beds at a rate of one (1) ounce per ten (10) square feet. Immediately water in after installation. Follow manufacturer's installation instructions.

F. Wrapping, Staking & Guying:

1. All shade and single stem ornamental trees must be wrapped with burlap or an approved tree wrap from the based of the tree to the start of the first branches.
2. Evergreen trees 6' high and larger must be staked and guyed. Deciduous trees 4 caliper and larger must staked and guyed.
3. When required, a three-point guying system shall be used consisting of galvanized wires, hose loops, turn buckles and wooden stakes. Other commercial staking and guying systems may be used if presented by the Contractor and approved by the Landscape Architect. All guy wires must have high visibility orange flagging and all stakes must be painted with high visibility orange paint.

3.02 Maintenance, Clean-Up and Acceptance

A. Maintenance of plant materials:

1. Maintenance of plant materials will begin upon completion of the installation of the last plant material and will continue for a period of sixty (60) days. Maintenance periods that have not been completed by November 1st, will be completed the following year, beginning on May 1st.
2. During the maintenance period, the Contractor must water and straighten all plants, as well as weed planting beds and tree rings.
3. The Owner will be responsible for all maintenance requirements after this required sixty (60) day period.

B. Clean Up:

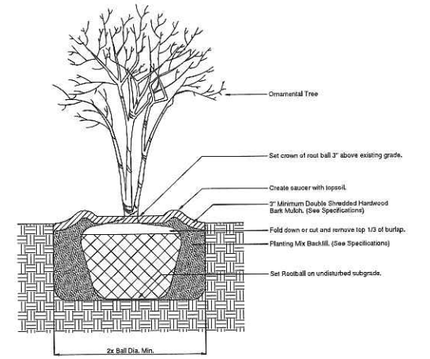
1. All debris generated during the installation of plant materials must be removed from the site.
2. All pavements and walks must be swept after each days work. Upon completion of the work, all pavements must be washed to removal mud or dirt.

C. Preliminary Acceptance:

1. Upon completion of the installation of all plant materials, the Contractor must submit his request for an inspection to determine preliminary acceptance of the completed work. All such requests must be submitted to the Landscape Architect at least 10 (ten) days in advance.

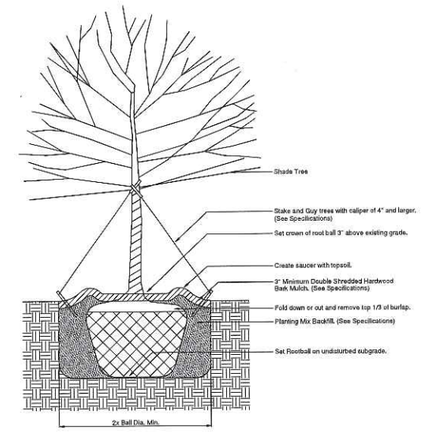
G. Final Acceptance:

1. Upon completion of the maintenance period the Contractor must submit his request for final acceptance of the completed work. All such requests must be submitted to the Landscape Architect at least 10 (ten) days in advance.
2. The Landscape Architect will review the work and determine whether the work should receive Final Acceptance. Should the Landscape Architect find conditions that are not acceptable, the Contractor will be notified in writing and will be required to make changes to correct the unacceptable condition.



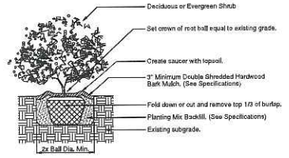
Ornamental Tree Planting

Not to Scale



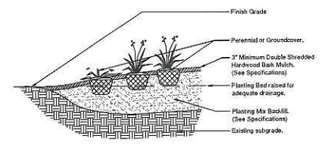
Shade Tree Planting

Not to Scale



Shrub Planting

Not to Scale



Perennial Planting

Not to Scale

NO.	REVISIONS	DATE	BY
-	ISSUED FOR OWNER REVIEW	05/08/15	PM
*	ZONING SUBMITTAL	06/25/15	KP
-	REVISIONS PER CITY COMMENTS	06/03/15	KP
-			
-			
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LANDSCAPE SPECIFICATIONS

START DATE:	05-04-2015
SCALE:	AS SHOWN
DRAWN:	PM
CHECK:	CK
JOB:	D15041
SHEET:	L2

Project #: B15027

No Scale

Brusseau Design Group, LLC
Landscape Architecture ▪ Land Planning ▪ Recreational Planning & Design
2675 Pratum Avenue, Hoffman Estates, IL 60192

GENERAL NOTES:

1. Unless otherwise noted in the special project specifications, the Project shall be built in accordance with the "Standard Specifications for Road and Bridge Construction for Illinois" latest edition, and "Supplemental Specifications and Recurring Special Provisions" latest edition by the Illinois Department of Transportation.

2. Sewer and Water Main Construction shall be in accordance with the Standard Specifications for Sewer and Water Main Construction in Illinois, latest edition.

3. Any reference to "supervision" by the Engineer in the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction or any other referenced documents shall be changed to "observation".

4. The Engineer shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the work. The Engineer shall not have authority over or responsibility for safety precautions and programs incident to the work of Contractor(s) or any failure of Contractor(s) to comply with laws, rules, regulations, ordinances, codes or orders applicable to Contractor(s) furnishing and performing the work.

5. The Contractor shall be responsible for the general supervision of the work and assume sole responsibility for the job site conditions during the course of construction including the safety of all persons and property. This requirement shall apply continuously and shall not be limited to normal working hours.

6. It shall be the Contractor's responsibility to provide necessary signs, barricades, fences, etc. as required to insure the safety of vehicles and the general public during all phases of construction.

7. Contractors shall use appropriate equipment to expedite completion of the Project while avoiding any encroachment of neighboring property with any materials, equipment or excavation.

8. Overflow drainage routes and swales must be installed when shown.

9. Surface drainage shall be maintained during all phases of construction.

10. Erosion control practices shall be constructed in accordance with standard specifications for soil erosion and sediment control as contained in IEPA/WCP/87-012 or current issue.

11. All areas disturbed by construction shall be restored to their original condition at no additional cost to the Owner.

12. It shall be the Contractor's responsibility to properly dispose of any excess excavation material due either to channel construction or sewer installation and shall be considered as an incidental expense.

13. Elevations shown are NAVD 88.

14. Return radii are as shown.

15. Disposal of debris from clearing and tree removal shall be the Contractor's responsibility and considered as an incidental expense.

16. Natural plant covering and trees shall be retained and protected during construction where practical.

17. Topsoil replacement for landscaping is six [6] inches.

18. Final seeding and finishing shall be done as soon as possible in accordance with Section 250, Illinois Department of Transportation Standard Specifications.

19. All existing sewers and water mains shall be protected during construction by the Contractor. Any damages shall be repaired at the Contractor's expense.

20. The Contractor shall utilize a laser for all sewer main construction, except those locations waived by the Engineer.

21. All trenches under or within the zone of influence (1:1 slope) of existing or proposed pavement or sidewalks shall be backfilled with selected granular backfill.

22. All trenches shall be water jetted or mechanically compacted to the satisfaction of the Engineer.

23. The Contractor shall notify the Town of Crystal Lake and all Utility Companies two [2] working days before construction is started in any work area.

24. The Contractor shall be responsible for locating all utilities (Northern Illinois Gas, Ameritech, and Commonwealth Edison Company). Call J.U.L.I.E. 1-800-892-0123 prior to construction for location of utilities. All utilities damaged and/or disturbed by the Contractor shall be repaired at no additional cost to the Owner. Locations as shown on the plans are approximate and are based on the best available information.

CONTRACTOR'S INSURANCE:

1. Prior to the commencement of the work, the Owner shall require the Contractor and any Subcontractors to submit evidence to the Owner, Municipality and Engineer the he (they) have obtained for the period of the Construction Contract and the guarantee period comprehensive general liability insurance coverage (including completed operations coverage) and comprehensive automobile liability (including non-ownership and hired car coverage, as well as all owned vehicles). This coverage shall provide for bodily injury and property damage arising directly or indirectly out of, or in connection with, the performance of the work under the Construction Contract, and have a limit of not less than $500,000.00 for all damages arising out of bodily injury, sickness or death of one person and an aggregate of $5,000,000.00 for damages arising out of bodily injury, sickness or death of two or more persons in any one occurrence. The property damage portion will provide for a limit of not less than $1,000,000.00 for all damages arising out of injury to or destruction of property of others arising directly or indirectly out of or in connection with the performance of the work under the Construction Contract and in any one occurrence including explosion, collapse and underground exposures.

2. In addition, the Contractor shall carry the necessary public liability and workers' compensation insurance to protect the Town of Crystal Lake, the Town Engineer, Owner, and the Engineer/Resident Project Representative and their consultants from any claims which may arise during construction and to submit two (2) acceptable certificates of insurance naming the Town of Crystal Lake, the Town Engineer, the Engineer/Resident Project Representative and their consultants as additional insured.

3. In the event of accidents of any kind, the Contractor shall furnish the Town with copies of all reports of such accidents at the same time that the reports are forwarded to any other interested parties.

4. The Town Attorney shall review and approve the insurance contract to the satisfaction of the Town of Crystal Lake.

INDEMNIFICATION:

1. To the fullest extent permitted by laws and regulations, the Contractor shall indemnify and hold harmless the Owner, the Town and the Engineer and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by law and regulations regardless of the negligence of any such party.

2. In any and all claims against the Owner, the Town or Engineer or any of their consultants, agents or employees by any employee of the Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or obligation under not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

3. The obligations of the Contractor shall not extend to the liability of the Engineer, the Engineer's consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications.

4. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Engineer, and the Engineer's consultants and their respective agents and employees (indemnities) from and against any and all claims, damages, losses, economic losses and expenses, including but not limited to attorneys' fees, arising out of or specifically claims arising under the Illinois Structural Work Act), provided that such claim, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, excluding any proportionate amount of any claim, damage, loss or expense which is caused by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity, which would otherwise exist as to a party or person described in the paragraph.

5. In claims against any person or entity indemnified under this paragraph by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they be liable, the indemnification obligation under the paragraph shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

SAFETY AND PROTECTION:

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work:

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of underground facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damages, injury, or loss to any property referred to in paragraph A.2 of A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or any one employed by any of them, or anyone for whose acts any of them may be liable and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed.

DATE: 7/31/2015
FILE: E:\ACTIVE-PROJECTS\43711-000000-Ad Henry\ENG-BMB\43711 - Civil Plans.dgn
MODEL: C-1

Final Engineering Plans for:

SPARTA BROTHERS OIL

Brink Street and Crystal Lake Ave.

Crystal Lake, McHenry County, IL

SE ¼ Section 32 - Township 44 N - Range 08 E



VICINITY MAP

0 20 40
GRAPHIC SCALE - FEET

SPARTA BROTHERS OIL
BRINK STREET AND CRYSTAL LAKE AVE.

Prepared For:
CORPORATE DESIGN + DEVELOPMENT GROUP, LLC
2675 PRATUM AVE.
HOFFMAN ESTATES, IL 60192
Phone: 224-293-8860

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IEPA GENERAL NOTES:

Sewer construction, as a minimum, must comply with the following requirements:

1. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, shall govern all sanitary sewer construction on this project except as modified by the Special Provisions.
2. Horizontal and or vertical separation between sanitary sewer or sanitary services and water main or water services shall be as described in Section 370.350 of the Illinois Recommended Standards for Sewage Works or Section 41-2.01 of the Standard Specifications for Water and Sewer main Construction in Illinois, latest edition.
3. Protection of water works structures including basins, wells and other treatment units shall be as described in Section 370.350 of the Illinois Recommended Standards for Sewage Works.
4. All flexible gravity thermoplastic sanitary sewer pipe shall be installed in accordance with ASTM 2321-89. Embedment material for bedding, haunching and initial backfill shall extend from at least 4 inches below the pipe to at least 6 inches above the pipe and shall be Class IA, IB, II or III. Processed materials produced for highway construction should be classified in accordance with ASTM 2321-89, Section 5 and Table 1 according to particle size, shape and gradation.
5. Sanitary sewer bedding for rigid pipe sanitary sewers shall be class A, B or C in accordance with ASTM C 12-95.
6. All sanitary sewers shall be tested for either infiltration, exfiltration or exfiltration of air under pressure, and for deflection of flexible thermoplastic pipe as described in Section 31-1.11 of the Standard Specifications for Water and Sewer Main construction in Illinois, latest edition.
7. Precast manhole inlet and outlet connections fitted with "O" rings or equally watertight connection shall be provided.
8. All manholes shall be inspected and leakage tested for water tightness in accordance with ASTM C 969.94 or ASTM C 1244-93, prior to being placed into service.
9. Pick holes in sanitary sewer manhole covers shall not be larger than 1 inch in diameter or shall be of the concealed type.
10. Watertight manholes covers shall be used whenever the manhole tops are buried or may be flooded by surface runoff or high water.
11. A drop pipe shall be provided for a sanitary sewer entering a manhole where its invert is 24 inches or greater above the manhole invert.

LEGEND

EXISTING SANITARY MANHOLE	EXISTING LIGHT POLE
PROPOSED SANITARY MANHOLE	PROPOSED LIGHT POLE
SANITARY CLEANOUT	OVERHEAD LIGHT POLE
EXISTING STORM MANHOLE	RAILROAD SIGNAL POLE
PROPOSED STORM MANHOLE	RAILROAD SIGNAL VAULT
EXISTING STORM CATCH BASIN	UTILITY POLE
PROPOSED STORM CATCH BASIN	OH — OVERHEAD WIRES
EXISTING STORM INLET	E — UNDERGROUND ELECTRIC
PROPOSED STORM INLET	G — UNDERGROUND GAS
FLARED END SECTION	T — UNDERGROUND TELEPHONE
DOWNSPOUT	C — T — UNDERGROUND CABLE T.V.
TRANSFORMER	W — WATER MAIN
ELECTRIC MANHOLE	W — PROPOSED WATER MAIN
ELECTRICAL BOX	SANITARY SEWER
CABLE T.V. BOX	PROPOSED SANITARY SEWER
TELEPHONE BOX	STORM SEWER
TELEPHONE MANHOLE	PROPOSED STORM SEWER
ELECTRIC METER	EXISTING COMBINED SEWER
GAS METER	FENCE LINE
GAS VALVE	GUARD RAIL
B-BOX	DECIDUOUS TREE
WATER VALVE	PINE TREE
EXISTING WATER VALVE VAULT	OVERFLOW ARROW
PROPOSED WATER VALVE VLT	DROVE IRON PIPE
EXISTING FIRE HYDRANT	FOUND IRON PIPE
PROPOSED FIRE HYDRANT	R — RECORD DIMENSION
POST INDICATOR VALVE	M — MEASURED DIMENSION
SIGN	FE — FLOOR ELEVATION
FLAG POLE	TW — TOP OF WALL
MAILBOX	TC — TOP OF CURB
TRAFFIC SIGNAL POLE	FL — CURB FLOW LINE
TRAFFIC SIGNAL VAULT	

INDEX OF SHEETS

C-1 ..... COVER SHEET
C-2 ..... EXISTING CONDITIONS
C-3 ..... PAVING & LAYOUT PLAN
C-4 ..... GRADING & EROSION CONTROL PLAN
C-5..... UTILITY PLAN
C-6.1 ..... DETAILS - 1
C-6.2 ..... DETAILS - 2
C-6.3 ..... CITY NOTES AND SPECIFICATIONS

LEGAL DESCRIPTION

LOT 1 IN BLOCK 14 IN ORIGINAL PLAT OF NADA, BEING A PART OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 44 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 13, 1858, IN BOOK 43 OF PLATS, PAGE 296, IN MCHENRY COUTNY, ILLINOIS

BENCHMARK INFORMATION
Per Survey Compelted by WT

ONSITE BENCHMARK -
NE FLANGE BOLT ON HYDRANT AT SW CORNER OF PROPERTY.
ELEVATION=914.43' (NAVD88)

LICENSED PROFESSIONAL ENGINEER
STEPHEN M. RICHARDS
062-054556
STATE OF ILLINOIS

STATE OF ILLINOIS)
COUNTY OF DUPAGE)SS

THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION AND ARE BASED UPON AVAILABLE INFORMATION.

7/31/2015
STEPHEN MARK RICHARDS — DATE
LICENSE EXPIRES 11/30/15

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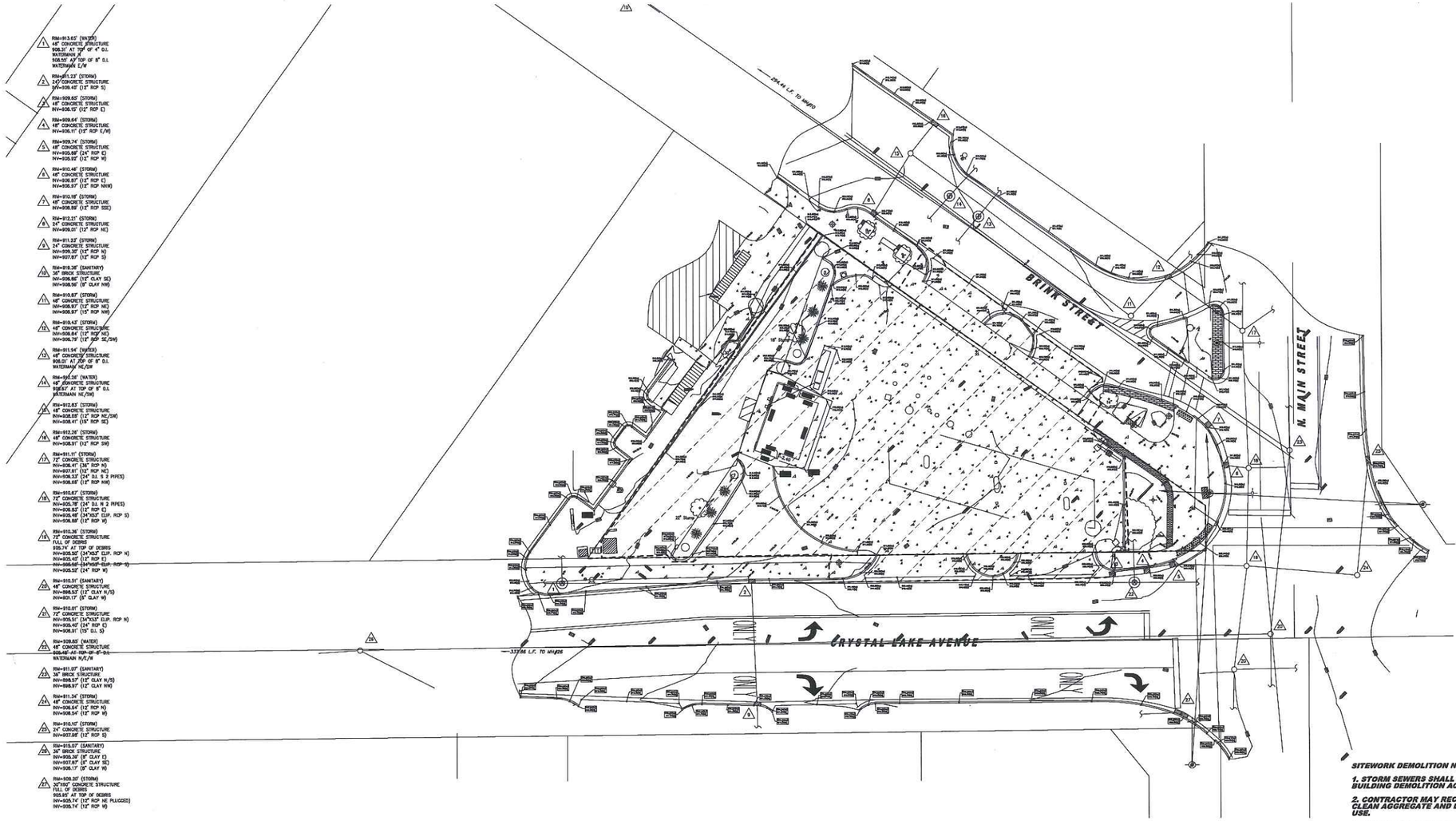
REV'D	DATE	REVISION DESCRIPTION	BY

Section-Township-Range
County: SEW 32-44-08

JOB #: 43711	SURV: W-T
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=20'	DATE: 07-30-15

SHEET NAME
COVER SHEET

SHEET # C-1



DEMOLITION LIMIT AREA. REMOVE ALL SITE IMPROVEMENTS

SITEWORK DEMOLITION NOTES:

1. STORM SEWERS SHALL REMAIN ACTIVE DURING BUILDING DEMOLITION ACTIVITIES.
2. CONTRACTOR MAY RECYCLE EXISTING ONSITE CLEAN AGGREGATE AND LEAVE ONSITE FOR FUTURE USE.
3. MAINTAIN SITE DRAINAGE THROUGH THE COURSE OF DEMOLITION.
4. REMOVED BITUMINOUS PAVEMENT MUST BE REMOVED OFFSITE
5. ABANDON EXISTING SANITARY SERVICES.
6. ABANDON EXISTING SEWER PIPES AND PLUG WITH TWO FEET LONG OF NON SHRINK GROUT AT EACH ENDS
7. REMOVE EXISTING WATER SERVICE AND PLUG AT THE PROPERTY LINE.
8. ABANDON NATURAL GAS, ELECTRIC, PHONE AND ALL UTLITIES SERVING THE PROPERTY.
9. MAINTAIN SERVICE TO OFFSITE PROPERTIES AT ALL TIMES.
10. ALL UTILITIES, INCLUDING STORM AND SANITARY SEWER, WATER PIPING SHALL BE COMPLETELY REMOVED FROM THE PROPOSED AND FUTURE BUILDING LIMITS AND FROM ANY EASEMENT AREA.
11. OUTSIDE FUTURE BUILDING LIMITS, ONSITE ABANDONED SANITARY AND STORM SEWER PIPING 8" DIAMETER AND SMALLER SHALL BE MORTAR PLUGGED ABANDONED IN PLACE. ABANDONED MANHOLES AND OR CATCH BASINS SHALL HAVE THE BARREL SECTION REMOVED TO 3' BELOW GRADE, MORTAR PLUG OPENINGS, AND BACKFILL WITH FA-1 SAND.
12. REMOVAL OF GAS STORAGE TANKS IS ADDRESSED BY SEPARATE PLANS BY OTHERS AND AS PERMITTED BY IEPA.

0 20 40
GRAPHIC SCALE - FEET

SPARTA BROTHERS OIL
BRINK STREET AND CRYSTAL LAKE AVE.

Prepared For:
CORPORATE DESIGN + DEVELOPMENT GROUP, LLC
2075 PRATUM AVE.
HOFFMAN ESTATES, IL 60192
Phone: 224-293-8560

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Section-Township-Range
County: SE¼ 32-44-08

JOB # 43711	SURV: W-T
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=20'	DATE: 07-30-15

SHEET NAME
EXISTING CONDITIONS AND SITE DEMO. PLAN

SHEET #
C-2

DATE: 7/31/2015
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MODEL: C-2

8" CONCRETE

6" CA-6 AGGREGATE BASE

CONCRETE DRIVE/PAD

PAVEMENT LEGEND:

CONCRETE SIDEWALK
5" Concrete (4,000 psi minimum)
4" CA-6 Base

CONCRETE PAVEMENT
8" Concrete (4,000 psi minimum)
6" CA-6 Base

PARKING SUMMARY:
10 Regular Stalls
1 Handicap Stalls
11 Total Stalls

0 20 40
GRAPHIC SCALE - FEET

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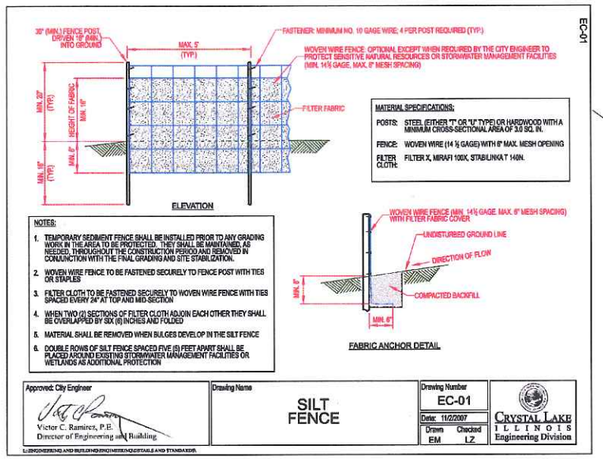
Section-Township-Range
County: SE¼ 32-44-08

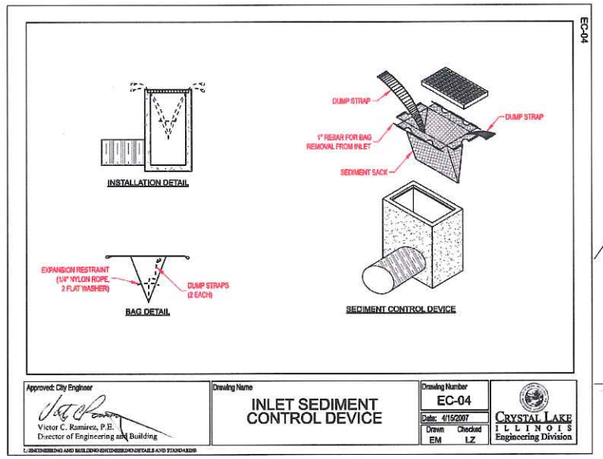
JOB # 43711	SURV: W-T
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=20'	DATE: 07-30-15

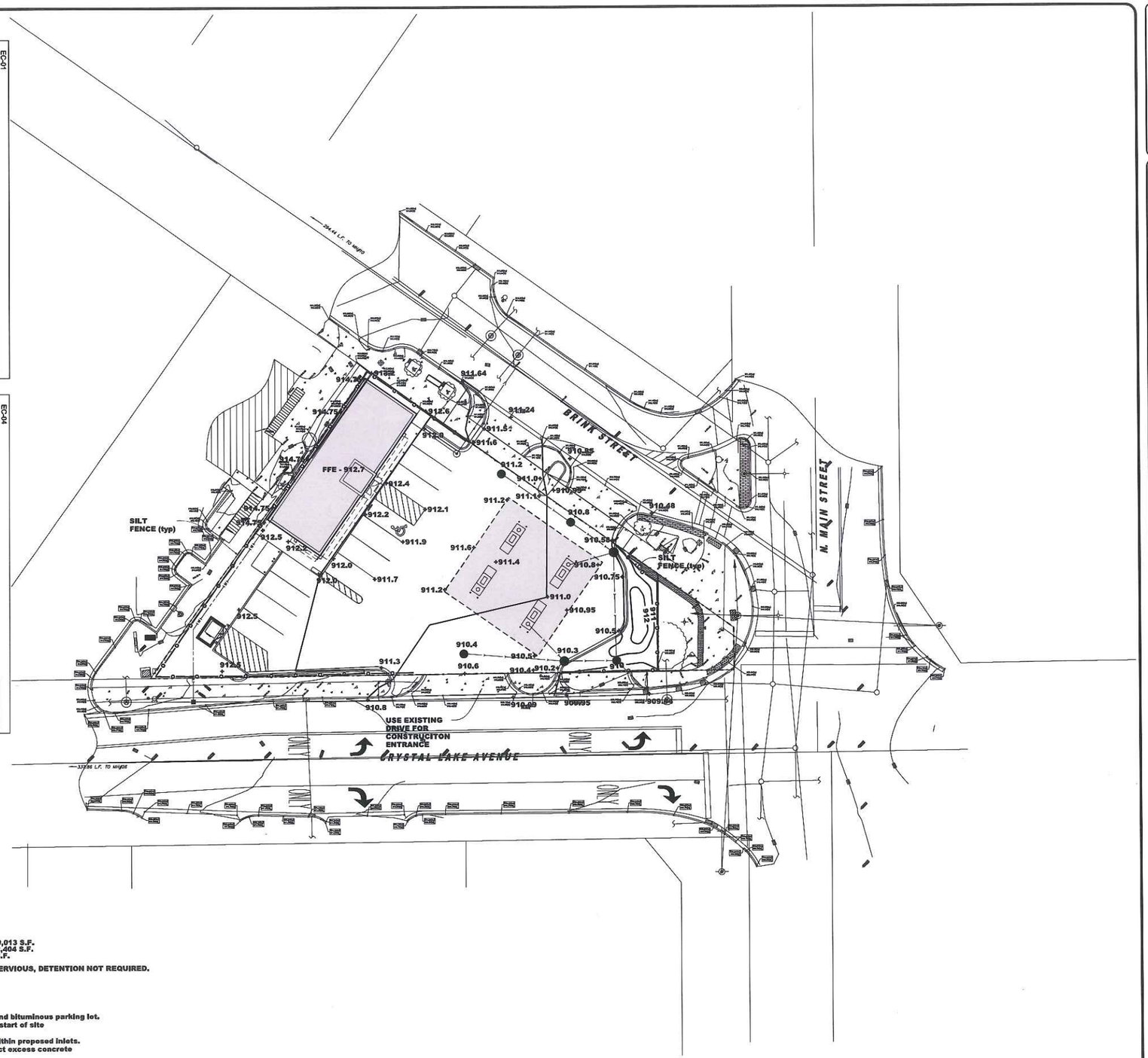
SHEET NAME
SITE LAYOUT AND PAVING PLAN

SHEET #
C-3

DATE: 7/30/2015
FILE: E:\ACTIVE-PROJECTS\43711-000000\MicroStn\ENG-BMB\43711 - Civil Plans.dgn
MODEL: C-3







EROSION CONTROL NOTES

1. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE LAND IS DISTURBED ON THE SITE. MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, AS AMENDED.
2. SOIL DISTURBANCE SHALL BE CONDUCTED IN A MANNER THAT MINIMIZES EROSION. AREAS OF THE DEVELOPMENT SITE THAT WILL NOT BE GRADED SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC OR OTHER DISTURBANCE.
3. CHANNELS AND ADJOINING PROPERTIES SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. WHERE CONCENTRATED FLOW LEAVES A DEVELOPMENT SITE, EFFECTIVE ENERGY DISSIPATION SHALL BE PLACED ONSITE AT DISCHARGE LOCATIONS.
4. THE USE OF STRAW BALES AS A FILTER BARRIER OR DITCH CHECK IS PROHIBITED.
5. THE SURFACE OF STRIPPED AREAS SHALL BE PERMANENTLY OR TEMPORARILY PROTECTED FROM SOIL EROSION WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED. STRIPPED AREAS THAT WILL REMAIN UNDISTURBED FOR MORE THAN 14 DAYS AFTER INITIAL DISTURBANCE SHALL BE PROTECTED FROM EROSION. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY UNTIL PERMANENT COVER IS ESTABLISHED.
6. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE FILTERED. PUMPING SEDIMENT LADEN WATER INTO ANY STORM WATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
7. ALL DISCHARGES TO UNDISTURBED AREA, STABILIZED AREA OR WATERCOURSE SHALL BE DESIGNED AT A NON-EROSIVE VELOCITY CORRESPONDING TO THE SOIL AND VEGETATIVE COVER OF THE UNDISTURBED AREA.
8. ALL STORM SEWERS, STORM DRAIN INLETS AND CULVERTS THAT ARE, OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY SEDIMENT CONTROL MEASURES. THE SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED.
9. A STABILIZED CONSTRUCTION ENTRANCE OF AGGREGATE UNDERLAIN WITH FILTER CLOTH, OR GRAVELED ROAD, OR ACCESS DRIVE, OR PARKING AREA OF SUFFICIENT WIDTH AND LENGTH, AND/OR VEHICLE WASH DOWN FACILITIES, SHALL BE PROVIDED TO PREVENT SOIL FROM BEING TRACKED OR DEPOSITED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED IMMEDIATELY AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
10. STOCKPILES TO REMAIN IN PLACE MORE THAN THREE DAYS SHALL BE PROVIDED WITH SOIL EROSION AND SEDIMENT CONTROL MEASURES.
11. ALL EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED. TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
13. INSPECTION OF EROSION CONTROL MEASURES SHALL BE CONDUCTED WEEKLY AND FOLLOWING RAINFALL OF 0.5" OR GREATER. REPAIRS OR ADDITIONAL MEASURES REQUIRED SHALL BE IMPLEMENTED IMMEDIATELY.
14. MAINTENANCE AND INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR UNTIL ESTABLISHMENT OF THE PERMANENT STABILIZATION MEASURES AND FINAL APPROVAL BY THE OWNER AND THE TOWN OF CICERO.

STORMWATER NOTE:

EXISTING IMPERVIOUS AREA = 10,013 S.F.
PROPSED IMPERVIOUS AREA = 12,404 S.F.
NEW IMPERVIOUS AREA = 2,391 S.F.

< THAN 20,000 S.F. NET NEW IMPERVIOUS, DETENTION NOT REQUIRED.

SESC Narrative
Temporary Erosion Control
1. The existing site is a building and bituminous parking lot.
Silt fence shall be placed prior to start of site and building demolition.
2. Inlet baskets shall be placed within proposed inlets.
3. A concrete washout shall collect excess concrete delivered to the site.
4. The existing paved surface shall function as the constructoin entrance.
5. Excess soils shall be hauled offsite.

Permanent SESC Narrative
1. Permanent land staballization shall be as shown on the landscape plan.
2. Shrub beds shall be mulched to protect soils.
3. The turf and landscape beds will be maintained in a growing condition to protect the soil.

0 20 40
GRAPHIC SCALE - FEET

SPARTA BROTHERS OIL
BRINK STREET AND CRYSTAL LAKE AVE.

Prepared For:
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BY	REVISION DESCRIPTION	DATE	REV#

Section-Township-Range
County: SE¼ 32-44-08

JOB # 43711	SURV: W-T
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=20'	DATE: 07-30-15

SHEET NAME
GRADING AND EROSION CONTROL PLAN

SHEET #
C-4

DATE: 7/31/2015
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MODEL: C-4

RIM=913.65' (WATER)
48" CONCRETE STRUCTURE
908.31' AT TOP OF 4" D.I. WATERMAIN W
908.55' AT TOP OF 8" D.I. WATERMAIN E/W

RIM=911.23' (STORM)
24" CONCRETE STRUCTURE
INV=909.49' (12" RCP S)

RIM=909.85' (STORM)
48" CONCRETE STRUCTURE
INV=908.15' (12" RCP E)

RIM=909.64' (STORM)
48" CONCRETE STRUCTURE
INV=908.11' (12" RCP E/W)

RIM=909.74' (STORM)
48" CONCRETE STRUCTURE
INV=905.88' (24" RCP E)
INV=905.93' (12" RCP W)

RIM=910.46' (STORM)
48" CONCRETE STRUCTURE
INV=908.97' (12" RCP E)
INV=905.97' (12" RCP NWW)

RIM=910.18' (STORM)
48" CONCRETE STRUCTURE
INV=908.59' (12" RCP SSE)

RIM=912.21' (STORM)
24" CONCRETE STRUCTURE
INV=909.01' (12" RCP NE)

RIM=911.33' (STORM)
24" CONCRETE STRUCTURE
INV=909.32' (12" RCP N)
INV=907.87' (12" RCP S)

RIM=918.36' (SANITARY)
36" BRICK STRUCTURE
INV=908.85' (12" CLAY SE)
INV=908.56' (8" CLAY NW)

RIM=910.87' (STORM)
48" CONCRETE STRUCTURE
INV=908.97' (12" RCP NE)
INV=908.97' (15" RCP NW)

RIM=910.43' (STORM)
48" CONCRETE STRUCTURE
INV=908.84' (12" RCP NE)
INV=908.79' (12" RCP SE/SW)

RIM=911.04' (WATER)
48" CONCRETE STRUCTURE
908.01' AT TOP OF 8" D.I. WATERMAIN NE/SW

RIM=914.28' (WATER)
48" CONCRETE STRUCTURE
908.67' AT TOP OF 8" D.I. WATERMAIN NE/SW

RIM=912.83' (STORM)
48" CONCRETE STRUCTURE
INV=908.68' (12" RCP NE/SW)
INV=908.41' (15" RCP SE)

RIM=912.26' (STORM)
48" CONCRETE STRUCTURE
INV=908.91' (12" RCP SW)

RIM=911.11' (STORM)
72" CONCRETE STRUCTURE
INV=908.41' (36" RCP N)
INV=907.61' (12" RCP NE)
INV=906.13' (24" D.I. S 2 PIPES)
INV=906.68' (12" RCP NW)

RIM=910.67' (STORM)
72" CONCRETE STRUCTURE
INV=905.78' (24" D.I. N 2 PIPES)
INV=908.63' (12" RCP E)
INV=905.68' (24"X13" ELIP. RCP S)
INV=906.69' (12" RCP W)

RIM=910.36' (STORM)
72" CONCRETE STRUCTURE
FULL OF DEBRIS
908.74' AT TOP OF DEBRIS
INV=905.36' (24"X13" ELIP. RCP N)
INV=905.46' (12" RCP E)
INV=905.56' (24"X13" ELIP. RCP S)
INV=905.52' (24" RCP W)

RIM=910.31' (SANITARY)
48" CONCRETE STRUCTURE
INV=898.53' (12" CLAY N/S)
INV=905.17' (8" CLAY W)

RIM=910.01' (STORM)
72" CONCRETE STRUCTURE
INV=905.51' (24"X13" ELIP. RCP N)
INV=905.46' (24" RCP E)
INV=906.91' (15" D.I. S)

RIM=909.85' (WATER)
48" CONCRETE STRUCTURE
906.48' AT TOP OF 8" D.I. WATERMAIN N/E/W

RIM=911.07' (SANITARY)
36" BRICK STRUCTURE
INV=898.53' (12" CLAY N/S)
INV=898.97' (12" CLAY NW)

RIM=911.34' (STORM)
48" CONCRETE STRUCTURE
INV=908.64' (12" RCP N)
INV=908.54' (12" RCP W)

RIM=910.10' (STORM)
24" CONCRETE STRUCTURE
INV=907.98' (12" RCP S)

RIM=915.07' (SANITARY)
36" BRICK STRUCTURE
INV=905.38' (8" CLAY E)
INV=907.87' (8" CLAY SE)
INV=906.17' (8" CLAY W)

RIM=909.20' (STORM)
30"X60" CONCRETE STRUCTURE
FULL OF DEBRIS
905.85' AT TOP OF DEBRIS
INV=905.74' (12" RCP NE PLUGGED)
INV=905.74' (12" RCP W)

284.44 L.F. TO MH#9

22 L.F. 6" PVC Sanitary Sewer @ 2.0%

Connection Inv = 902.57

41 L.F. 6" PVC Sanitary Sewer @ 2.0%

BRINK STREET

Inv = 903.83

St 6
Rim = 911.2
Inv = 907.07
Type A Inlet
Type I O.L.

33 L.f. 12" RCP @ 0.50%

Sa - 1
Rim = 914.7
Inv = 903.39
Type I Closed Lid
4' Dia. Sanitary MH

St 5
Rim = 910.8
Inv = 906.9
Type B Inlet
Type I O.L.

34 L.f. 12" RCP @ 0.50%

St 4
Rim = 910.9
Inv = 906.8
Type B Inlet
Type I O.L.

43 L.f. 12" RCP @ 0.50%

N. MAIN STREET

Proposed 6" Water Service

St 1
Rim = 910.0
W-N Inv = 906.58
W Inv = 907.1
5' Dia. Grit Oil Separator

40 L.f. 12" RCP @ 0.50%

Pressure Connect to Ex. City Main

St 3
Rim = 910.4
Inv = 907.4
Type A Inlet
Type I O.L.

St 2
Rim = 910.3
Inv = 907.2
Type B Inlet
Type I O.L.

20 L.f. 12" RCP @ 0.50%

Connect to Ex. 4' Dia. MH Connection Inv = 906.5

CRYSTAL LAKE AVENUE

337.66 L.F. TO MH#28

16 L.f. 12" RCP @ 0.50%

0 20 40
GRAPHIC SCALE - FEET

SPARTA BROTHERS OIL
BRINK STREET AND CRYSTAL LAKE AVE.

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Phone: 224-293-2900

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DESIGN FIRM LICENSE NO. 184003101

BY	REVISION DESCRIPTION	DATE

Section-Township-Range
County: SE¼ 32-44-08

JOB # 43711	SURV: W-T
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=20'	DATE: 07-30-15

SHEET NAME

UTILITY PLAN

SHEET # C-5

DATE: 7/31/2015
FILE: E:\ACTIVE-PROJECTS\43711-000000-McHenry\ENG-BMB\43711 - Civil Plans.dgn
MODEL: C-5

UW-01

NOTE:
ALL MANHOLES MUST BE DAMP PROOF PER IDOT SPECIFICATIONS 1060 "WATER PROOFING MATERIALS"

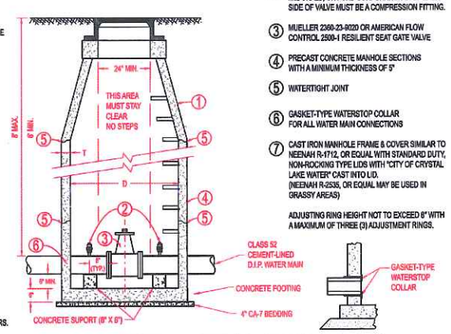
ALL LIDS TO BE USED ON WATER SYSTEM STRUCTURE SHALL BEAR THE WORDS "CITY OF CRYSTAL LAKE WATER".

DRAIN FOR VALVE VAULT SHALL BE CONSTRUCTED ONLY WHEN SHOWN ON THE PLANS.

FRAME AND RING(3) TO BE SET IN MORTAR BED OR SEALED WITH A PREFORMED BITUMEN SEAL (E-Z-STICK OR APPROVED EQUAL).

FOR PRESSURE CONNECTION, SEE DETAIL UW-2.

DIAMETER OF WATER MAIN	D	T
8 INCHES AND OVER	5 FT	5"



NOTE: ALL VALVE HARDWARE MUST BE STAINLESS STEEL INCLUDING NUTS, BOLTS & WASHERS.

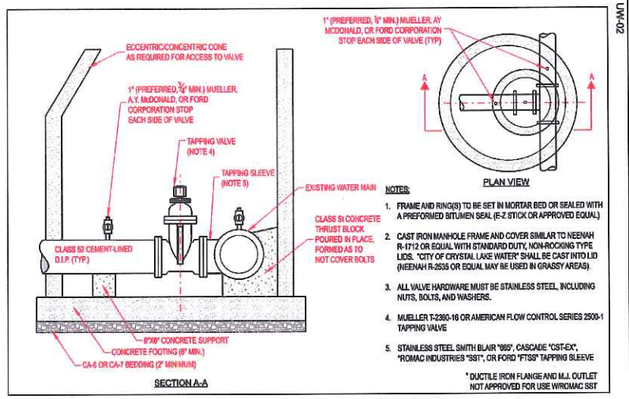
1. CONCENTRIC CONES REQUIRED
2. 1" (PREFERRED), 3/4" MIN.) MUELLER, A.Y. McDONALD, OR FORD CORPORATION STOP EACH SIDE OF VALVE MUST BE A COMPRESSION FITTING.
3. MUELLER 2360-20-9020 OR AMERICAN FLOW CONTROL 2500-1 RESILIENT SEAT GATE VALVE
4. PRECAST CONCRETE MANHOLE SECTIONS WITH A MINIMUM THICKNESS OF 5"
5. WATERTIGHT JOINT
6. GASKET-TYPE WATERSTOP COLLAR FOR ALL WATER MAIN CONNECTIONS
7. CAST IRON MANHOLE FRAME & COVER SIMILAR TO NEENAH R-1712, OR EQUAL WITH STANDARD DUTY, NON-ROCKING TYPE LIDS WITH "CITY OF CRYSTAL LAKE WATER" CAST INTO LID. (NEENAH R-2535, OR EQUAL MAY BE USED IN GRASSY AREAS)

ADJUSTING RING HEIGHT NOT TO EXCEED 6" WITH A MAXIMUM OF THREE (3) ADJUSTMENT RINGS.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	STANDARD VALVE VAULT	UW-01	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn: EM Checked: JN	

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UW-02



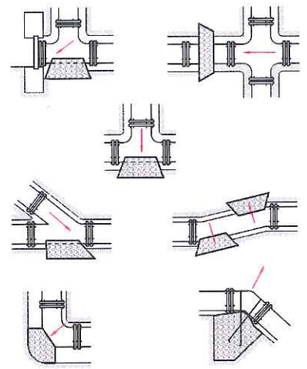
NOTES:
1. FRAME AND RING(S) TO BE SET IN MORTAR BED OR SEALED WITH A PREFORMED BITUMEN SEAL (E-Z STICK OR APPROVED EQUAL)
2. CAST IRON MANHOLE FRAME AND COVER SIMILAR TO NEENAH R-1712 OR EQUAL WITH STANDARD DUTY, NON-ROCKING TYPE LIDS. "CITY OF CRYSTAL LAKE WATER" SHALL BE CAST INTO LID (NEENAH R-2535 OR EQUAL MAY BE USED IN GRASSY AREAS).
3. ALL VALVE HARDWARE MUST BE STAINLESS STEEL, INCLUDING NUTS, BOLTS, AND WASHERS.
4. MUELLER T-2360-16 OR AMERICAN FLOW CONTROL SERIES 2500-1 TAPPING VALVE
5. STAINLESS STEEL SMITH BLAIR "665", CASCADE "CST-EX", "ROMAC INDUSTRIES "SS1", OR FORD "FTSS" TAPPING SLEEVE

* DUCTILE IRON FLANGE AND M.J. OUTLET NOT APPROVED FOR USE W/ROMAC SST

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	WATER MAIN PRESSURE CONNECTION	UW-02	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 6/1/2007	
		Drawn: EM Checked: JN/LZ	

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UW-03



BEARING AREA (SQ. FT.)					
PIPE SIZE	TEE/PLUG	90°	45°	21 1/2"	11 1/4"
6	4	2	1	1	1
8	6	4	3	1	1
10	7	5	3	2	1
12	8	6	4	3	2
14	12	9	6	4	3
16	15	12	7	5	3
18	18	15	9	5	4
24	40	30	15	10	5

NOTES:

ALL BLOCKING SHALL BE POURED CLASS SI CONCRETE AGAINST UNDISTURBED EARTH.

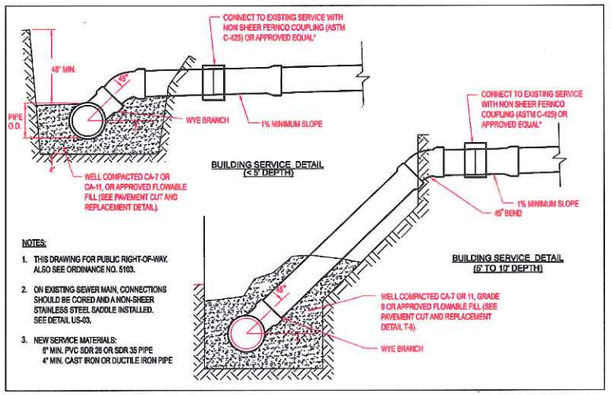
ALL BENDS OR ELBOWS GREATER THAN 11 1/4" SHALL HAVE THRUST BLOCKING. FORM AS TO NOT COVER BOLTS.

IN LIEU OF THRUST BLOCKING "MEGA LUG" (EBAA) JOINT RESTRAINTS OR APPROVED EQUAL CAN BE USED AS APPROVED BY THE ENGINEER.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	THRUST BLOCK INSTALLATION	UW-03	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn: EM Checked: JN	

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US-01

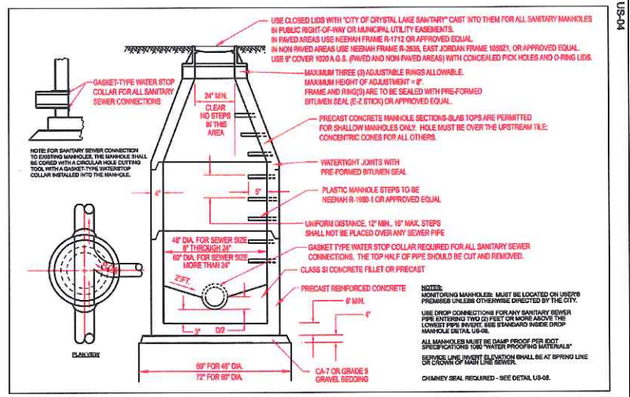


NOTES:
1. THIS DRAWING FOR PUBLIC RIGHT-OF-WAY. ALSO SEE ORDINANCE NO. 5103.
2. ON EXISTING SEWER MAIN, CONNECTIONS SHOULD BE CORED AND A NON-SHEER, STAINLESS STEEL SADDLE INSTALLED. SEE DETAIL US-03.
3. NEW SERVICE MATERIALS:
   6" MIN. PVC SDR 26 OR SDR 35 PIPE
   4" MIN. CAST IRON OR DUCTILE IRON PIPE

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	SANITARY SERVICE RISER (DEPTH < 10')	US-01	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn: EM Checked: TH	

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US-04



NOTES:
MONITORING MANHOLES MUST BE LOCATED ON USER'S PREMISES UNLESS OTHERWISE DIRECTED BY THE CITY.

USE DROP CONNECTIONS FOR ANY SANITARY SEWER PIPE ENTERING TWO (2) FEET OR MORE ABOVE THE LOWEST PIPE INVERT. SEE STANDARD INSIDE DROP MANHOLE DETAIL US-05.

ALL MANHOLES MUST BE DAMP PROOF PER IDOT SPECIFICATIONS 1060 "WATER PROOFING MATERIALS"

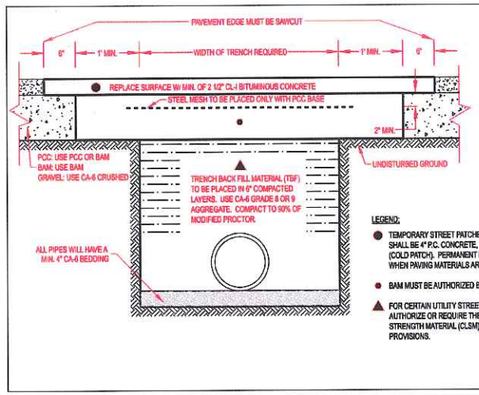
SERVICE LINE INVERT ELEVATION SHALL BE AT SPRING LINE OR CROWN OF MAIN LINE SEWER.

CHIMNEY SEAL REQUIRED - SEE DETAIL US-06.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	STANDARD SANITARY AND MONITORING MANHOLE	US-04	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 11/2/2007	
		Drawn: EM Checked: TH	

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RD-06

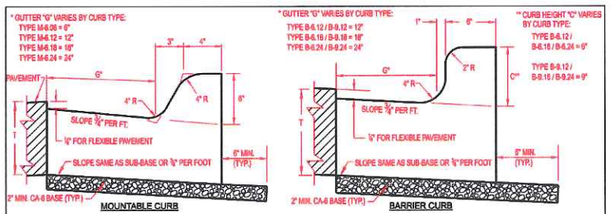


LEGEND:
- TEMPORARY STREET PATCHES DURING WINTER CONSTRUCTION SHALL BE 4" P.C. CONCRETE, IDOT CLASS SI OR A MIN. 3" OF UPM (COLD PATCH). PERMANENT PATCHES SHALL BE COMPLETED WHEN PAVING MATERIALS ARE AVAILABLE.
- BAM MUST BE AUTHORIZED BY THE CITY ENGINEER.
- ▲ FOR CERTAIN UTILITY STREET CUTS, THE CITY ENGINEER MAY AUTHORIZE OR REQUIRE THE USE OF A CONTROLLED LOW-STRENGTH MATERIAL (CLSM) AS PER THE IDOT SPECIAL PROVISIONS.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	PAVEMENT CUT AND REPLACEMENT	RD-06	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn: EM Checked: LZ	

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RD-05a



THICKNESS - T - Thickness of pavement when curb and gutter is constructed adjacent to flexible or rigid pavement, the vertical thickness of the gutter flag shall be 9". Also, tie bars shall be omitted.

DRAINAGE OPENINGS - At all locations where metal castings are to be incorporated in the curb and gutter, a 1" thick pre formed expansion joint filler, conforming to the cross sections of the curb and gutter, shall be installed in the curb and gutter a distance of 3 ft. from each side of the metal castings. Where the width of the metal casting is less than the width of the curb and gutter, 2 - No. 4 rebars (L = 12 + casting length + 12") shall be incorporated in the continuous portion of concrete gutter in front of the casting.

TRANSITIONS - The transition from full height curb to depressed curb shall be made at the rate of 3" per foot of length or flatter.

(2) - No. 4 steel reinforcing bars shall be incorporated over trench crossings if required by the City Engineer.

JOINTS - In addition to the requirements of Article 606.06 of the Standard Specifications, joints shall be constructed as follows:

Contraction joints and expansion joints shall be installed in the curb or curb and gutter in prolongation with joints in adjacent P.C.C. pavement or base course.

When curb and gutter is constructed adjacent to flexible pavement, a 1" thick pre formed expansion joint filler, conforming to the cross section of the curb and gutter, shall be installed at points of curvature for short radius curves and at construction joints. Contraction joints shall be placed between expansion joints at distances not to exceed 5 feet.

All expansion joints shall be provided with a 1 ¼" dia. x 18" coated smooth dowel bar conforming to Article 1006.10 of the Standard Specifications. The dowel bar shall be fitted with a cap having a pinched stop that will provide 1" of expansion.

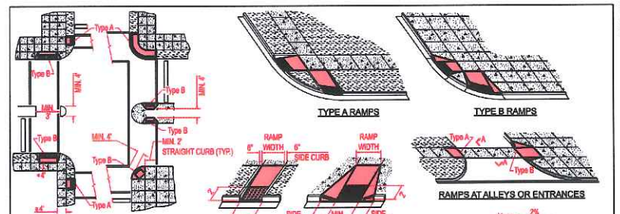
All construction joints shall be provided with ⅝" dia. deformed steel tie bars 30" long conforming to AASHTO M-31 or M-53. Tie bars shall be placed on 9" centers. (minimum 2 per joint).

Expansion joints shall be placed at intervals not to exceed 100 feet.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	CURB: CONCRETE CURB AND GUTTER	RD-05a	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 6/1/2007	
		Drawn: EM Checked: MS	

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RD-05b

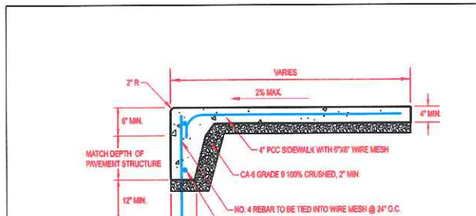


SEE RD-03b FOR GENERAL NOTES AND DETECTABLE WARNING DETAILS

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	PUBLIC SIDEWALK RAMP DETAIL (MODIFIED IDOT 424001-04)	RD-03a	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn: EM Checked: MS	

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RD-05c



CLASS SI CONCRETE SHALL BE USED THROUGHOUT (UNLESS OTHERWISE NOTED)

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	CURB: SIDEWALK WITH INTEGRAL CURB	RD-05c	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn: EM Checked: MS	

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0 20 40
GRAPHIC SCALE - FEET

SPARTA BROTHERS OIL
BRINK STREET AND CRYSTAL LAKE AVE.

Prepared For:
CORPORATE DESIGN + DEVELOPMENT GROUP, LLC
2975 PRAIRIE AVE
HOFFMAN ESTATES, IL 60192
Phone: 224-293-6980

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PH: (630)668-7076 FAX: (630)668-7780
Illinois Firm License No. 184-003161

BY	REVISION DESCRIPTION	DATE

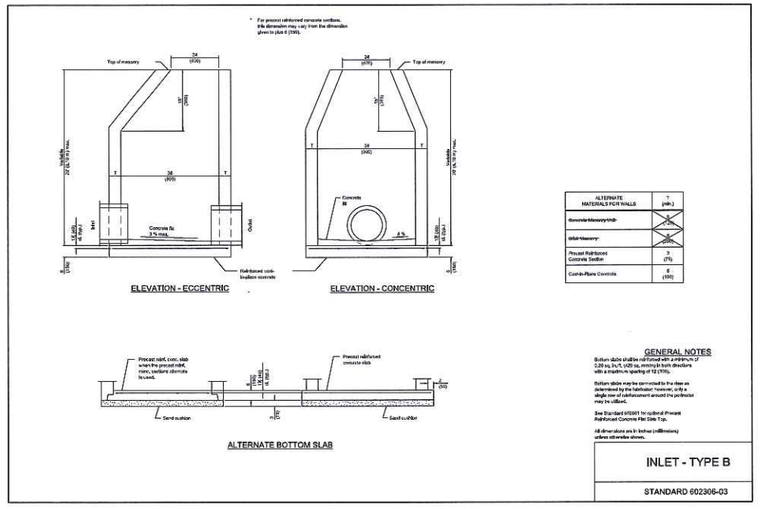
Section-Township-Range
County: SE¼ 32-44-08

JOB #	43711	SURV:	W-T
DRAWN:	BMB	REVIEW:	SMR
SCALE:	1"=20'	DATE:	07-30-15

SHEET NAME
DETAILS - 1

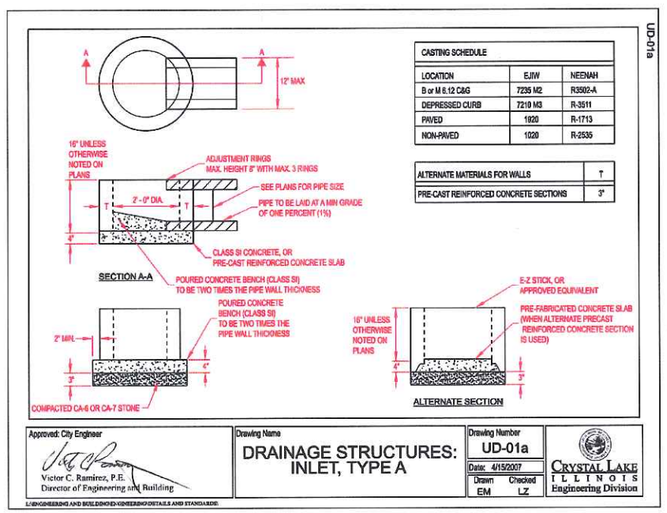
SHEET #
C-6.1

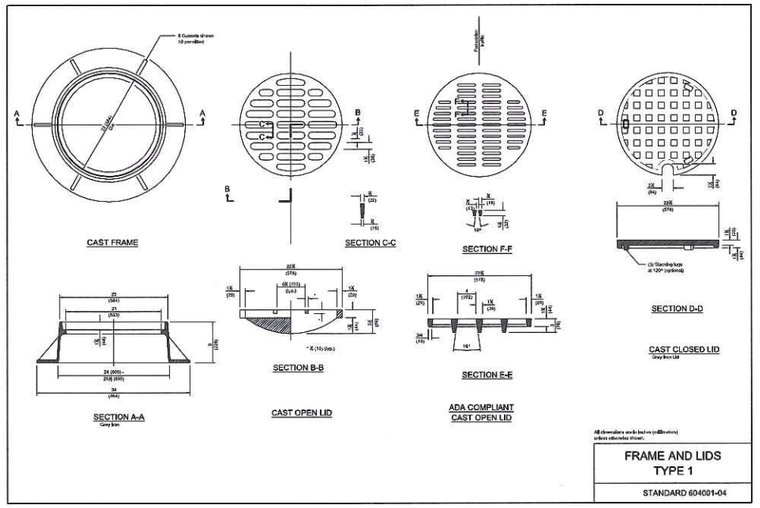
DATE: 7/31/2015
FILE: E:\ACTIVE-PROJECTS\43711-000000-Ad-Henry\ENG-BMB\43711 - Civil Plans.dgn
MODEL: C-6.1



INLET - TYPE B

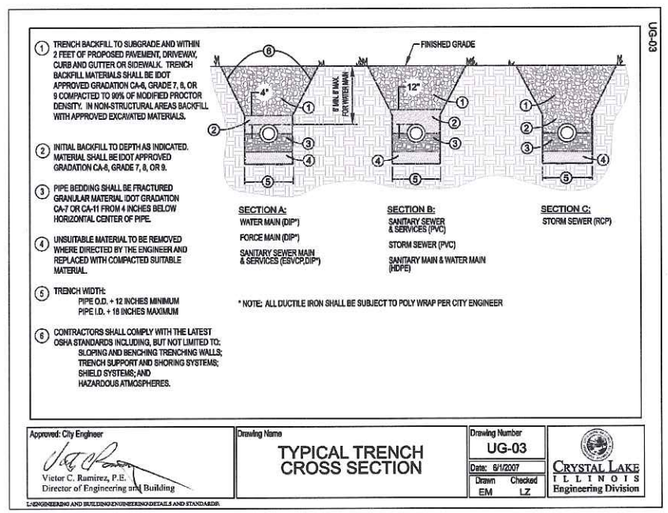
STANDARD 602306-03





FRAME AND LIDS TYPE 1

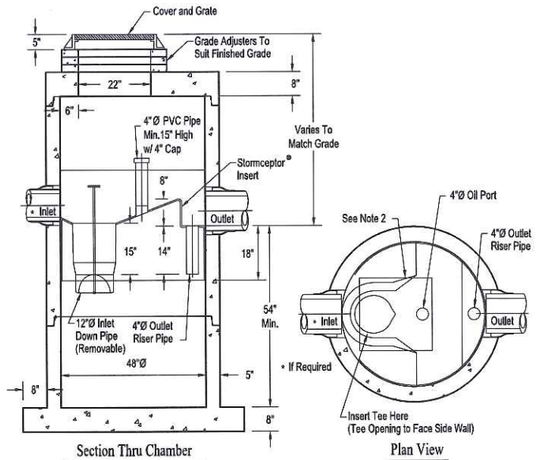
STANDARD 604001-04



Rinker MATERIALS

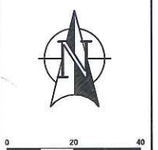
Concrete Pipe Division

STC 450i Precast Concrete Stormceptor®
(450 U.S. Gallon Capacity)



Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Inlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact Greg Sterchi (708) 557-6174, gsterchi@sunsrcce.com for further details.

Rinker 027



SPARTA BROTHERS OIL
BRINK STREET AND CRYSTAL LAKE AVE.

Prepared For:
CORPORATE DESIGN + DEVELOPMENT GROUP, LLC
2675 PRATUM AVE.
HOFFMAN ESTATES, IL 60192
Phone: 224-293-2963

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PH: (630)668-7600 FAX: (630)682-7760
DESIGN FIRM LICENSE NO.: 184-003191

BY	REVISION DESCRIPTION	DATE

Section-Township-Range
County: SE¼ 32-44-08

JOB # 43711	SURV: W-T
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=20'	DATE: 07-30-15

SHEET NAME

DETAILS - 2

SHEET # C-6.2

DATE: 7/31/2015
FILE: E:\ACTIVE-PROJECTS\43711-000000-McHenry\ENG-BMB\43711 - Civil Plans.dgn
MODEL: C-6.2

GE-02c

SANITARY SEWER:

1. Non-shear stainless steel couplings shall be used when connecting sewer pipes of dissimilar materials and pipes with no hub joints. When connecting to an existing sanitary sewer by means other than an existing wye or manhole, contractor shall use a Sewer-Tap and hub-wye or hub-tee saddle.
2. Unless an alternate method is approved, water stop gaskets shall be provided at all sanitary sewer manhole connections. Type and manufacturer to be approved by the City.
3. PVC plastic sewer pipe and fittings of sizes 4-inch through 15-inch shall conform to the latest revised specification requirements of ASTM D3034 for type PSM polyvinyl chloride (PVC) sewer pipe and fittings of minimum wall thickness SDR 35.
4. Joints shall be either the solvent weld type conforming to the latest revised specification requirements of ASTM D2564 and ASTM D2855, or elastomeric gasket type conforming to the latest revised specification requirements of ASTM D1869 and ASTM D3212.
5. A thicker walled pipe such as SDR 26 may be specified by the engineer depending on design and/or field conditions.
6. PVC plastic sewer pipe and fittings of sizes 18-inch through 36-inch shall conform to the latest revised specification requirements of ASTM F679 or polyvinyl chloride (PVC) large diameter ribbed gravity sewer pipe and fittings, with integral bell gasketed joints and elastomeric gaskets to form a watertight seal conforming to the latest revised specification requirements of ASTM F477 or ASTM D3212.
7. Pipe and fittings shall be the products of one approved manufacturer only, and there shall not be any mixing of pipe and fittings of different manufacturers.
8. The handling and installation of pipe, assembly or joints, and manhole connections shall be in accordance with the manufacturer's recommendations.
9. Gasket-type watertop collars consist of a neoprene collar and a stainless steel band or other approved manhole watertop shall be installed wherever the pipe passes through the manhole walls to provide a watertight joint to prohibit infiltration into the sewer system.
10. PVC pipe shall be installed in accordance with the latest revised specification requirements of ASTM D2321 using either compacted class I or class II granular embedment materials for bedding, haunching and initial backfill of 12 inches over the top of pipe to provide the necessary support for the pipe so that the maximum deflection does not exceed five percent (5%) of the pipe's original internal diameter.
11. The Contractor shall provide the necessary tools and equipment and perform the work necessary to test the deflection in the initial 1,200 feet of installed sewer and not less than ten percent (10%) of the remainder of the sewer project at random locations selected by the engineers no sooner than 30 days after backfilling has been completed. In the event that deflection exceeds the maximum limit of five percent (5%), the Contractor shall test all other new flexible pipe for deflection. Deflection shall be tested by use of either a mandrel or rigid ball having a diameter equal to ninety-five percent (95%) of the inside diameter of the pipe, and the test shall be performed without using mechanical pulling devices. Wherever the deflection limitation is exceeded, the contractor shall uncover the pipe, carefully replace compacted embedment and backfill material, and retest for deflection.
12. The Contractor shall subject all sanitary sewers, including service lines, to an air test. Allowable infiltration shall not exceed 100 gallons per inch diameter of pipe per mile per day. Televising of testing, cost for televising, and testing shall be the responsibility of the Contractor.
13. Cast Iron Soil Pipe: service weight cast iron soil pipe and fittings conforming C.I.S.P.I. Specification HS-67 with compression type rubber gasket joints conforming to ASTM specification C564, or other suitable materials approved by the City Engineer.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	STANDARD NOTES AND SPECIFICATIONS	GE-02c Date: 6/1/2007 Drawn: EM Checked: LZ	CRYSTAL LAKE ILLINOIS Engineering Division

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GE-02a

GENERAL SITE-WORK:

1. Pre-Construction meeting shall be conducted with City Staff and all Contractors prior to commencing any grading or underground utility construction activities (schedule meeting with the Engineering Division Inspection Services Coordinator at 815-356-3615).
2. 24-hour Emergency contact numbers shall be provided to City Staff at the Pre-Construction meeting.
3. Working hours shall be limited to the hours of 7:00 a.m. and 7:00 p.m. on weekdays only (except in cases of emergency). Non-emergency work on weekends or holidays is not permitted per City Code except under a separate permit from the City Engineer, limited to a period of not more than three days and renewable only once.
4. Public/private streets shall be kept free of dirt and debris with regular cleaning, sweeping, and scraping conducted by the Contractor. Junk and debris shall not be allowed to accumulate, blow, or scatter onto streets or adjacent properties.
5. J.U.L.I.E. shall be contacted for utility locations on-site and in the adjacent rights-of-way.
6. Contractor shall provide and maintain fencing, barricades, traffic control signs, and other safeguarding measures during the course of all work to protect the public from the construction operations.
7. Maintain access to adjacent streets during construction. No closing of streets unless approved first obtained from the agency with jurisdiction (City Engineering Division, McHenry County Department of Transportation, Illinois Department of Transportation, etc).
8. Any damage to public right-of-way, public utilities, streets, curb, etc. shall be repaired/replaced as soon as possible and as directed by the Engineering Division.
9. The contractor shall give the City of Crystal Lake, Illinois Department of Transportation, and any other governmental agency having jurisdiction, at least two (2) working days notice excluding Saturday and Sunday prior to the initiation of any phase of construction. Contractor shall immediately notify if construction has ceased and renew the two (2) working day notification thereafter.
10. The Contractor shall be responsible for obtaining all required permits for construction along or across existing streets or highways. The Contractor shall make arrangements for the proper bracing, shoring and other protection of all roadways before construction begins.
11. The owner is responsible for the cost of overtime inspection beyond the normal eight (8) hour day, including weekends and holidays.

GRADING:

1. The grading and construction of the site improvements shall not cause ponding of storm sewer water. All areas adjacent to these improvements shall be graded to allow positive drainage.
2. The proposed grading elevations shown on the plans are finished grade. A minimum of six (6) inches of topsoil is to be placed before finished grade elevations are achieved.
3. Embankment material within parkway and open space areas shall be compacted to a minimum of ninety percent (90%) of maximum density in accordance with ASTM Specification D-1557 (modified proctor method), or to such other density as may be determined appropriate by the soils engineer.
4. All subgrade material shall have a minimum CBR (California Bearing Ratio) of 3.0 as determined by the soils engineer, or base replacement and pavement design revisions shall be provided which are adequate to obtain equivalent pavement strength.
5. Proposed pavement areas, building pads, driveways and sidewalks and yard/open space areas shall be excavated or filled to plus or minus 0.1 foot of design subgrade elevations by the Contractor.
6. Any borrow pit locations shall be identified by the Contractor on a copy of the approved site plans and forwarded to the Engineering Division at least 24-hours prior to excavation. Provide backfill compaction reports from a geotechnical engineer and as-built plans to the Engineering Division for any borrow pit area.
7. Backfill shall be monitored by a geotechnical engineer on-site with compaction reports forwarded to the Engineering Division for review.
8. Water truck shall be on-site at all times during mass-grading operations and be available as needed for the purposes of dust control or at the request of City Staff.
9. Use of City fire hydrants is not allowed unless approved (separate from this permit) by the Public Works Department and a hydrant meter and RPZ is obtained from the City of Crystal Lake Water Division. Only the City of Crystal Lake Water Division may operate valves and hydrants.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	STANDARD NOTES AND SPECIFICATIONS	GE-02a Date: 6/1/2007 Drawn: EM Checked: LZ	CRYSTAL LAKE ILLINOIS Engineering Division

L:\ENGINEERING AND BUILDING\ENGINEERING DETAILS AND STANDARDS\

GE-02b

TOPSOIL STOCKPILING:

1. Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
2. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter, or other litter and waste products including other extraneous materials not conducive to plant growth.
3. Topsoil shall be stockpiled in sequence to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
4. Topsoil stockpiles shall be located in areas to avoid erosion of said stockpile to offsite areas. Topsoil stockpiles are to have a minimum three (3) foot high berm around the circumference of the pile so as to control erosion and runoff.
5. If a stockpile is to remain in place for more than twelve (12) months, it is required that the stockpile be seeded so as to minimize soil erosion by both wind and water.

UNDERGROUND UTILITY:

1. The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the City Engineering and Building Department at least 24 hours in advance.
2. All main line sanitary and storm sewer shall be cleaned and televised (provide a VHS videotape or DVD to the City's Public Works Department).
3. All manhole or valve covers shall be imprinted "SANITARY" or "STORM" or "WATER".
4. Reference the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois".
5. Existing manholes to be circular cored and booted.

EROSION CONTROL:

1. All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
2. All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
3. All overland flow routes to be stabilized by sod or blanket.
4. Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
5. Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
6. The Contractor shall implement any additional erosion control measures deemed necessary by the City per the standards of the City Of Crystal Lake Stormwater Ordinance.
7. All storm sewer catch basins, sumps and/or retention basins provided with this project are to be cleaned at the end of construction of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
8. Rip-rap material shall be in accordance with Article 765 and grouted in place according to Article 691 of the IDOT "Standard Specifications".

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	STANDARD NOTES AND SPECIFICATIONS	GE-02b Date: 6/1/2007 Drawn: EM Checked: LZ	CRYSTAL LAKE ILLINOIS Engineering Division

L:\ENGINEERING AND BUILDING\ENGINEERING DETAILS AND STANDARDS\

GE-02d

WATER MAIN:

1. Thrust blocking shall be installed on water mains at all bends, tees, elbows, etc. except as noted below.
2. Thrust blocks not permitted with 45° vertical bends in water main. These shall be restrained with "Mega-Lug" or equivalent.
3. Water main shall be ductile iron pipe, Class 52 conforming to A.N.S.I. A-21.51 or AWWA C-151.
4. Gaskets and cast iron fittings shall conform to A.N.S.I. A-21.11 or AWWA C-110 and C-111 water main shall be cement lined in conformance with A.N.S.I. A-21.4 or AWWA C-104.
5. Minimum cover from finished grade to top of water main shall be six (6) feet. Maximum cover shall be eight (8) feet.
6. Water Main Tops: an Illinois licensed plumber is required for any water main tap.
7. All water mains shall be subjected to a pressure test and a separate leakage test at system pressure for 24 hours by the Contractor. Hydrostatic pressure test and leakage shall be based on 125 psi for two (2) hours. Water mains shall be chlorinated in accordance with the Standard Specifications.
8. The Underground Contractor shall consider incidental to the contract any chlorination and testing of existing water main where connections to and conclusion of such mains is indicated on the drawings. In the event that the pressure attributable to defective original workmanship and material, then the Contractor shall be entitled to additional payment for correcting the deficiencies.

PAVING:

1. All subgrades and bases shall be proof-rolled and approved by the Engineering Division prior to base or binder installation.
2. Subgrade and proposed pavements shall be finished by the Excavation Contractor to within 0.1 foot plus or minus, of plan elevation.
3. The Paving Contractor shall ensure that the subgrade has been properly prepared and that the finished top of subgrade elevation has been graded within the tolerances allowed in these specifications. Unless the Paving Contractor advises the owner and engineer in writing prior to fine grading for base course construction, it is understood that the Contractor has approved and accepts responsibility for the subgrade.
4. For the purpose of providing handicap accessibility and complying with the American Disability Act and City Standards, curbs shall be depressed at locations where public walks or pedestrian paths intersect curb lines at street intersections and other locations as directed.
5. ½ inch thick premolded fibre expansion joints with two (2) No. 4 plain round steel dowel bars shall be installed at designated intervals and at all P.C., P.T., curb returns and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted with metal expansion tubes.
6. ½ inch thick fibre expansion joints shall be used in every case where the sidewalk coincides with the curb and gutter. Contraction joints shall be saw cut at designated intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract.
7. All poured in place concrete curb and gutter shall incorporate two (2) No. 4 reinforcing bars installed wherever the curb and gutter crosses utility service lines, the cost of which shall be considered incidental to the cost of concrete curb and gutter.
8. Sidewalks (where required) shall be of the thickness and dimensions as shown in the construction plans. All sidewalk concrete shall be a minimum of 6.1 bag mix (or IDOT class SI concrete) and shall develop a minimum of 3,500 psi compressive strength at twenty eight (28) days. Contraction joints shall be set at four (4) foot centers, and one-half inch (½ inch) premolded fibre expansion joints at forty (40) foot centers and where the sidewalk meets the curb or another sidewalk, or at the end of each pour. All sidewalks constructed over utility trenches and/or abutting driveway aprons shall be reinforced with three (3) No. 4 reinforcing bars (10 foot minimum length).

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	STANDARD NOTES AND SPECIFICATIONS	GE-02d Date: 6/1/2007 Drawn: EM Checked: LZ	CRYSTAL LAKE ILLINOIS Engineering Division

L:\ENGINEERING AND BUILDING\ENGINEERING DETAILS AND STANDARDS\

0 20 40
GRAPHIC SCALE - FEET

SPARTA BROTHERS OIL
BRINK STREET AND CRYSTAL LAKE AVE.

Prepared For:
CORPORATE DESIGN + DEVELOPMENT GROUP, LLC
2975 PRATUM AVE.
HOFFMAN ESTATES, IL 60192
Phone: 224-293-6900

WEBSTER, McGRATH & AHLBERG, LTD.
WMA
LAND SURVEYING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE
Over 100 Years of Service to Clients
207 SOUTH NAPERVILLE ROAD, WHEATON, ILLINOIS 60187
PH: (630)668-7603 FAX: (630)668-1760
Design Firm License No.: 184-003101

BY	REVISION DESCRIPTION	DATE	REV#

Section-Township-Range
County: SEC. 32-44-08

JOB # 43711	SURV: W-T
DRAWN: BMB	REVIEW: SMR
SCALE: 1"=20'	DATE: 07-30-15

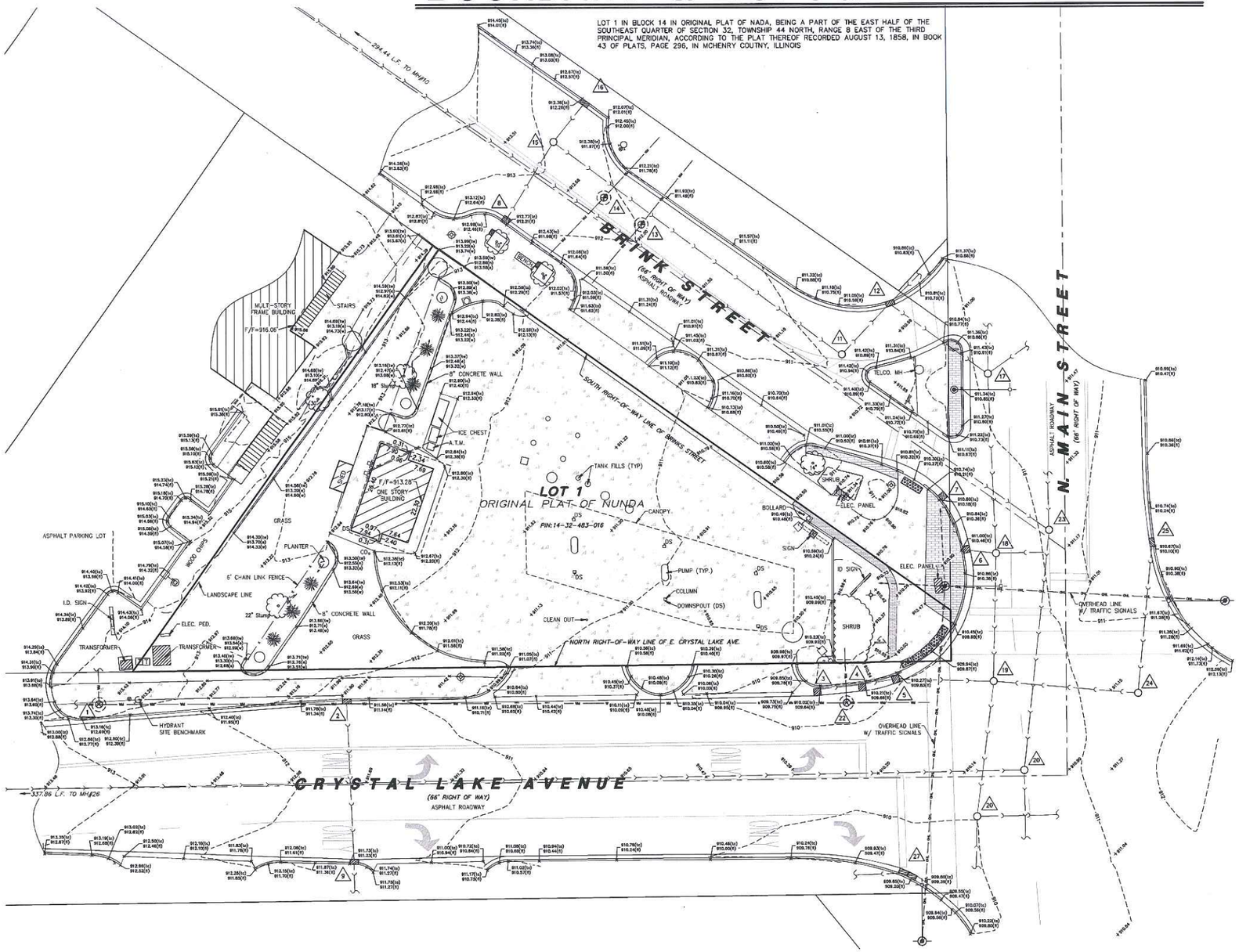
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CITY STANDARD NOTES

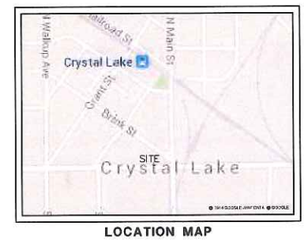
SHEET #
C-6.3

DATE: 7/30/2015
FILE: E:\ACTIVE-PROJECTS\43711-000000-Ald Henry\ENG-BMB\43711 - Civil Plans.dgn
MODEL: C-6.3

BOUNDARY & TOPOGRAPHIC SURVEY

LOT 1 IN BLOCK 14 IN ORIGINAL PLAT OF NADA, BEING A PART OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 44 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 13, 1858, IN BOOK 43 OF PLATS, PAGE 296, IN MCHENRY COUTNY, ILLINOIS





LOCATION MAP

1. RIM=913.65' (WATER) 48" CONCRETE STRUCTURE 908.31' AT TOP OF 4" D.I. WATERMAIN N 908.55' AT TOP OF 8" D.I. WATERMAIN E/W
2. RIM=911.23' (STORM) 24" CONCRETE STRUCTURE INV=909.40' (12" RCP S)
3. RIM=909.65' (STORM) 48" CONCRETE STRUCTURE INV=906.15' (12" RCP E)
4. RIM=909.64' (STORM) 48" CONCRETE STRUCTURE INV=906.11' (12" RCP E/W)
5. RIM=909.74' (STORM) 48" CONCRETE STRUCTURE INV=905.89' (24" RCP E) INV=905.92' (12" RCP W)
6. RIM=910.46' (STORM) 48" CONCRETE STRUCTURE INV=906.87' (12" RCP E) INV=906.97' (12" RCP NNW)
7. RIM=910.18' (STORM) 48" CONCRETE STRUCTURE INV=906.89' (12" RCP SSE)
8. RIM=912.21' (STORM) 24" CONCRETE STRUCTURE INV=909.01' (12" RCP NE)
9. RIM=911.23' (STORM) 24" CONCRETE STRUCTURE INV=909.30' (12" RCP N) INV=907.87' (12" RCP S)
10. RIM=919.35' (SANITARY) 36" BRICK STRUCTURE INV=906.86' (12"? CLAY SE) INV=908.56' (8" CLAY NW)
11. RIM=910.87' (STORM) 48" CONCRETE STRUCTURE INV=906.97' (12" RCP NE) INV=906.97' (15" RCP NW)
12. RIM=910.43' (STORM) 48" CONCRETE STRUCTURE INV=906.94' (12" RCP NE) INV=906.79' (12" RCP SE/SW)
13. RIM=911.94' (WATER) 48" CONCRETE STRUCTURE 908.01' AT TOP OF 6" D.I. WATERMAIN NE/SW
14. RIM=912.26' (WATER) 48" CONCRETE STRUCTURE 906.67' AT TOP OF 8" D.I. WATERMAIN NE/SW)
15. RIM=912.83' (STORM) 48" CONCRETE STRUCTURE INV=908.68' (12" RCP NE/SW) INV=908.41' (15" RCP SE)
16. RIM=912.26' (STORM) 48" CONCRETE STRUCTURE INV=908.91' (12" RCP SW)
17. RIM=911.11' (STORM) 72" CONCRETE STRUCTURE INV=906.41' (36" RCP N) INV=907.61' (12" RCP NE) INV=906.23' (24" D.I. S 2 PIPES) INV=906.66' (12" RCP NW)
18. RIM=910.67' (STORM) 72" CONCRETE STRUCTURE INV=905.78' (24" D.I. N 2 PIPES) INV=906.83' (12" RCP E) INV=903.48' (34"X53" ELIP. RCP S) INV=906.89' (12" RCP W)
19. RIM=910.36' (STORM) 72" CONCRETE STRUCTURE FULL OF DEBRIS 905.74' AT TOP OF DEBRIS INV=905.50' (34"X53" ELIP. RCP N) INV=905.40' (12" RCP E) INV=905.52' (34"X53" ELIP. RCP S) INV=905.52' (24" RCP W)
20. RIM=910.51' (SANITARY) 48" CONCRETE STRUCTURE INV=898.53' (12" CLAY N/S) INV=901.17' (8" CLAY W)
21. RIM=910.01' (STORM) 72" CONCRETE STRUCTURE INV=905.51' (34"X53" ELIP. RCP N) INV=905.40' (24" RCP E) INV=906.91' (15" D.I. S)
22. RIM=909.85' (WATER) 48" CONCRETE STRUCTURE 905.48' AT TOP OF 8" D.I. WATERMAIN N/E/W
23. RIM=911.07' (SANITARY) 36" BRICK STRUCTURE INV=898.57' (12" CLAY N/S) INV=898.97' (12" CLAY NW)
24. RIM=911.34' (STORM) 48" CONCRETE STRUCTURE INV=906.64' (12" RCP N) INV=906.54' (12" RCP W)
25. RIM=910.10' (STORM) 24" CONCRETE STRUCTURE INV=907.98' (12" RCP S)
26. RIM=915.07' (SANITARY) 36" BRICK STRUCTURE INV=905.39' (8" CLAY E) INV=907.87' (6" CLAY SE) INV=906.17' (8" CLAY W)
27. RIM=909.20' (STORM) 30"X60" CONCRETE STRUCTURE FULL OF DEBRIS 905.95' AT TOP OF DEBRIS INV=905.74' (12" RCP NE PLUGGED) INV=905.74' (12" RCP W)

NOTES:

1. ONSITE BENCHMARK – NE FLANGE BOLT ON HYDRANT AT SW CORNER OF PROPERTY. ELEVATION=914.43' (NAVD88)
2. PERMANENT INDEX NUMBER (P.I.N. #): 14-32-483-016
3. THE LOCATION OF UNDERGROUND UTILITIES WAS DETERMINED BY FIELD OBSERVATION AND VISIBLE MARKINGS ONLY.
4. PROPERTY AREA:
5. FIELD WORK COMPLETED ON 6/9/15
6. SURVEY PREPARED WITHOUT THE AID OF A TITLE REPORT, REFER TO A CURRENT TITLE REPORT, DEED AND LOCAL CODES FOR ANY EASEMENT, BUILDING SETBACKS AND OTHER LOCAL RESTRICTIONS NOT SHOWN HERON.
7. ACCORDING TO OUR INTERPOLATION OF THE FLOOD INSURANCE RATE MAP THIS SITE IS LISTED AS BEING IN A ZONE "X", DESCRIBED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN" PER F.E.M.A. PANEL NO. 17111C0327J DATED NOVEMBER 16, 2006.
8. SURVEY PREPARED FOR: CORPORATE DESIGN & DEVELOPMENT GROUP
9. BUILDING TIES & DIMENSIONS SHOWN ARE MEASURED FROM THE OUTSIDE FACE OF THE BUILDING.
10. LATITUDE: N 42°14'28.91" LONGITUDE: W088°18'59.67"
11. BASIS OF BEARINGS IS TRUE NORTH BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, ILLINOIS EAST 1201 ZONE.
12. ANY DISCREPANCIES FOUND WITHIN THIS DOCUMENT NEED TO BE REPORTED TO THE SURVEYOR AS SOON AS POSSIBLE.

LEGEND

PROPERTY LINE	TYPICAL SIGN	UTILITY POLE
CENTER LINE	FLARED END SECTION	TELEPHONE VAULT
EASEMENT LINE	CLOSED MANHOLE	GUARDRAIL
BUILDING SETBACK	OPEN GRATE MANHOLE	GUY WIRE ANCHOR
(M) MEASURED DATA	BEEHIVE GRATE MANHOLE	773 CONTOUR LINE
(R) RECORD DATA	GUTTER FRAME	TREE LINE / HEDGE LINE
XXX.XX TOP OF (CURB/WALL ETC) SPOT GRADE XXX.XX BOTTOM OF (STAIRS, GUTTER/ETC)	VALVE VAULT	EDGE GRAVEL/STONE
CONCRETE	FIRE HYDRANT	FENCE LINE
	B-BOX / SERVICE VALVE	STORM SEWER
	POST LIGHT/GROUND LIGHT	SANITARY SEWER
	AREA LIGHT	COMBO SEWER
EVERGREEN/DECIDUOUS WITH SIZE IN INCHES	STREET LIGHT	WS WATER SERVICE LINE
	TRAFFIC SIGNAL	WM WATERMAIN
	MAST ARM SIGNAL	OHL OVERHEAD LINE
SHRUB/SHRUB LINE	HANDHOLE (electric\traffic)	FO FIBER OPTIC LINE
	GAS METER	GAS LINE
MONITOR WELL	ELECTRIC METER	UGT U.G. TELCO LINE
GAS VALVE	PEDESTAL(telco,elec,cable)	UGE U.G. ELECTRIC LINE

N

SCALE: 1" = 15'

00 7.5 15 30 60

BAR SCALE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

WE W-T LAND SURVEYING, INC. DO HEREBY DECLARE THAT WE HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY AND THAT THIS PLAT IS A CORRECT REPRESENTATION OF SAID SURVEY. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY AND TOPOGRAPHIC SURVEY.

GIVEN UNDER OUR HAND AND SEAL THIS _____ DAY OF _____ A.D._____ AT HOFFMAN ESTATES, ILLINOIS.

W-T LAND SURVEYING, INC. ILLINOIS

PRELIM

FRANJO I. MATICIC – PLS #035-003556 EXPIRES 11/30/2016
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 184-004387

BY	DATE	REVISIONS

W-T LAND SURVEYING, INC.
LAND AND CONSTRUCTION SURVEYORS
2975 Prairie Avenue
Hoffman Estates, IL 60192
PH: (224) 293-4333 FAX: (224) 293-4444
www.wtlandsurveying.com
IL License No.: 184-004387 Exp: 04/30/15

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SPARTA BROTHERS OIL
90 BRINK STREET
CRYSTAL LAKE, ILLINOIS

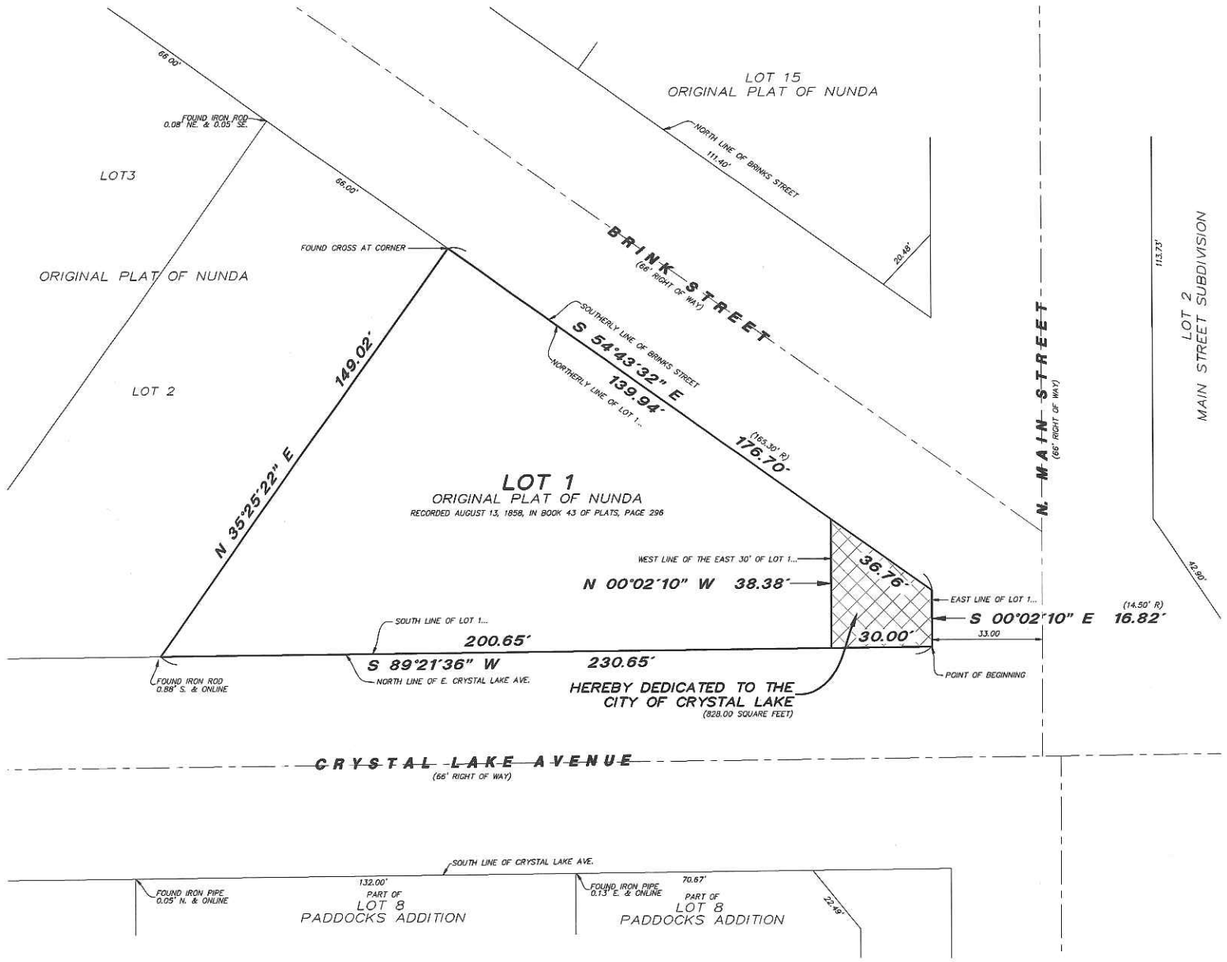
BOUNDARY & TOPOGRAPHIC SURVEY

SCALE :	1"=15'
DRAWN :	REM
BOUNDARY :	FIM
FIELD WORK :	MWS
CHECK :	FIM
JOB :	S15274
SHEET	S-1
OF	ONE SHEETS

PLAT OF DEDICATION

PERMANENT INDEX NUMBER (P.I.N. #): 14-32-483-016

THAT PART OF LOT 1 IN BLOCK 14 IN ORIGINAL PLAT OF NADA, BEING A PART OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 44 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 13, 1858, IN BOOK 43 OF PLATS, PAGE 296, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 1; THENCE SOUTH 89 DEGREES 21 MINUTES 36 SECONDS WEST ALONG THE SOUTH LINE OF SAID LOT 1 ALSO BEING THE NORTH LINE OF CRYSTAL LAKE AVENUE, 30.00 FEET; THENCE NORTH 00 DEGREES 02 MINUTES 10 SECONDS WEST ALONG THE WEST LINE OF THE EAST 30 FEET OF SAID LOT 1, A DISTANCE OF 38.38 FEET TO A POINT ON THE NORTHERLY LINE OF SAID LOT 1; THENCE SOUTH 54 DEGREES 43 MINUTES 32 SECONDS EAST ALONG THE NORTHERLY LINE OF SAID LOT 1 ALSO BEING THE SOUTHERLY LINE OF BRINK STREET, 36.76 FEET TO THE NORTHEAST CORNER OF SAID LOT 1; THENCE SOUTH 00 DEGREES 02 MINUTES 10 SECONDS EAST ALONG THE EAST LINE OF SAID LOT 1, A DISTANCE OF 16.82 FEET TO THE POINT OF BEGINNING, CONTAINING 828.00 SQUARE FEET, IN MCHENRY COUNTY, ILLINOIS.



LEGEND

- HEREBY DEDICATED TO THE CITY OF CRYSTAL LAKE
- PROPERTY LINE
- ROAD CENTER LINE
- SECTION LINE
- EXISTING EASEMENT LINE
- (R) RECORD PROPERTY DATA

N

SCALE: 1" = 20'

00 10 20 40

BAR SCALE

NOTES:

1. DEDICATED AREA: 828.00 SQUARE FEET
2. FIELD WORK COMPLETED ON 6/9/15
3. PLAT PREPARED WITHOUT THE AID OF A TITLE REPORT, REFER TO A CURRENT TITLE REPORT, DEED AND LOCAL CODES FOR ANY EASEMENT, BUILDING SETBACKS AND OTHER LOCAL RESTRICTIONS NOT SHOWN HERON.
4. PLAT PREPARED FOR: CORPORATE DESIGN & DEVELOPMENT GROUP
5. BASIS OF BEARINGS IS TRUE NORTH BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, ILLINOIS EAST 1201 ZONE.
6. ANY DISCREPANCIES FOUND WITHIN THIS DOCUMENT NEED TO BE REPORTED TO THE SURVEYOR AS SOON AS POSSIBLE.

OWNER'S CERTIFICATE

STATE OF _____) SS
COUNTY OF _____

THIS IS TO CERTIFY THAT THE UNDERSIGNED, IS [ARE] THE LEGAL OWNER[S] OF THE LAND DESCRIBED ON THE PLAT HEREON DRAWN AND SHOWN HEREON AS SUBDIVIDED; THAT HE [THEY] HAS [HAVE] CAUSED SAID LAND TO BE SURVEYED AND DEDICATED AS SHOWN HEREON, FOR THE PURPOSE OF HAVING THIS PLAT RECORDED AS PROVIDED BY LAW. IN WITNESS WHERE I [WE] HAVE HEREUNDER SET MY [OUR] HAND[S] OF SEAL[S]

THIS ___ DAY OF _____ A.D. _____.

_____ (SEAL)

_____ (SEAL)

NOTARY CERTIFICATE

STATE OF _____) SS
COUNTY OF _____

I, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT _____ OF _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSON OR PERSONS WHOSE NAME OR NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS, _____ RESPECTIVELY APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED AND DELIVERED THE SAID INSTRUMENT AS THEIR OWN FREE AND VOLUNTARY ACT OF SAID COMPANY FOR THE USES AND PURPOSES THEREIN SET FORTH AND SAID SECRETARY DID ALSO THEN AND THERE ACKNOWLEDGE THAT HE OR SHE AS CUSTODIAN OF THE CORPORATE SEAL OF SAID COMPANY DID AFFIX THE SAID CORPORATE SEAL OF SAID COMPANY TO THE SAID INSTRUMENT AS HIS OR HER OWN FREE VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID COMPANY FOR THE USES AND PURPOSES SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL, THIS _____ DAY OF _____A.D. _____.

_____ (SEAL)
NOTARY PUBLIC

COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS
COUNTY OF MCHENRY) SS

I, _____, COUNTY CLERK IN MCHENRY COUNTY, ILLINOIS DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID CURRENT GENERAL TAXES, NO UNPAID FORFEITED TAXES, AND NO REDEEMABLE TAX AGAINST ANY OF THE LAND INCLUDED IN THE ANNEXED PLAT. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE ANNEXED PLAT.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY AT WOODSTOCK, ILLINOIS, THIS _____ DAY OF _____A.D. _____.

_____ (SEAL)
MCHENRY COUNTY CLERK

COUNTY RECORDER'S CERTIFICATE

STATE OF ILLINOIS
COUNTY OF MCHENRY) SS

THIS INSTRUMENT FILED FOR RECORD IN THE RECORDER'S OFFICE OF MCHENRY COUNTY, ILLINOIS, ON THIS _____ DAY OF _____, A.D._____, AT ____ O'CLOCK _M. AND RECORDED AS DOCUMENT NUMBER _____.

_____
COUNTY RECORDER

CITY ENGINEER'S CERTIFICATE

STATE OF ILLINOIS
COUNTY OF MCHENRY) SS

I, _____ CITY ENGINEER OF THE CITY OF CRYSTAL LAKE, ILLINOIS, HEREBY CERTIFY THAT THE PLAT OF DEDICATION IF APPROVED AND ACCEPTED

DATED AT THE CITY OF CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS.
THIS _____ DAY OF _____, 20 ____ A.D.

_____
CITY ENGINEER

CITY COUNCIL CERTIFICATE

STATE OF ILLINOIS
COUNTY OF MCHENRY) SS

APPROVED AND ACCEPTED BY THE CITY MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE, ILLINOIS AT A MEETING HELP THIS _____ DAY OF _____, 20 ____ A.D.

BY: _____
CITY MAYOR

ATTEST: _____
CITY CLERK

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I, FRANJO I. MATICIC, AN ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3556, STATE THAT I HAVE SURVEYED THE ABOVE DESCRIBED TRACT AS SHOWN BY THE PLAT HEREON DRAWN AND PREPARED THIS PLAT FOR THE PURPOSE OF RIGHT OF WAY DEDICATION. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARD FOR A BOUNDARY SURVEY.

GIVEN UNDER OUR HAND AND SEAL THIS _____ DAY OF _____ A.D._____, AT HOFFMAN ESTATES, ILLINOIS.

W-T LAND SURVEYING, INC. ILLINOIS

PRELIMINARY

_____
FRANJO I. MATICIC – PLS #035-003556 EXPIRES 11/30/2016
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 184-004387

REVISIONS	DATE	BY
ISSUED PRELIMINARY PLAT FOR REVIEW	7/31/15	MO

W-T LAND SURVEYING, INC.
LAND AND CONSTRUCTION SURVEYORS
2678 Pratum Avenue
Hoffman Estates, IL 60192
PH: (224)293-5333 FAX: (224)293-5444
www.wtengineering.com
IL. License No.: 184-004387 Exp: 04/30/16

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SPARTA BROTHERS OIL
90 BRINK STREET
CRYSTAL LAKE, ILLINOIS

PLAT OF DEDICATION

SCALE :	1"=20'
DRAWN :	MWO
BOUNDARY :	FIM
FIELD WORK :	MWS
CHECK :	FIM
JOB :	S15274
SHEET	S-2
OF	ONE SHEETS

SPARTA BROTHERS PHOTOMETRIC BY LEDCO AMERICA L.L.C.

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CANOPY CALC POINTS	Illuminance	Fc	28.77	40.3	12.2	2.36	3.30
PARKING LOT CALC POINTS	Illuminance	Fc	4.20	22.2	0.2	21.00	111.00
PROPERTY LINE CALC POINTS	Illuminance	Fc	1.43	9.1	0.0	N.A.	N.A.

Luminaire Schedule

Symbol	Qty	Label	Arrangement	LLF	Description
	12	C2	SINGLE	0.800	CPY250 LED CANOPY, 82 WATTS, FLAT LENS
	1	A1	SINGLE	0.800	CREE OSQ LED AREA LIGHT, TYPE 4MB OPTIC, 168 WATTS
	2	W1	SINGLE	0.800	XSPW LED WALL PACK, TYPE 3ME OPTIC, 25 WATTS

