VILLAGE OF YELLOW SPRINGS
PLANNING COMMISSION

The Village of Yellow Springs Planning Commission will meet in regular session on Monday, November 13, 2017 at 6PM in Village Council Chambers on the second floor of the Bryan Community Center, 100 Dayton Street, Yellow Springs, Ohio 45387

CALL TO ORDER

ROLL CALL

REVIEW OF AGENDA

REVIEW OF MINUTES
Minutes of September 25, 2017

COMMUNICATIONS

COUNCIL REPORT

CITIZEN COMMENTS

PUBLIC HEARINGS:

1. **Fire Station – Conditional Use and Site Plan Review** – Residential C – High Density Residential District. The Miami Township Trustees has submitted a conditional use and site plan review application for the purpose of locating and constructing a new fire station and township offices at Xenia Avenue between Marshall and East Herman Streets. Parcel ID #s F19000100080030400; F19000100080030500; F19000100080030600; F19000100080030700; F19000100080030800; F19000100080030900; F19000100080031000; F19000100080031100; F19000100080031200; F19000100080031300; F19000100080031400

2. **CBE/Commerce Park - Final Plan Phase One Replat** – Planned Unit Development (PUD) District (I-1 Industrial-Mixed Use). The Village of Yellow Springs has submitted a replat application for the purpose of re-dedicating right-of-ways and parcels for the development of infrastructure to the proposed Cresco Labs medical marijuana cultivation and processing plant, and future mixed use PUD development. Parcel ID #F19000100200000300, F19000100200000600 and F19000100200000700

3. **Cresco Labs – Conditional Use and Site Plan Review** – PUD District (I-1 Industrial-Mixed Use) at CBE/Commerce Park. Cresco Labs has submitted a conditional use and site plan review application for the purpose of establishing and constructing a medical marijuana cultivation and processing plant. Parcel ID #s F19000100200000300; F19000100200000600

OLD BUSINESS

NEW BUSINESS

AGENDA PLANNING

ADJOURNMENT

Planning Commission
Regular Meeting Minutes

Council Chambers 7:00pm **Monday, August 14, 2017**

CALL TO ORDER
The meeting was called to order at 7:00 P.M.

ROLL CALL
Planning Commission members present were Chair, Matt Reed, Council Representative Gerald Simms, Susan Stiles, Rose Pelzl and Alternate Chris Zurbuchen. Also present were Denise Swinger, Zoning Administrator, and Chris Conard, Village Solicitor.

REVIEW OF AGENDA
There were no changes made.

REVIEW OF MINUTES
Minutes of August 14, 2017 were reviewed. Stiles MOVED to APPROVE THE MINUTES AS AMENDED. Pelzl SECONDED and the MOTION PASSED 4-0 with Simms abstaining.

COMMUNICATIONS
Chris Zurbuchan re: Silver Link Information from Complete Streets Workshop. Zurbuchan briefly reviewed the workshop.

OLD BUSINESS
There was no Old Business.

NEW BUSINESS
There was no New Business.

COUNCIL REPORT
Simms noted that the Village will be hearing an ordinance to ban or limit smoking on Village owned properties at their October 2nd meeting.

Swinger noted that Council has passed the Lodging tax ordinance, which will go into effect on January 1st.

CITIZEN COMMENTS
Steve Bienovich inquired about a landlocked parcel he owns, seeking information as to how he could develop the lot without frontage to a street.

Swinger commented that she has not yet had an opportunity to work with Bienovich on the matter.

Reed commented that Planning Commission is cognizant that infill is to be encouraged, per Visioning and the Comprehensive Land Use Plan, and that if the lot is non-conforming, the matter could be heard by the Board of Zoning Appeals.

PUBLIC HEARINGS:

1. **Amend Chapter 1258.01 Table – Schedule of Uses by District – adding Pocket Neighborhood Developments (PNDs) to Residential Districts A, B and C.**

Swinger commented that this table was overlooked when Planning Commission added PNDs to the zoning code.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Zurbuchan MOVED TO APPROVE THE CHANGES TO SECTION1258.01. Stiles SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

2. Text Amendments - The Village of Yellow Springs is applying for an amendment to the following zoning code sections for Short-Term Rentals:

Amend Chapter 1262.08 (e) (6) Conditional Use Specific Requirements – changing short-term rentals to transient guest lodging and adding specific requirements.

Conard explained that the term "short term rental" (STR) is unique to the Village zoning code, while the Ohio Revised Code uses the term "transient guest lodging" (TGL). He opined that replacing "short term rental" in the Village code will lend a consistency by mirroring the state code. All of the suggested amendments, he stated, are definitional in nature, rather than substantive.

Conard explained further that the ordinance creating the lodging tax states that any homeowner who rents out a room or rooms for fewer than five total days per calendar year need not apply to the Village for a conditional use nor charge their guest(s) a lodging tax.

Conard clarified that any rental to the same person(s) of 30 days or greater is not a transient guest rental and falls outside of both zoning code and administrative regulation.

Conard noted that the adoption date of January first was selected so that the Finance Director would have time to flesh out the details and prepare information for proprietors.

Conard stated that there were no clear standards listed for the conditional use for STRs are not currently defined, and noted that this leaves a lack of guidance for the Planning Commission as well as for citizens seeking to have this use approved. He presented a prepared set of conditions which he suggested be attached to the standards for approval of a TGL establishment.

PC discussed the suggested standards of section 6(H) as listed here:

H. Standards. When determining if the conditional use should be granted, the Planning Commission shall consider and weigh the following factors:

(1) whether the essential character of the neighborhood would be substantially altered or whether adjoining properties would suffer a substantial detriment as a result of the conditional use;

(2) whether the conditional use would adversely affect the delivery of governmental services (e.g., water, sewer, garbage);

(3) whether the conditional use will negatively impact affordable housing and/or whether the conditional use will decrease the potential income tax that the Village could collect;

(4) whether the spirit and intent behind the zoning requirement would be observed and substantial justice done by granting the conditional use.

PC discussed the standards in general, with Swinger noting that some of the language is taken from the Ohio Revised Code as Board or Zoning Appeals standards.

Simms asked for further explanation of number three, wondering how this determination could be made.

Conard explained the logic that while renting out space can assist a villager in affording to live in town, if too many affordable homes are turned into TGL, the shortage of affordable dwellings could become critical. This could become a factor to be weighed in the consideration, he stated.

Stiles objected to the subjective nature of the questions, commenting that she would prefer clearer direction.

Pelzl asked whether the conditional use follows the home, or follows the owner, wondering how information would be conveyed across ownership changes.

Conard commented that a significant issue in terms of payment of the tax is a lack of awareness, hence the importance of information to citizens early on.

Pelzl questioned the information and permitting process, seeking assurance that an establishment would be followed from application point through any moves or changes that may occur.

Conard stated that the ordinance allows the Finance Director latitude to affect the process once the use has been granted. He suggested that this is best left up to the Finance Director, since she will have a handle on what needs to be asked of whom.

Pelzl argued that the zoning administrator should stay with the process through the administrative phase so that the permits stay up to date. She expressed her concern as the possibility of a change not being properly catalogued.

PC discussed the value of section #3 with regard to its enforceability and the general nature of the query.

Conard made an argument for the lodging tax in general, but noted that the Village does not wish to create unintended consequences, characterizing the standards as "the culmination of a thoughtful process in rolling out the lodging tax.

With regard to number (4), Conard responded to Zurbuchan's question by stating that this question attempts to bridge the gap between the right of the property owner and the interests of the community as a whole.

Zurbuchan suggested changing the limitation of occupancy in an ADU which is currently two adults, to defer to Health Department standards.

Reed noted that if PC changes this language, then the section on ADU's would have to be changed.

The group decided not to make the change.

Pelzl asked how a proprietor would prove that they would be grandfathered in to the use, asking that this be included in the code.

Conard argued that this can and properly should remain the jurisdiction of the administrative code.

In response to continued concern on the part of Pelzl, Conard explained that the zoning administrator would be in close communication with the Finance Director, and that the language permitting this is contained in the establishing ordinance.

The Clerk asked PC members whether they are agreeable to a question (#3), which may be more political in nature rather than using the language in #4 to address the same issues.

Reed responded that he sees a need to address the issue directly because of its potentially significant impact upon affordability. It may be difficult to hit the "sweet spot" between allowing a resident to afford to continue to live in the Village and allowing someone else to become a homeowner here, he opined, but stated that he liked the direct question.

Stiles agreed, stating that she appreciated the direct nature of the question.

Reed commented that he had an interest in limiting the number of days a home could be rented in a given year, and felt the current language is appropriate.

Simms concurred, arguing that the Village is small enough that uses in one neighborhood can affect the Village as a whole.

Swinger noted that she would like to see a distinction made between owner occupied rentals and those in which the owner is a non-Village resident, seeing that as an important distinction from an affordable housing as well as administrative standpoint.

Simms pointed out a clerical error in the proposed amendments.

Reed OPENED THE PUBLIC HEARING.

Leslie Shepard spoke against any regulation of transient lodging. She opined that that Planning Commission would "subjectively say" that a person who owns an affordable home would be denied the use.

Reed attempted to explain that that was not what the question under #3 meant, that it was a more overarching consideration.

Shepard spoke against regulation in general, and opined regarding why there is no affordable housing in the Village.

Swinger attempted to explain the nature of conditional use.

Pelzl attempted to explain that the use could have an impact on a neighborhood.

Shepard again opined that the use should not be regulated, that someone else should not be able to decide who can or cannot rent their home, characterizing it as micromanagement.

There being no further comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Stiles MOVED TO APPROVE THE PROPOSED AMENDMENTS TO SECTION 1262.08 (e) (6), including correction of the clerical error. Pelzl SECONDED, and the MOTION PASSED 3-2 ON A ROLL CALL VOTE, with Zurbuchan and Simms voting against.

Amend Chapter 1246.02 Table – Schedule of Uses: Educational Institution Districts – changing short-term rentals to transient guest lodging.

Swinger explained that the amendment simply changes the definition from STR to TGL in this section.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Stiles MOVED TO APPROVE THE PROPOSED AMENDMENTS TO CHAPTER 1246.02. Simms SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

Amend Chapter 1248.02 Table – Schedule of Uses: Residential Districts - changing short-term rentals to transient guest lodging in sections A; B and C.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Pelzl MOVED TO APPROVE THE PROPOSED AMENDMENTS TO CHAPTER 1248.02. Simms SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

Amend Chapter 1250.02 Table – Schedule of Uses: Business Districts – changing short-term rentals to transient guest lodging.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Simms MOVED TO APPROVE THE PROPOSED AMENDMENTS TO CHAPTER 1250.02. Zurbuchan SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

Amend Chapter 1258.01 Table – Schedule of Uses by District – changing short-term rentals to transient guest lodging.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Stiles MOVED TO APPROVE THE PROPOSED AMENDMENTS TO SECTION 1258.01. Simms SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

Amend Chapter 1284.08 Definitions: R-S – removing the definition of short-term rentals.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Stiles MOVED TO APPROVE THE PROPOSED AMENDMENTS TO CHAPTER 1284.08. Zurbuchan SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

Amend Chapter 1284.09 Definitions: T-U – adding the definition of transient guest lodging.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Zurbuchan MOVED TO APPROVE THE PROPOSED AMENDMENTS TO CHAPTER 1284.09. Stiles SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

3. **Text Amendments -The Village of Yellow Springs is applying for amendments to the planning and zoning codes for the addition of Pocket Neighborhood Developments (PNDs).**

Amend APPENDIX B – Village of Yellow Springs Recommended Trees – updating the list of recommended trees.

Swinger explained that at the September 18, 2017 meeting of Council, the second reading of the ordinances pertaining to the Pocket Neighborhood Development legislation passed. There was only one edit to the Pocket Neighborhood Developments legislation which was in the planning code in Chapter 1226.06 DESIGN STANDARDS. In section 1226.06 C. (3) the text was changed to include the words "ADA-compliant" for sidewalks and striking out the measurement of at least four feet in width. A recent update to ODOT standards for ADA compliancy is five feet, or in certain cases four feet with a five by five foot turning radius every 200 feet.

Council passed Chapter 1226.06 with this one edit to the text and with the understanding that the Planning Commission would make recommendations for Appendix B, also referenced in this Chapter. Council member Brian Housh, after taking a look at Appendix B, realized that some of the trees on this list are no longer recommended and he asked Planning Commission to review the list for possible updates to the text.

Swinger stated that she had also reached out to Wendi Van Buren, Urban Forester at the Ohio Dept. of Natural Resources and asked for her input, which is incorporated into *Appendix B – Village of Yellow Springs Recommended Trees*. She divided the trees by native and non-native, and created a third category for suggested removal of existing trees, which Nick Boutis had mentioned the Village consider for the Tree of Heaven species. Ms. Van Buren also provided a shortened list for the Planning Commission to consider (ATTACHMENT E).

Planning Commission discussed the recommendations.

Swinger explained that the appendix is meant as a guide for developers as well as for citizens seeking tree planting guidance.

Pelzl expressed strong feeling regarding the presence of Paw Paws as a possible street tree, and asked that this be left as a recommended native tree, but that it be added to the list of trees not recommended for street use.

Reed OPENED THE PUBLIC HEARING. There being no comment from those present, Reed CLOSED THE PUBLIC HEARING and CALLED THE MOTION.

Simms MOVED TO APPROVE THE CHANGES TO SECTION1258.01, INCLUDING THE ADDITION OF PAW PAW TREES AS NOT RECOMMENDED FOR STREET USE. Stiles SECONDED, and the MOTION PASSED 5-0 ON A ROLL CALL VOTE.

OLD BUSINESS

There was no Old Business.

NEW BUSINESS

There was no New Business.

AGENDA PLANNING

Swinger noted that neither the hearing regarding the CBE/Commerce Park - Final Plan Phase One Replat – Planned Unit Development (PUD) District nor the Cresco Labs Conditional Use and Site Plan Review can be heard on October 9th, because Cresco is not yet ready for a site plan review.

PC discussed possible meeting dates, finally concluding that October 23 was an acceptable second date for October if Cresco is prepared by that time. If not, potentially both Cresco hearings and the site plan review for the Miami Township Fire Department's new station would be heard on November 13th, with a 6pm start time.

ADJOURNMENT

At 8:30pm, Stiles MOVED and Pelzl SECONDED a MOTION TO ADJOURN. The MOTION PASSED 5-0 ON A VOICE VOTE.

_____

Matt Reed, Chair

_____

Attest: Judy Kintner, Clerk

Please note: These minutes are not verbatim. A DVD copy of the meeting is available at the Yellow Springs Library during regular Library hours, and in the Clerk of Council's office between 9 and 3 Monday through Friday.

PLANNING COMMISSION

MEETING DATE: Monday, November 13, 2017

STAFF REPORT: Denise Swinger, Zoning Administrator

LOCATION: Xenia Avenue between East Herman and Marshall Streets

ZONING DISTRICT: R-C, High-Density Residential District

APPLICANT: Miami Township Trustees and MSA Architects

PROPERTY OWNER: Miami Township Trustees

REQUESTED ACTION: Request for a conditional use permit, per Yellow Springs Zoning Ordinance Table 1248.02 Schedule of Uses: Residential Districts, Table 1258.01 Schedule of Uses by District, Chapter 1262 Conditional Use Requirements and a site plan review per Yellow Springs Zoning Ordinance Chapter 1268 Site Plan Review, to allow for the location and construction of a new fire station and township offices.

HEARING NOTICE*: "Fire Station – Conditional Use and Site Plan Review* *– R-C, High Density Residential District and R-B, Moderate Density Residential. The Miami Township Trustees has submitted a conditional use and site plan review application for the purpose of locating and constructing a new fire station and township offices at Xenia Avenue between Marshall and East Herman Streets."*

GREENE COUNTY PARCEL ID #'s: F19000100080030400; F19000100080030500; F19000100080030600; F19000100080030700; F19000100080030800; F19000100080030900; F19000100080031000; F19000100080031100; F19000100080031200; F19000100080031300; F19000100080031400

PROPERTY INFORMATION AND ANALYSIS:
The property consists of 11 lots sold to Miami Township by Wright State University. Located on the east side of Xenia Avenue between Marshall and East Herman Streets, it is the proposed site for Miami Township Fire-Rescue's new fire station and township offices. The property contains approximately 2.095 acres. The frontage on Xenia Avenue measures 353.95 feet. The southern side lot line measures approximately 356.51 feet, the northern side lot line measures 209 feet and the back lot line measures 323.23 feet. This location previously served as a commercial property with Wright State University Physicians operating a clinic there. The clinic was demolished around 2010.

STAFF ANALYSIS OF THE APPLICATION:
The applicant is requesting a conditional use permit to allow for the construction of a new fire station and offices for the Miami Township trustees. The Fire Department will consist of five

apparatus bays opening out onto Xenia Avenue, administrative offices, support spaces, living quarters for up to six full-time firefighters, and a training room. The Township offices will consist of an open office and a small conference room for use by the Township Trustees and their staff. The Township will use the training room for their twice a month Township Trustees meetings. The six lots abutting Xenia Avenue are located in the R-C, High Density Residential District and the five lots at the back of the property are located in R-B, Moderate Density Residential District.

"R-C," High Density Residential District. The R-C District is intended to promote a high quality mix of residential units, including multiple-family dwellings, at a density of up to 14 units per acre. Other compatible, nonresidential uses may also be permitted.

"R-B," Moderate-Density Residential District. The R-B District is intended to encompass much of the Village's existing single-family and medium-density residential neighborhoods and accommodate similarly situated new and infill development at densities up to eight units per acre. This district also permits the introduction of attached residential units and nonresidential uses that are compatible and in scale with the established neighborhood character. Land within this district will be served by public sanitary sewer and water facilities.

Table 1248.02 Schedule of Uses: Residential Districts				
Residential	***R-A***	***R-B***	***R-C***	
Public/Quasi-public				
Government offices and buildings	**C**	**C**	**C**	

Chapter 1248 – Table 1248.02 Schedule of Uses: Residential Districts and Chapter 1258 – Table 1258.01 Schedule of Uses by District allows for Government offices and buildings as a conditional use in all three residential districts.

The Zoning Code requires the Planning Commission approve all conditional uses, and consider the operational characteristics of the proposed use. Because the building is over 5,000 square feet, the Planning Commission is also required to review the site plan.

CONDITIONAL USE AND SITE PLAN REVIEW REQUIREMENTS:

Section 1248.03 Spatial Requirements.

(a) All lots and buildings shall meet the minimum area and width requirements of Table 1248.03. New lots shall not be created, except in conformance with these requirements.

Table 1248.03 Lot and Width Requirements: Residential Districts		
Zoning District	**Minimum Lot Area (Sq. Ft.)[1]**	**Minimum Lot Width (Ft.)**
R-B, Moderate-Density Residential	**6,000[2]**	**50**
R-C, High-Density Residential	**4,800[3]**	**40**
1 Public water and sanitary sewer is required for all property in these districts. 2 Two-family and attached single-family dwellings shall provide 4,500 square feet per unit. Multi-family dwellings are permitted a density up to 8 units per acre. 3 Two-family dwellings shall provide 4,000 square feet per unit. Attached single-family and multi-family dwellings are permitted a density up to 14 units per acre.		

The combined square footage of the 11 lots measures 91,258.2 square feet. The frontage on Xenia Avenue measures 353.95 feet and meets the requirements for minimum lot width.

(b) All structures and their placement on a lot shall conform to the minimum dimensional requirements listed in Table 1248.03a.

Table 1248.03a Dimensional Requirements: Residential Districts						
Zoning District	**Maximum Building Height (Ft./stories)**	**Minimum Yard Setbacks (Ft.)**				**Max. Lot Coverage (%)**
		Front	**Side**		**Rear**	
			Total	**Least**		
R-B	**35/2.5**	**20**	**15**	**5**	**20**	**40**
R-C	**35/3**	**20**	**10**	**5**	**15**	**50**
4 Average established setback shall apply, where applicable, in accordance with Section 1260.02(a).						

Maximum Building Height – **At its tallest point, the building height is 35 feet, which meets the maximum requirements for R-B and R-C, even though fire stations are exempt from this requirement per the zoning code.**

The proposed building has a front setback of 20 feet. Because the property lies between two streets, the front yard setback extends to both side yards – see **Definition - Lot line, front**. In the case of an interior lot, the line separating the lot from the street right-of-way or road easement. **Through and corner lots shall have two front lot lines.**

The side yard setback for the future expansion is twenty feet on the north lot line at Marshall Street and is 61.84 feet at the south lot line by East Herman Street. The rear lot line setback is 122.36 feet. **The setbacks for this building meet the minimum requirements of the zoning code.**

The maximum lot coverage for R-C is 50% and R-B is 40%. The total square footage of the property is 91,258.2 .These means that a maximum of 36,503.28 square feet in R-B is available to build on. The lot coverage requirement excludes parking areas. **The building, at 16,199 square feet, meets the lot coverage requirements of the zoning code.**

Chapter 1260.05 Other Provisions

Control of Heat, Glare, Fumes, Noise, Odor, Dust and Vibration. Every use shall be conducted and operated in a way that does not create a nuisance and is not dangerous by reason of heat, glare, fumes, odor, dust, noise or vibration beyond the lot on which it is located.

Chief Altman stated, *"ORC 4511.041 directs emergency vehicles to respond to emergencies with both lights AND sirens on. For emergency medical calls, call types are coded and assigned levels by our dispatchers. Calls are coded as levels Alpha, Bravo, Charlie, Delta, Echo and Omega types. We respond to all Alpha and Omega call types non-emergency (no lights or sirens); this amounts to roughly 30% of our emergency medical call volume. Department policy covers this as follows:*

307.6 NON-EMERGENCY RESPONSE AND TRAVEL

Non-emergency responses are made only to non-emergency incidents and at the discretion of the unit's OIC. Unless directed otherwise by a Department member on scene, medic units shall respond non-emergency to all Alpha and Omega level incidents (except mutual aid). Fire apparatus shall respond non-emergency to the following types of incidents. Responses can always be upgraded at the discretion of the OIC.

- *Carbon monoxide investigation with no report of illness.*
  Public utility calls, such as lines down, arcing wires, or transformer fires with no associated injury, fuel spill wash downs, entrapment or threat to structures..
- *Service calls (animal rescues, smoke removal).*
- *Outdoor smoke investigations.*
- *Move-up / cover details to other fire departments.*
- *Explosive ordinance incident stand-by.*
- *Unauthorized controlled burns with no threatened structures.*
- *Invalid assists.*

Personnel responding to the station for one of the above listed call types shall respond non-emergency. During non-emergency response and travel, MPOs shall obey all traffic control signals and signs, and all other laws and rules of the road.

When we move to our new location, I will direct our drivers to not activate their sirens (when practical and safe) until they have turned onto Xenia Avenue."

Lighting. All light fixtures shall be direct cut-off fixtures, designed to prevent light spill or trespass beyond the boundaries of the property where the fixture is located.

According to KLH Engineers, *"all general site lighting fixtures will be selected with minimal uplight. Pole-mounted fixtures will provide overall illumination for the parking areas and building aprons. Fixtures will be angled away from surrounding properties and will be equipped with lighting shields to minimize spill-light. Pathways and sidewalks on the site will be illuminated with bollards. Building-mounted lighting will supplement the pole–mounted fixtures to provide uniform site illumination and provide code-required egress lighting. The building façade will be highlighted using techniques to minimize the spill of light into the night sky."*

The site electric lighting plan is identified as Exhibit C-1.

Storm Water. When land is developed or redeveloped and/or the surface characteristics of the property change (increased impervious surfaces, site grading, etc.), these activities shall not result in additional storm water runoff flowing to adjacent properties.

A proposed storm water management swale is shown on the southeast corner of the property. The Village's engineer Mike Heintz indicated concern with the detention basin showing a large number of trees and shrubs. Although some are acceptable, too many may reduce the volume of the basin. Mr. Heintz received their storm water calculations November 9, 2017 (see Exhibit C-2) and requests Planning Commission give approval based on his final review of their storm water plan unless his findings are complete by the meeting date.

OFF-STREET PARKING AND LOADING

Section 1264.02 General Requirements

Staff recommended two sections of the zoning code for MSA Architects to consider when planning and designing the required parking for the new fire station. The uses will primarily be for office space, warehousing of the trucks and living quarters. For this reason, two sections of the parking code were used.

Table 1264.02 Parking Requirements by Use	
Use	***Number of Parking Spaces***
Offices	
Business offices or professional offices of lawyers, architects or similar professionals	1 for every 300 sq. ft. of UFA, but no less than 5 parking spaces.

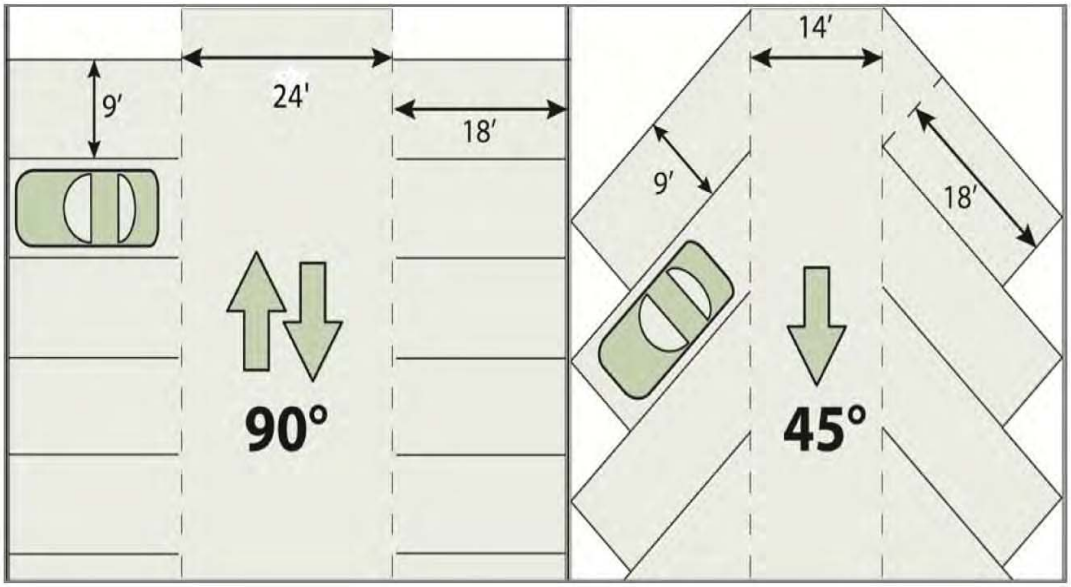
Industrial Uses	
Warehouses and storage buildings	1 per employee computed on the basis of the greatest number of persons employed at any one time during the day or night, or 1 for every 5,000 square feet of gross floor area, whichever is greater.

As a result, MSA Architects projected the following: office spaces = 1,774 sq. ft. @ 300 sq. ft. per parking space, a total of 6 spaces are required. For warehouses, MSA Architects chose 1 per employee computed on the basis of the greatest number of persons employed at any one time during the day or night. They projected 12 employees at shift change with 1 space per employee = 12 spaces. Additionally, they have provided 2 barrier free parking spaces.

With a total of 20 parking spaces, the site plan meets the zoning code parking requirements by use.

Additionally, the parking space and aisle dimensions meet the requirements of Table 1264.03 below, with a parking pattern of 75 to 90 degrees.

Table 1264.03 Dimensional Requirements (feet)					
Parking Pattern	**Parking Space**		**Maneuvering Lane Width**	**Total One Row of Parking and Maneuvering Lane**	**Total Bay (Two Rows of Parking and Maneuvering Lane)**
	Width	**Length**			
75° to 90°	9	18	24	42	60



A. Ingress and egress driveways shall be located no closer than 50 feet to the intersecting right-of-way of two streets and no closer than three feet to any adjoining property line.

B. Driveways shall not exceed 30 feet in width, as measured at the right-of-way line**.**

The driveway width of 30 feet for Marshall and East Herman Streets meets the requirements of the zoning code. The Xenia Avenue driveway exceeds the requirement with a measurement of 96.5 feet in width. A variance from the Board of Zoning Appeals will be required.

C. A maximum of one driveway shall be permitted per street frontage; provided a second driveway may be allowed where the frontage exceeds 200 feet.

D. No driveway shall be closer than 75 feet to another driveway on the same or abutting property.

E. Driveways shall be perpendicular or no more than 30 degrees from perpendicular to the curb.

F. Driveways shall not be located closer than 25 feet to any property line, unless approved as a shared driveway for two or more properties.

G. All driveways shall be constructed in accordance with the Village engineering standards.

The three driveways meet the requirements of section A, C, D, E and F of the zoning code above. Section B will require a variance hearing before the Board of Zoning Appeals.

(6) Curbing. A six-inch concrete curb, or alternative as determined by the Planning Commission, shall be provided around all sides of any parking lot of five or more spaces to protect landscaped areas, sidewalks, buildings, or adjacent property from vehicles that might otherwise extend beyond the edge of the parking lot. Curb openings are allowed for storm water drainage, as recommended by the Village Engineer. Plantings shall be set back two feet from curbs to allow for bumper overhang.

The plan calls for a six inch barrier curb. The location of the trees is set back at least two feet from the curbs.

(7) Landscaping. Off-street parking areas shall be landscaped and/or buffered, in accordance with the requirements of Chapter 1270. **See landscaping section later in this report.**

(8) Lighting. Light fixtures used to illuminate off-street parking areas shall be arranged to deflect the light away from adjoining properties and adjacent streets. Lighting fixtures in parking areas adjacent to any residentially zoned or used property shall not exceed 20 feet in height. Fixtures in all other parking areas shall not exceed 35 feet in height. Light fixtures shall be designed to achieve 90 degree luminary cutoff.

(9) Fire lanes. Fire lanes shall be designated on the site and posted with signage prior to occupancy. Vehicle circulation shall meet turning radius requirements set by the Fire Department.

(c) Barrier Free Parking in Parking Lots. Within each parking lot, signed and marked barrier free spaces shall be provided at a convenient location, in accordance with the Barrier Free Parking Space Requirements of the Ohio Department of Transportation. Barrier free spaces shall be located as close as possible to building entrances.

Two barrier free parking spaces are provided for. Sidewalks shown are six feet wide.

Section 1264.04 Off-Street Loading Requirements

(a) Uses Requiring Loading Area. On the same premises with every building, structure or part thereof, erected and occupied for manufacturing, storage, warehouse, retails sales, consumer services or other uses similarly involving the receipt or distribution of vehicles, materials or merchandise, there shall be provided and maintained on the lot adequate space for standing, loading and unloading services in order to avoid undue interference with public use of the streets, alleys and parking spaces. This provision shall not apply to uses in the B-1 District.

(b) Loading Area Requirements. Loading and unloading spaces shall be paved and, unless otherwise adequately provided for, shall be ten feet by 50 feet, with 15-foot height clearance, according to the following schedule:

Table 1264.04 Minimum Off-Street Loading Requirements	
Building Net GFA	***Minimum Truck Loading Spaces***
1,401—20,000 sq. ft.	1 space

(c) Orientation of Overhead Doors. Overhead doors for truck loading areas shall not face a public right-of-way and shall be screened to not be visible from a public street or an adjacent residential district.

The fire station driveway entrance off Xenia Avenue will be for the purpose of ingress and egress of fire trucks and the loading and unloading of equipment. There is also ample space for truck loading and unloading at the rear of the building. Staff requests an exemption to section 1264.04 (c) regarding the orientation of overhead doors.

Section 1266 Signs

The site plan shows a proposed monument sign for the new fire station at the southwest corner of Xenia Avenue and East Herman Street, and a wall sign on the building facing Xenia Avenue. This will require an application for a sign permit and will be processed separately through the zoning office at a future time.

Section 1268.05 Site Plan Requirements

The site plan submitted by MSA Architects shows the Zoning Code's General Information requirements (see Exhibit A – Legal Description), the Existing Conditions requirements, the Engineering requirements, Building Details and the Proposed Development Requirements, except for exterior mechanicals which they indicated in a letter (Exhibit B) ***will be provided on the flat roof portion of the building, completely hidden by parapet walls*****,**

and *a generator* which *will be located on the ground and screened by a wall similar in appearance to the walls of the building.* The site plan is identified as Exhibit C.

Section 1270.02 Greenbelts and Parking Lot Landscaping

(a) Greenbelts Required. Greenbelts and landscaping shall be required in the following situations, except for parking areas within the B-1, Central Business District.

(1) Along the street frontage, between the right-of-way line and the parking lot of any parking lot containing four or more spaces;

(2) Within any required parking setback area; and

(3) Within the interior of any parking lot containing ten spaces or more.

(b) Greenbelt Standards for Front Setbacks. Greenbelts shall meet the requirements of this chapter.

(1) At a minimum, a required greenbelt shall contain one canopy tree, plus two additional canopy or understory trees for each 50 feet of road frontage.

Marshall Street – 209 LF/50 = 4.18 or 4 Canopy and combination of 4 canopy or 8 understory trees. As shown, 2 existing canopy trees with 3 more proposed. As shown, 1 existing understory tree with 5 more proposed.

Xenia Avenue – 353.95 LF/50 = 7.08 or 7 canopy and combination of 7 canopy or 14 understory trees required. As shown, 2 existing canopy trees and 2 existing understory trees. No additional trees will be planted due to the required sightlines for emergency vehicles.

East Herman Street – 356.51 LF/50 = 7.13 or 7 canopy and combination of 7 canopy or 14 understory trees required. As shown, 2 existing canopy trees and 7 proposed canopy trees. As shown, 10 understory trees proposed.

(c) Parking Lot Landscaping. Where landscaping is required within parking lots, it shall meet the following requirements:

(1) One tree for every ten parking spaces shall be planted within the parking lot. Trees shall be canopy species. While drought tolerant native species are preferred, other species may be planted within parking areas if approved by the Zoning Administrator or Planning Commission, as applicable.

Parking Lot Requirement – 1 canopy tree per 10 spaces – 20 spaces = 2 canopy trees required. As shown, 3 canopy trees.

RECOMMENDATION

Staff recommends the Planning Commission review the information provided and any additional information available at the meeting, and consider:

- The expansion is in conformance with goals of the Village's 2010 Comprehensive Plan and the Vision: Yellow Springs and Miami Township visioning plan.

- The expansion will not be detrimental to the health, safety and welfare of the village's residents.
- The expansion is adequately served by essential public facilities.
- The expansion is compatible with the surrounding character of the general vicinity.
- The expansion will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.
- The expansion will not block sight lines.
- The proposal as presented complies with most of the requirements of the Village's Zoning Code.

Utilities staff have reviewed the utility plans and have approved the site plan drawings.

Staff recommends **APPROVAL** of the conditional use and site plan review for the new Miami Township fire station and Miami Township offices, allowing for the overhead doors facing Xenia Avenue, and with the following conditions, 1) an approved storm water management plan by the Village's engineer, 2) a replat of the property reducing the 11 lots to one, and 3) a BZA hearing for a variance to the driveway width.

If you have any questions or if I can be of assistance please feel free to contact me at (937) 767-1702 or email at dswinger@vil.yellowsprings.oh.us.

THE KLEINGERS GROUP

CINCINNATI
COLUMBUS
DAYTON

6305 Centre Park Drive
West Chester, OH 45069
phone 513.779.7851
fax 513.779.7852
www.kleingers.com

October 11, 2017

Legal Description
2.095 Acres-Rezone

Situated in Section 19, Town 4, Range 8, M.R.S., Village of Yellow Springs, Greene County, Ohio and being all of the lands conveyed to The Miami Township Board of Trustees in Instrument No. 2017-006874 of the Green County, Ohio Recorder's Office, the boundary of which being more particularly described as follows:

Beginning at the southwest corner of Lot 604 of Williams 1st Addition to Yellow Springs as recorded in P.C. 31 Pg 244B, said point being in the north right of way line of Herman Street;

Thence along said north right of way line, N89°45'54"W a distance of 356.51 feet to the intersection of said north right of way line with the east right of way line of Xenia Avenue (AKA U.S. 68);

Thence along said east right of way line, N24°37'14"E a distance of 353.95 feet to the intersection of said east right of way line with the south right of way line of Marshall Street;

Thence along said south right of way line, N90°00'00"E a distance of 209.00 feet to the intersection of said south right of way line with the west line of Lot 592 of the aforementioned Williams 1st Addition to Yellow Springs;

Thence along said west line and along the west line of the aforementioned Lot 604, S00°00'31"E a distance of 323.23 feet to the point of beginning.

Containing 2.095 acres, more or less and being subject to easements, restrictions and rights of way of record.

MSA Architects

October 12, 2017

Denise Swinger
Planning and Zoning Administrator
The John Bryan Community Center
100 Dayton Street
Yellow Springs, Ohio 45387

Re: Miami Township Fire-Rescue
MSA No. 17158.00

Dear Denise:

The new building being proposed for the east side of Xenia Avenue, between Marshall and Herman Streets will be a new station for Miami Township Fire-Rescue and will also contain offices for Miami Township. The Fire Department component will consist of five apparatus bays opening out onto Xenia Avenue, administrative offices, support spaces, living quarters for up to six full-time firefighters, and a training room. The Township component will consist of an open office and a small conference room for use by the Township Trustees and their staff. The Township will be able to use the training room for Township Trustee Meetings twice a month.

The building will be approximately 16,199 gross square feet (15,122 net square feet).

Per our phone conversation on September 22, 2017, we calculated our parking spaces as follows:

Offices: 1,774 s.f. @ 300 s.f. per space = 6 spaces
Warehouse: 12 employees at shift change @ 1 space per employee = 12 spaces
Total spaces required: 18

Per the zoning code, we can provide up to 20% more spaces than required by zoning. We are therefore providing a total of twenty spaces, two of which are for handicap parking. By providing these additional spaces, we can provide the required spaces without making someone park illegally in a handicap space.

Exterior mechanical equipment will be provided on the flat roof portion of the building, completely hidden by parapet walls. A generator will be located on the ground and will be screened by a wall similar in appearance to the walls of the building.

If you have any questions or need additional information, please let me know.

Sincerely,

MSA Architects
Dan Montgomery, AIA, LEED AP
Associate

N:\Projects\2017\17-1\17158.00 Miami Township Fire HQ & Township Admins Building\doc\code permit\Zoning\le17101217swinger.docx

CINCINNATI
316 West Fourth Street
Floor 6
Cincinnati, Ohio 45202
T 513.241.5666
F 513.241.0978

COLUMBUS
14 East Gay Street
Suite 300
Columbus, Ohio 43215
T 614.300.3357
F 866.545.8073

Toll Free 855.241.5666
www.msaarch.com

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

ZONING SUBMITTAL - 10/12/17

OWNER:

MIAMI TOWNSHIP
225 CORRY STREET
YELLOW SPRINGS, OH
45387
(T): 937-767-2460

ARCHITECT:

MSA ARCHITECTS
316 W. FOURTH STREET
6TH FLOOR
CINCINNATI, OH 45202
(T): 513 241-5666
www.msaarch.com

STRUCTURAL ENGINEER:

SCHAEFER
10411 MEDALLION DR, SUITE 121
CINCINNATI, OH 45241
(T): 513-542-3300

MEP ENGINEERS:

KLH ENGINEERS
1538 ALEXANDRIA PIKE, SUITE 11
FOR THOMAS, KY 41075
(T): 859-442-8050

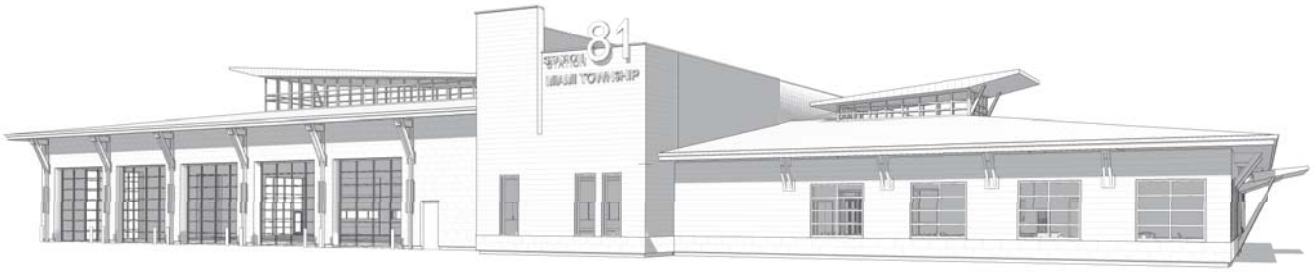
CIVIL ENGINEERS:

KLEINGERS GROUP
6305 CENTRE PARK DRIVE
WEST CHESTER, OH 45069
(T): 513-779-7852

LANDSCAPE ARCHITECT:

YELLOW SPRINGS DESIGN
830 XENIA AVENUE
YELLOW SPRINGS, OH 45387
(T): 937-767-8199

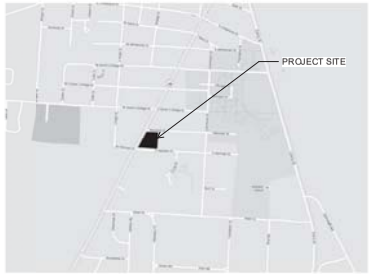
CODE INFORMATION



SHEET INDEX

SHEET NO.	SHEET NAME
GENERAL	
G0.0	COVER SHEET
CIVIL	
C1.0	SURVEY BASEMAP
C2.0	EXISTING CONDITIONS
C3.0	EXISTING CONDITIONS
C4.0	PROPOSED FEATURES
C5.0	GRADING AND UTILITIES PLAN
LANDSCAPE	
L1.0	SITE LANDSCAPE PLAN
ARCHITECTURE	
A2.0	FIRST FLOOR CONSTRUCTION PLAN
A3.0	EXTERIOR ELEVATIONS

VICINITY PLAN



MSA Architects
CINCINNATI
316 West Fourth St.
Floor 6
Cincinnati, OH 45202
513.241.5666
COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.300.3367
Toll Free 800.241.5666
www.msaarch.com
AIA Ohio
GOLD MEDAL FIRM

PRELIMINARY
NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81
Miami Township Greene County
1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THIS DRAWING AND THE DESIGN CONCEPTS REPRESENTED, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF MICHAEL SCHUTER ASSOCIATES INC. AND MAY NOT BE USED, REPRODUCED, OR COPIED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT PRIOR WRITTEN PERMISSION OF MICHAEL SCHUTER ASSOCIATES INC.
Copyright Michael Schuter Associates, Inc. dba MSA Architects All Rights Reserved
MSA Sport is a division of MSA Architects

DATE	ISSUED
10/12/17	ZONING

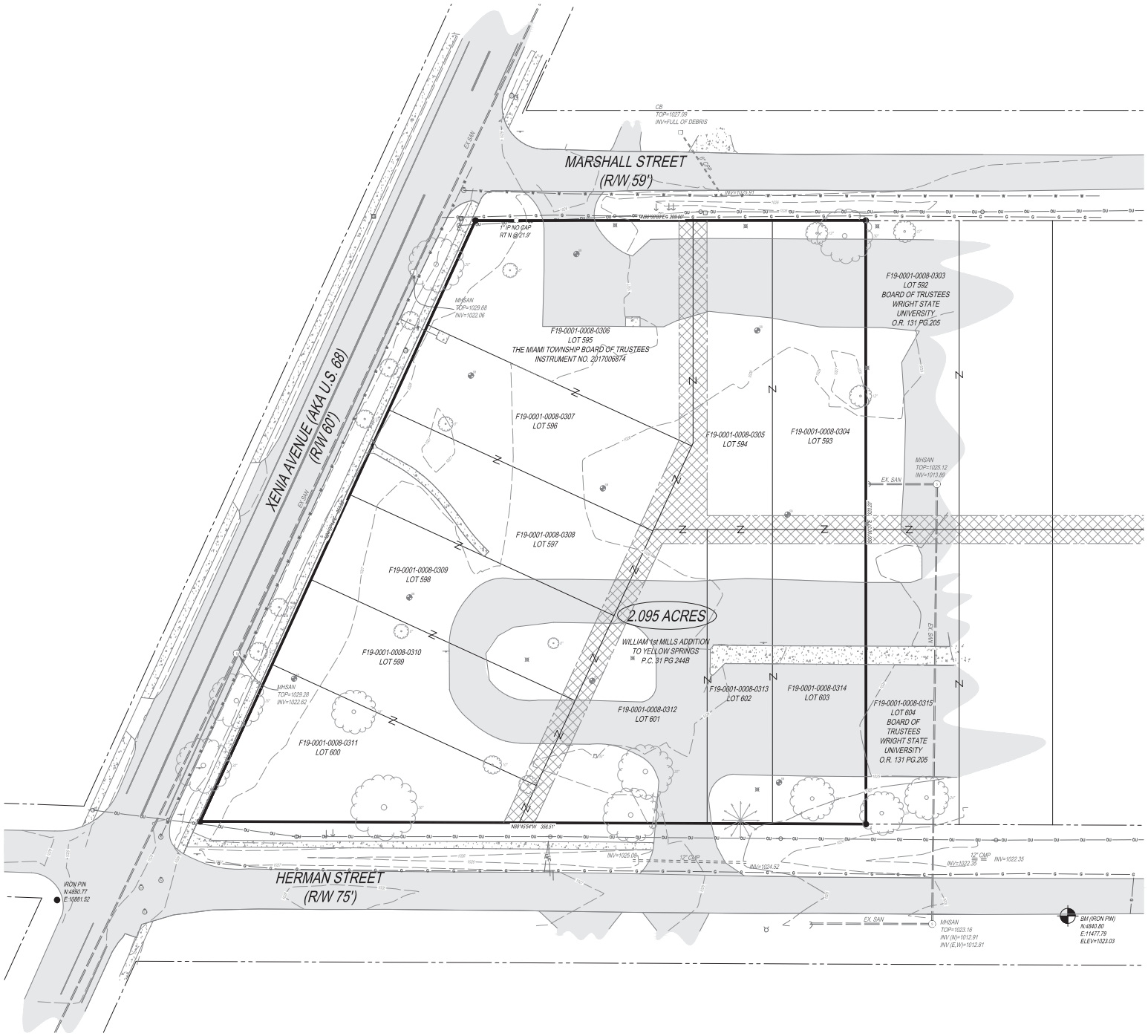
NO.	DATE	REVISION

PROJECT NO.
17158.00

DRAWING TITLE
COVER SHEET

G0.0

10/16/2017 3:12:41 PM C:\Users\kleheckia\Documents\17158_MIAMI FIRE_v17 Central_kleheckia.rvt



LEGEND

- BENCHMARK
- CROSS NOTCH FOUND
- IRON PIN FOUND
- SANITARY MANHOLE
- CLEANOUT
- STORM MANHOLE
- CATCH BASIN
- INLET
- FLOOR DRAIN
- YARD DRAIN
- DOWNSPOUT
- GAS VALVE
- UTILITY POLE
- GUY WIRE
- LIGHT POLE
- LAMP
- PULL BOX
- ELECTRIC METER
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- PHONE BOX
- POST INDICATOR VALVE
- FIRE DEPARTMENT CONNECTION
- WATER VALVE
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- WATER METER
- WATER MANHOLE
- WATER SPIGOT
- MAIL BOX
- PARKING METER
- HANDICAP
- SINGLE POST SIGN
- DOUBLE POST SIGN
- X — FENCE LINE
- W — WATER LINE (PER RECORDS)
- G — GAS LINE (PER RECORDS)
- UE — UNDERGROUND ELECTRIC (PER RECORDS)
- UU — UNDERGROUND UTILITY
- E — OVERHEAD ELECTRIC
- OU — OVERHEAD UTILITIES
- BUSH LINE
- STORM SEWER
- SANITARY SEWER
- UT — UNDERGROUND TELEPHONE
- HARDWOOD TREE
- SOFTWOOD TREE
- BUSH
- CONCRETE
- ASPHALT
- LANDSCAPE
- GRAVEL
- PAVERS
- VACATED ALLEY

STATE OF OHIO
CRAIG A. HONKOMP
58008
REGISTERED
PROFESSIONAL ENGINEER

0 10 20 40

MSA Architects

CINCINNATI
310 West Fourth St.
Floor 6
Cincinnati, OH 45202
513.241.3666

COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.300.3567

Toll Free 800.241.3666
www.msasarch.com

AIA Ohio
GOLD MEDAL FIRM

PRELIMINARY
NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THIS DRAWING AND THE DESIGN CONCEPTS THEREIN REPRESENTED, AND THEREON STAMPED, ARE THE SOLE PROPERTY OF MICHAEL SCHUSTER ASSOCIATES INC. AND MSA ARCHITECTS, AND SHALL NOT BE COPIED IN WHOLE OR PART, FOR ANY PURPOSE WHATSOEVER WITHOUT WRITTEN AUTHORIZATION OF MICHAEL SCHUSTER ASSOCIATES INC.
Copyright © 2016 Michael Schuster Associates, Inc. dba MSA Architects. All Rights Reserved.
MSA Sport is a division of MSA Architects

DATE	ISSUED

NO.	DATE	REVISION

PROJECT NO.
17158.00

DRAWING TITLE
SURVEY BASEMAP

C1.0

EXISTING CONDITIONS NOTES:

1. THIS PLAN SHOWS EXISTING CONDITIONS WITHIN 300' OF THE PROPOSED DEVELOPMENT.

MSA Architects

CINCINNATI
310 West Fourth St.
Floor 6
Cincinnati, OH 45202
513.241.3666

COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.365.2587

Toll Free 800.241.3666
www.msaarch.com

AIA Ohio
GOLD MEDAL FIRM

PRELIMINARY
NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THIS DRAWING AND THE DESIGN CONCEPTS THEREIN REPRESENTED AND DESCRIBED HEREIN, ARE THE SOLE PROPERTY OF MONEL SCHUSTER ASSOCIATES INC. AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION OF MONEL SCHUSTER ASSOCIATES INC.
© Copyright 2013 Monel Schuster Associates, Inc. dba MSA Architects. All Rights Reserved.
MSA Sport is a division of MSA Architects

DATE	ISSUED

NO.	DATE	REVISION

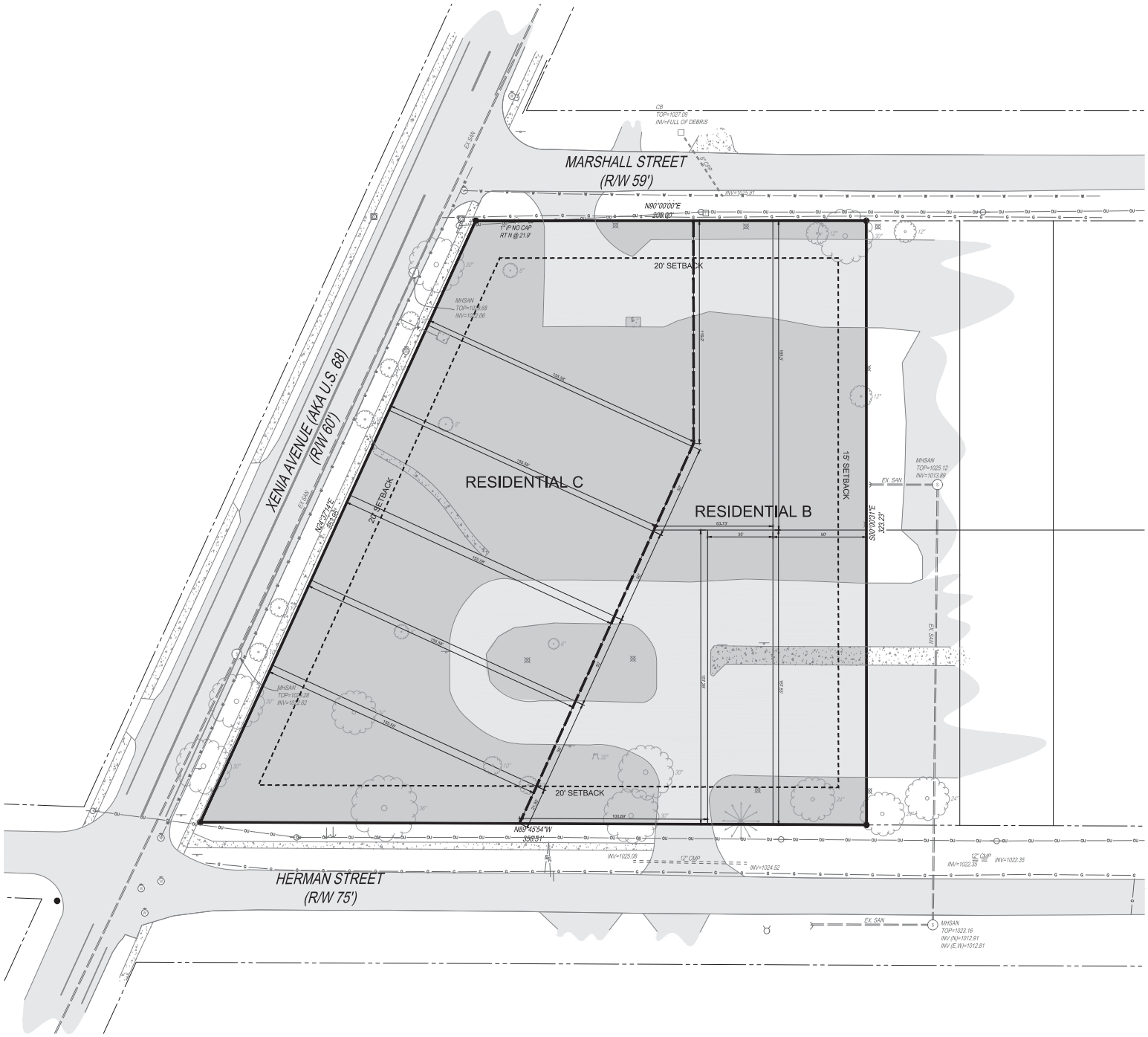
PROJECT NO.
17158.00

DRAWING TITLE
EXISTING CONDITIONS

STATE OF OHIO
CRAIG A. HONKOMP
58008
REGISTERED
PROFESSIONAL ENGINEER

0 20 40 80

C2.0



MSA Architects

CINCINNATI
310 West Fourth St.
Floor 6
Cincinnati, OH 45202
513.241.3666

COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.300.3567

Toll Free 800.241.3666

www.msaarch.com

AIA Ohio
GOLD MEDAL FIRM

PRELIMINARY
NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THE DRAWINGS AND THE DESIGN CONCEPTS THEREIN REPRESENTED AND DESCRIBED HEREIN, ARE THE SOLE PROPERTY OF MICHAEL SCHUSTER ASSOCIATES INC. AND MSA ARCHITECTS. THEY ARE NOT TO BE COPIED IN WHOLE OR PART, FOR ANY PURPOSE WHATSOEVER WITHOUT PRIOR WRITTEN AUTHORIZATION OF MICHAEL SCHUSTER ASSOCIATES INC.
Copyright © 2017 Michael Schuster Associates, Inc. dba MSA Architects. All Rights Reserved.
MSA Quad is a division of MSA Architects

DATE	ISSUED

NO.	DATE	REVISION

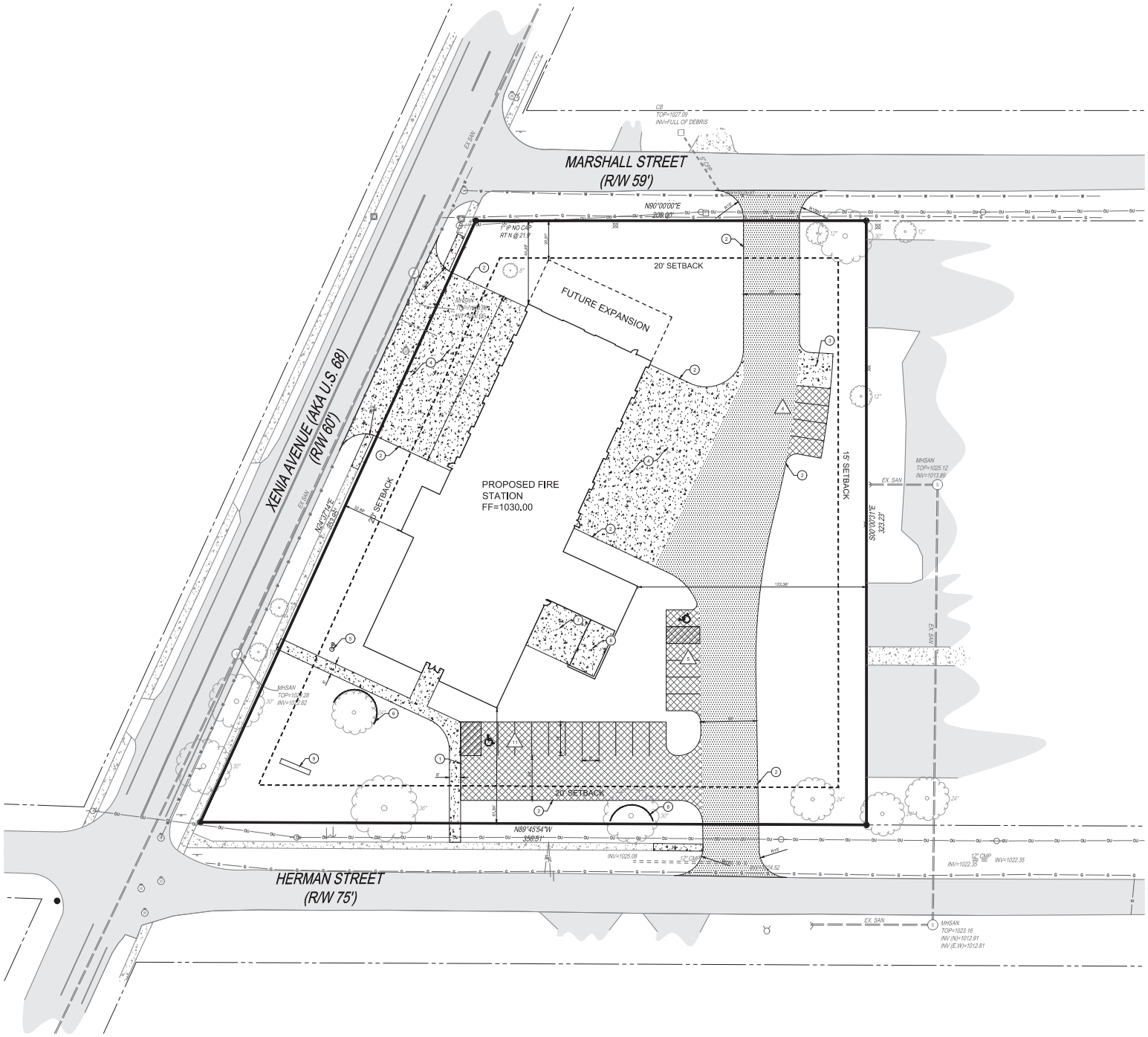
PROJECT NO.
17158.00

DRAWING TITLE
EXISTING CONDITIONS

STATE OF OHIO
CRAIG A. HONKOMP
58008
REGISTERED
PROFESSIONAL ENGINEER

0 10 20 40

C3.0



PROPOSED FEATURES KEY NOTES:

1. PROPOSED INTEGRAL WALK AND CURB.
2. PROPOSED 6" BARRIER CURB.
3. PROPOSED DUMPSTER PAD.
4. HEAVY DUTY CONCRETE PAVEMENT.
5. PROPOSED FLAG POLE.
6. PROPOSED TREE WELL.
7. PATIO AREA.
8. GENERATOR PAD.
9. FUTURE MONUMENT SIGN.

PROPOSED FEATURES NOTES:

1. TOTAL OF 20 PARKING SPACES PROVIDED, INCLUDING 2 HANDICAP ACCESSIBLE SPACES.
2. SEE SHEET C1.0 FOR PROPOSED PARCEL AND SIZE OF LOT.

PROPOSED FEATURES PLAN LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT, SEE KEYNOTE 4.
- 5" CONCRETE WALK
- INDICATES PARKING STALL COUNT

0 10 20 40

MSA Architects
CINCINNATI
310 West Fourth St.
Floor 6
Cincinnati, OH 45202
513.241.3666
COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.300.3567
Toll Free 800.241.3666
www.msasarch.com
AIA Ohio
GOLD MEDAL FIRM

PRELIMINARY
NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81

Miami Township Greene County
1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THE DRAWINGS AND THE DESIGN CONCEPTS THEREIN REPRESENTED AND DESCRIBED HEREIN, ARE THE SOLE PROPERTY OF MICHAEL SCHUSTER ASSOCIATES INC. AND MSA ARCHITECTS AND MAY NOT BE COPIED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION OF MICHAEL SCHUSTER ASSOCIATES INC.
Copyright © Michael Schuster Associates, Inc. dba MSA Architects All Rights Reserved
MSA Sport is a division of MSA Architects

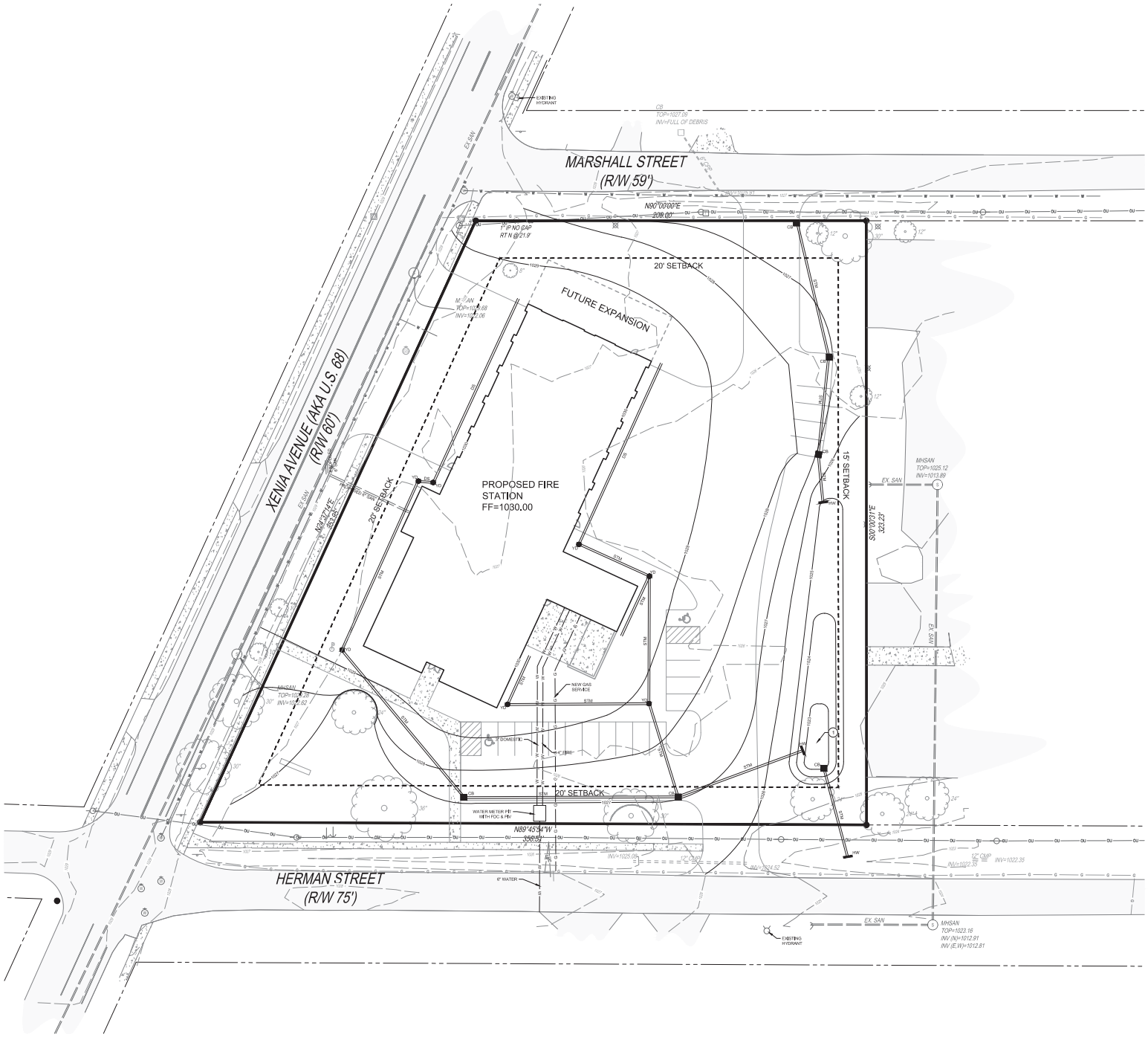
DATE	ISSUED

NO.	DATE	REVISION

PROJECT NO.
17158.00

DRAWING TITLE
PROPOSED FEATURES

C4.0



GRADING AND UTILITY PLAN KEY NOTES:

1. PROPOSED STORM WATER MANAGEMENT BASIN-<SWALE>.

MSA Architects

CINCINNATI
316 West Fourth St.
Floor 6
Cincinnati, OH 45202
513.241.3660

COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.300.3567

Toll Free 800.241.3696
www.msasarch.com

AIA Ohio
GOLD MEDAL FIRM

PRELIMINARY
NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THE DRAWINGS AND THE DESIGN CONCEPTS THEREIN REPRESENTED BY THESE DRAWINGS, ARE THE SOLE PROPERTY OF MICHAEL SCHUSTER ASSOCIATES INC. AND MSA ARCHITECTS AND MAY NOT BE COPIED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION OF MICHAEL SCHUSTER ASSOCIATES INC.
Copyright © Michael Schuster Associates, Inc. dba MSA Architects. All Rights Reserved.
MSA Quad is a division of MSA Architects

DATE	ISSUED

NO.	DATE	REVISION

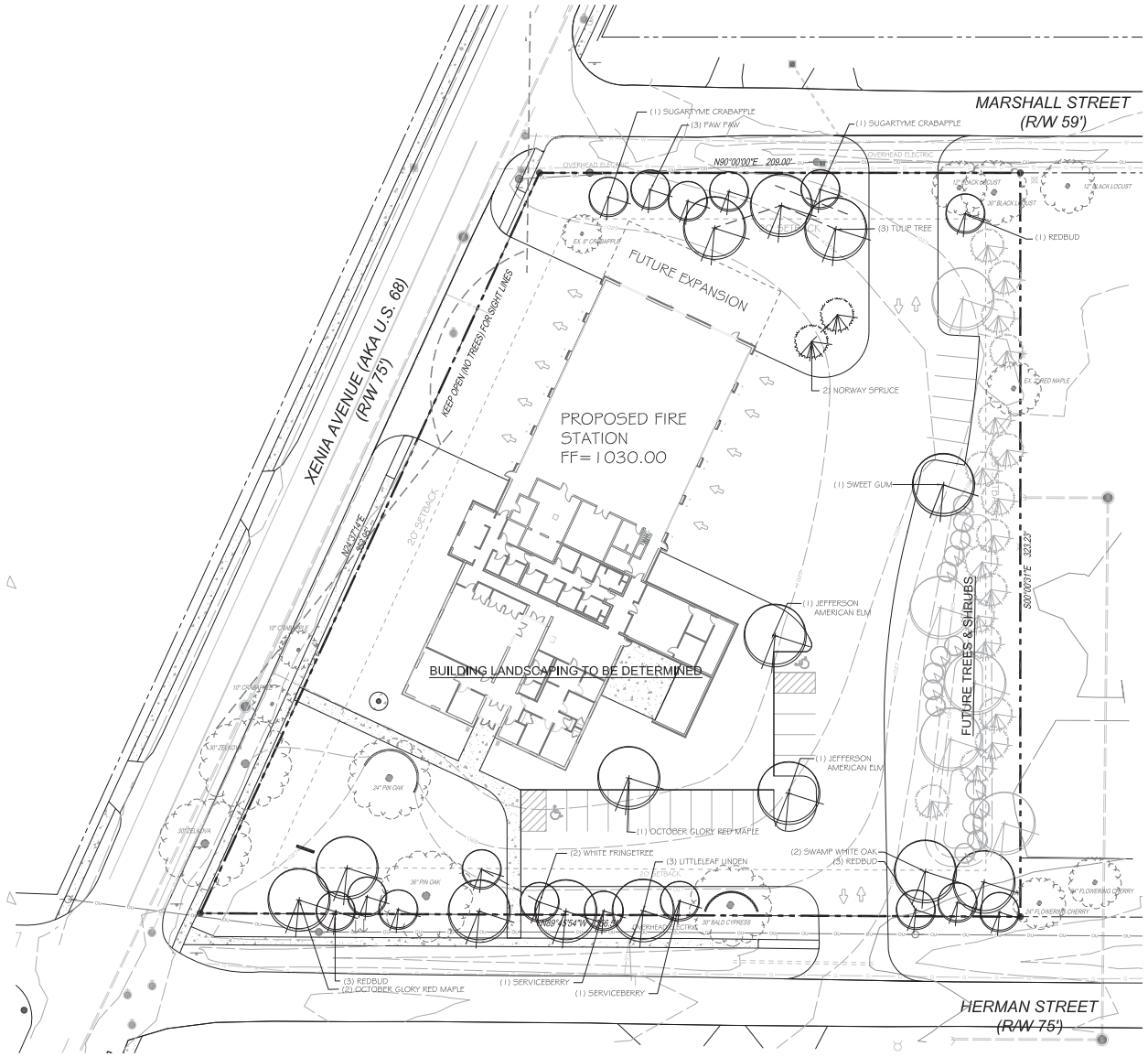
PROJECT NO.
17158.00

DRAWING TITLE
GRADING AND UTILITIES PLAN

STATE OF OHIO
CRAIG A. HONKOMP
58008
REGISTERED
PROFESSIONAL ENGINEER

0 10 20 40

C5.0



SITE LANDSCAPE PLAN

SCALE: 1" = 20'

NORTH

20 0 20 40

GRAPHIC SCALE (IN FEET)

LANDSCAPE REQUIREMENTS:

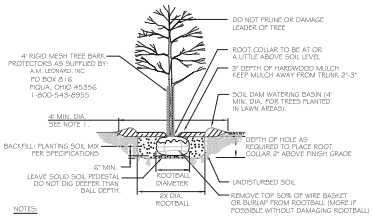
1. DIAMETERS OF PLANT MATERIALS AS DRAWN ARE REPRESENTATIVE OF PLANTS AT OR NEAR MATURITY RATHER THAN AT INITIAL PLANTING.
2. THE PLANT LIST IS INTENDED AS A GUIDE FOR THE LANDSCAPE CONTRACTOR. IN THE EVENT OF DISCREPANCY BETWEEN THE NUMBER OF PLANTS ON THE PLANT LIST AND ON THE DRAWING, THE GREATER NUMBER SHALL APPLY.
3. ADJUSTMENTS IN LOCATIONS OF PLANT MATERIALS MAY BE NECESSARY DUE TO NEW OR EXISTING UTILITIES OR SITE OBSTRUCTIONS. ADVISE ARCHITECT'S REPRESENTATIVE BEFORE ADJUSTMENTS ARE MADE.
4. BACKFILL ALL TREES WITH BACKFILL MIX OF ONE PART COMPOST TO THREE PARTS TOPSOIL.
5. MULCH TREES WITH MIN. 3" DEPTH OF SHREDDED HARDWOOD MULCH.
6. SEED ALL LAWN DISTURBED AREAS WITHIN PROJECT LIMITS AS NOTED ON CIVIL DRAWINGS; INCLUDING OUT TO PAVEMENT EDGES. REFER TO CIVIL DRAWINGS AND VERIFY EXTENT WITH PROJECT ARCHITECT'S REPRESENTATIVE.
7. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE-YEAR FROM DATE OF OF ACCEPTANCE. PRIOR TO END OF WARRANTY PERIOD CONTRACTOR SHALL REPLACE ALL TREES, SHRUBS OR PLANTINGS NOT ALIVE OR IN A HEALTHY GROWING CONDITION.

SITE PLANT MATERIALS LIST

QTY	CANOPY TREES	MIN. INSTALLED SIZE
3	OCTOBER GLORY RED MAPLE - Acer rubrum 'October Glory'*	1-1/2" cal. B/B
1	SWEETGUM - Liquidabar styraciflua*	1-1/2" cal. B/B
3	TULIP TREE - Linodendron tulipifera*	1-1/2" cal. B/B
2	SWAMP WHITE OAK - Quercus bicolor*	1-1/2" cal. B/B
3	LITTLE LEAF LINDEN - Tilia cordata 'Greenspire'*	1-1/2" cal. B/B
2	JEFFERSON AMERICAN ELM - Ulmus americana 'Jefferson'*	1-1/2" cal. B/B
	EVERGREEN TREES	
2	NORWAY SPRUCE - Picea abies	5' ht. B/B
	UNDERSTORY TREES	
2	SERVICEBERRY - Amelanchier laevis *	1-1/2" cal. B/B
3	PAW PAW - Asimina triloba*	1-1/2" cal. B/B
7	REDBUD - Cercis canadensis*	5' ht. B/B (Clump Form)
2	WHITE FRINGETREE - Chionanthus virginicus*	5' ht. B/B (Bush Form)
2	SUGAR TYME CRABAPPLE - Malus x 'Sugar Tyme'	1-1/2" cal. B/B

*DENOTES OHIO (LOCAL) NATIVE PLANTS

PLANT INSTALLATION DETAILS

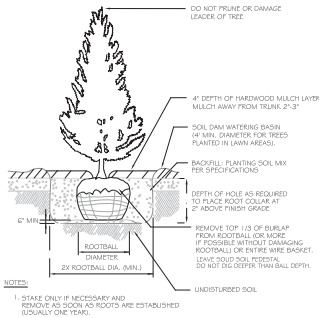


NOTES:

1. INDIVIDUAL TREES IN LAWN AREAS SHALL RECEIVE A 4' MINIMUM DIAMETER MULCHED CIRCLE
2. STAKE AND WRAP ONLY IF NECESSARY AND REMOVE AS SOON AS ROOTS ARE ESTABLISHED (USUALLY ONE YEAR).

SHADE TREE PLANTING DETAIL

NTS



NOTES:

1. STAKE ONLY IF NECESSARY AND REMOVE AS SOON AS ROOTS ARE ESTABLISHED (USUALLY ONE YEAR).

EVERGREEN TREE PLANTING DETAIL

NTS

LANDSCAPE SITE DATA:

LANDSCAPING ADJACENT TO PUBLIC STREET

REQUIRED: 1 CANOPY TREE & 2 CANOPY or UNDERSTORY TREES PER 50 LF OF FRONTAGE

MARSHALL STREET

209.00 LF/50 = 4.18 OR 4 CANOPY & COMBINATION OF 4 CANOPY OR & UNDERSTORY TREES REQUIRED

AS SHOWN: 2 EXISTING CANOPY TREES
4 PROPOSED CANOPY TREES
6 CANOPY TREES

AS SHOWN: 1 EXISTING UNDERSTORY TREES
4 PROPOSED UNDERSTORY TREES
6 UNDERSTORY TREES

XENIA AVE.

333.95 LF/50 = 7.08 OR 7 CANOPY & COMBINATION OF 7 CANOPY OR 14 UNDERSTORY TREES REQUIRED

AS SHOWN: 2 EXISTING CANOPY TREES

AS SHOWN: 2 EXISTING UNDERSTORY TREES

NO ADDITIONAL TREE DUE TO REQUIRED SIGHTLINES FOR EMERGENCY VEHICLES

HERMAN STREET

356.91 LF/50 = 7.13 OR 7 CANOPY & COMBINATION OF 7 CANOPY OR 14 UNDERSTORY TREES REQUIRED

AS SHOWN: 2 EXISTING CANOPY TREES
7 PROPOSED CANOPY TREES
9 CANOPY TREES

AS SHOWN:
10 PROPOSED UNDERSTORY TREES

PARKING LOT

REQUIRED: 1 CANOPY TREE PER 10 SPACES

22 SPACES/10 = 2.2 OR 3 TREES REQUIRED
AS SHOWN: 3 CANOPY TREES

MSA Architects

CINCINNATI
310 West Fourth St.
Floor 6
Cincinnati, OH 45202
513.241.3888

COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.826.3267

Toll Free 800.241.3888
www.msaarch.com

AIA Ohio
GOLD MEDAL FIRM

STATE OF OHIO
ROGER E. BEAL
443
REGISTERED
LANDSCAPE ARCHITECT

NAME: ROGER E. BEAL
REGISTRATION NO: LA.0.100433
EXPIRATION DATE: 12/31/16

LANDSCAPE ARCHITECT:

YELLOW SPRINGS DESIGN
PO BOX 472
YELLOW SPRINGS, OHIO 45387
VOICE937.767.8199
yellowspringsdesign@bizoh.rr.com

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THIS DRAWING AND THE DESIGN CONCEPTS EXPRESSED HEREIN ARE THE SOLE PROPERTY OF MOHME, SCHUSTER ASSOCIATES INC. AND MAY NOT BE USED, REPRODUCED OR COPIED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF MOHME, SCHUSTER ASSOCIATES INC.
Copyright © 2014 Schuster Associates, Inc. dba MSA Architects All Rights Reserved
MSA Sports is a division of MSA Architects

DATE	ISSUED

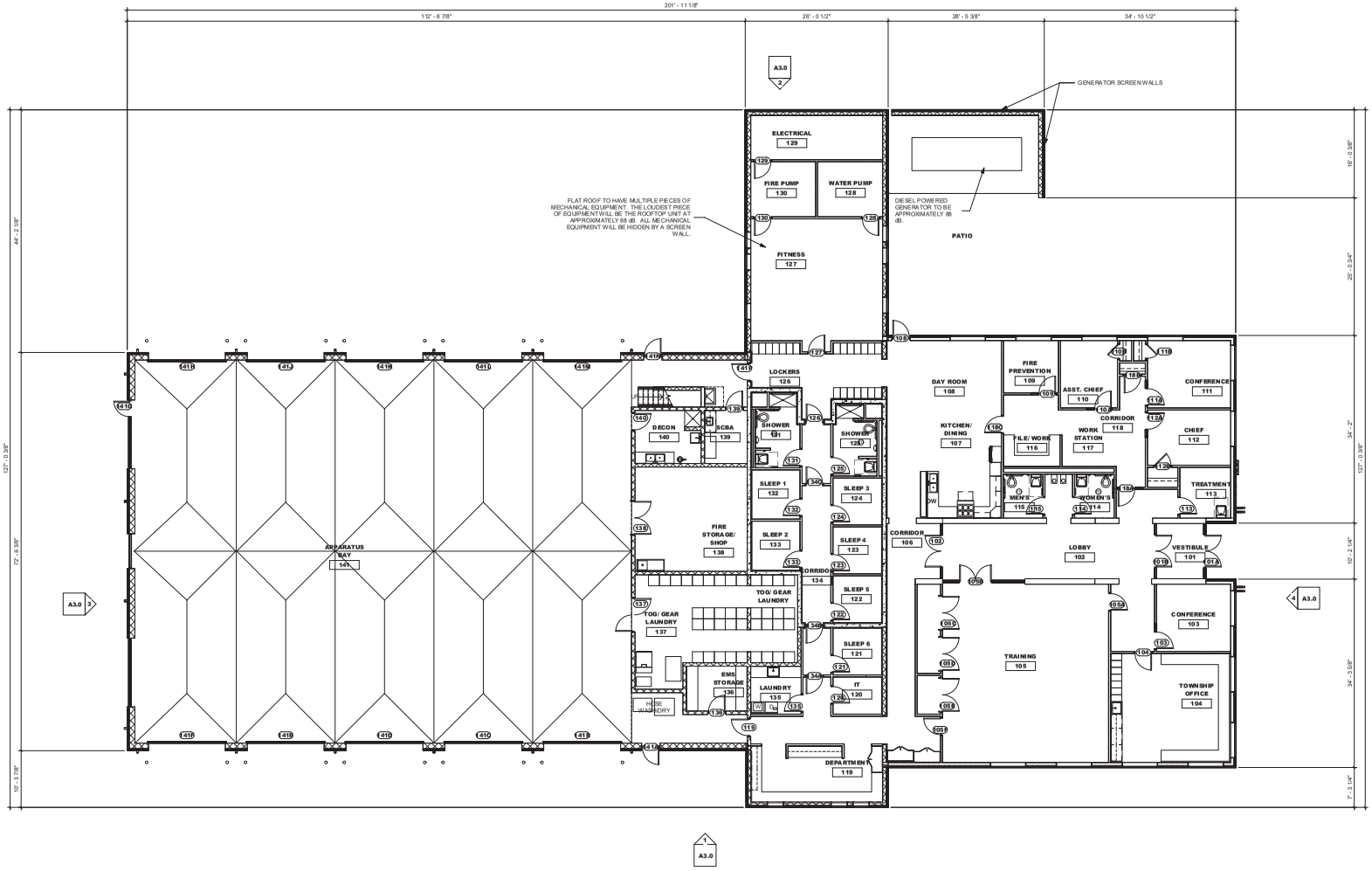
NO.	DATE	REVISION

PROJECT NO.
17158.00

DRAWING TITLE

SITE LANDSCAPE PLAN

L-1.0



6 SLEEP ROOMS OF SINGLE OCCUPANCY

GROSS FLOOR AREA: 16,199 SF
NET FLOOR AREA: 15,122 SF

1 A2.0 FIRST FLOOR CONSTRUCTION PLAN

1/8" = 1'-0"

10/16/2017 3:15:16 PM C:\Users\kehecka\Documents\17158_MIAMI FIRE_v17 Central_kehecka.rvt

MSA Architects

CINCINNATI
216 West Fourth St.
Floor 5
Cincinnati, OH 45202
513.241.5666

COLUMBUS
14 East Gay St.
Suite 300
Columbus, OH 43215
614.300.5667

Toll Free 800.241.5666
www.msasarch.com

AIA Ohio GOLD MEDAL FIRM

PRELIMINARY NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THIS DRAWING AND THE DESIGN CONCEPTS REPRESENTED, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF MICHAEL SCHUTER ASSOCIATES INC. AND MAY NOT BE USED, REPRODUCED, OR COPIED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT PRIOR WRITTEN PERMISSION OF MICHAEL SCHUTER ASSOCIATES INC.
Copyright Michael Schuter Associates, Inc. dba MSA Architects All Rights Reserved
MSA Sport is a division of MSA Architects

DATE	ISSUED
10/12/17	ZONING

NO.	DATE	REVISION

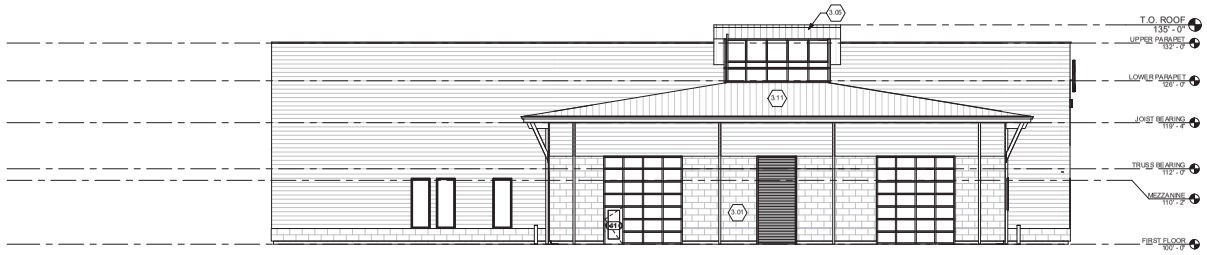
PROJECT NO. 17158.00

DRAWING TITLE
FIRST FLOOR CONSTRUCTION PLAN

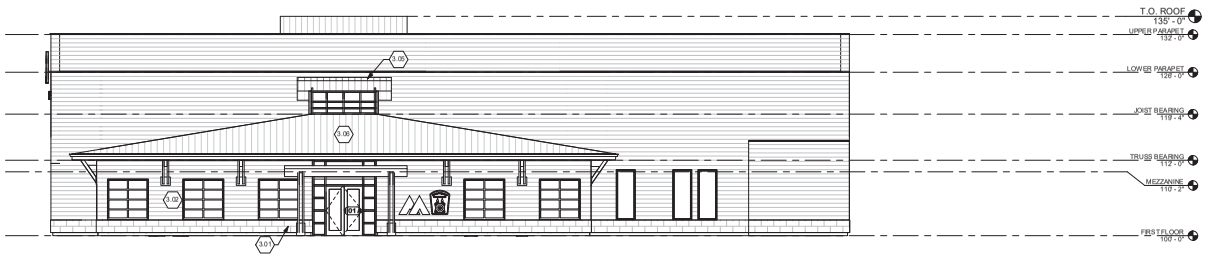
A2.0

CONSTRUCTION KEYNOTES

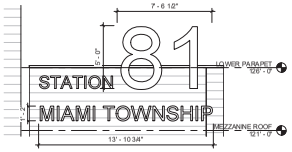
3.01	STONE.
3.02	INTEGRALLY COLOURED CEMENTITOUS PLANK RAIN SCREEN SYSTEM.
3.05	ROOF MONITOR WITH METAL ROOF.
3.06	STANDING SEAM METAL ROOF - R-24 POLYISO ROOF INSULATION.
3.08	LIGHTING.
3.09	PIN MOUNTED SIGNAGE.
3.11	FREE STANDING STEEL ROOF STRUCTURE.



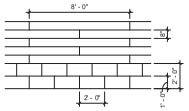
3 A3.0 NORTH ELEVATION
1/8" = 1'-0"



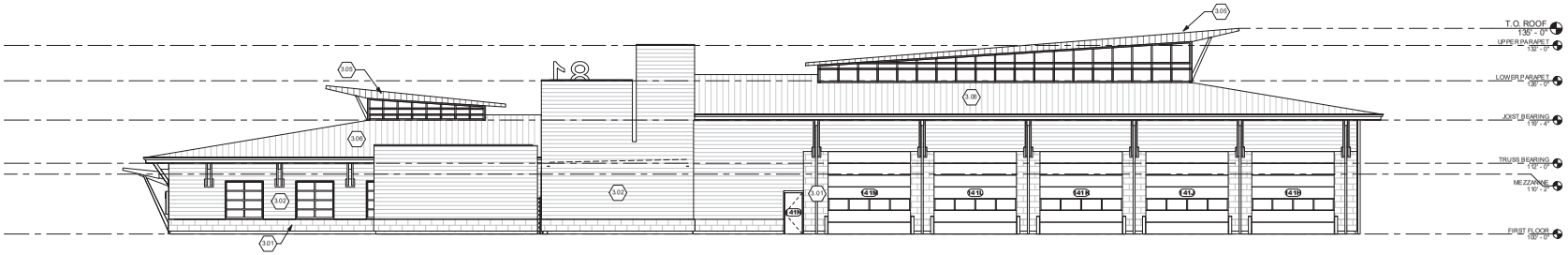
4 A3.0 SOUTH ELEVATION
1/8" = 1'-0"



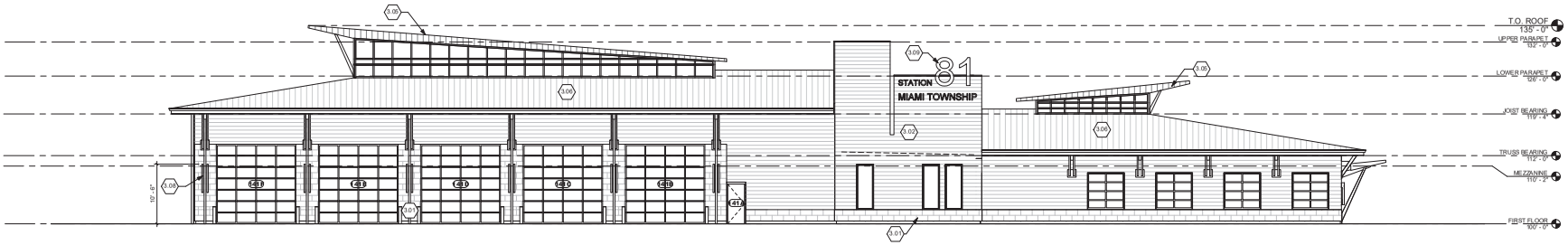
6 A3.0 SIGNAGE
1/4" = 1'-0"



5 A3.0 ENLG EXT ELEV
1/4" = 1'-0"



2 A3.0 EAST ELEVATION
1/8" = 1'-0"



1 A3.0 WEST ELEVATION
1/8" = 1'-0"

MSA Architects
CINCINNATI: 216 West Fourth St. Floor 5 Cincinnati, OH 45202 513.241.5666
COLUMBUS: 14 East Gay St. Suite 300 Columbus, OH 43215 614.300.3367
Toll Free 800.241.5666
www.msasarch.com
AIA Ohio GOLD MEDAL FIRM

PRELIMINARY NOT FOR CONSTRUCTION

Miami Fire- Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

THIS DRAWING AND THE DESIGN CONCEPTS REPRESENTED, AS INSTRUMENTS OF SERVICE, ARE THE PROPERTY OF MICHAEL SCHUTER ASSOCIATES INC. AND MAY NOT BE USED, REPRODUCED, OR COPIED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT PRIOR WRITTEN CONSENT OF MICHAEL SCHUTER ASSOCIATES INC.
Copyright Michael Schuter Associates, Inc. dba MSA Architects All Rights Reserved
MSA Sport is a division of MSA Architects

DATE	ISSUED
10/12/17	ZONING

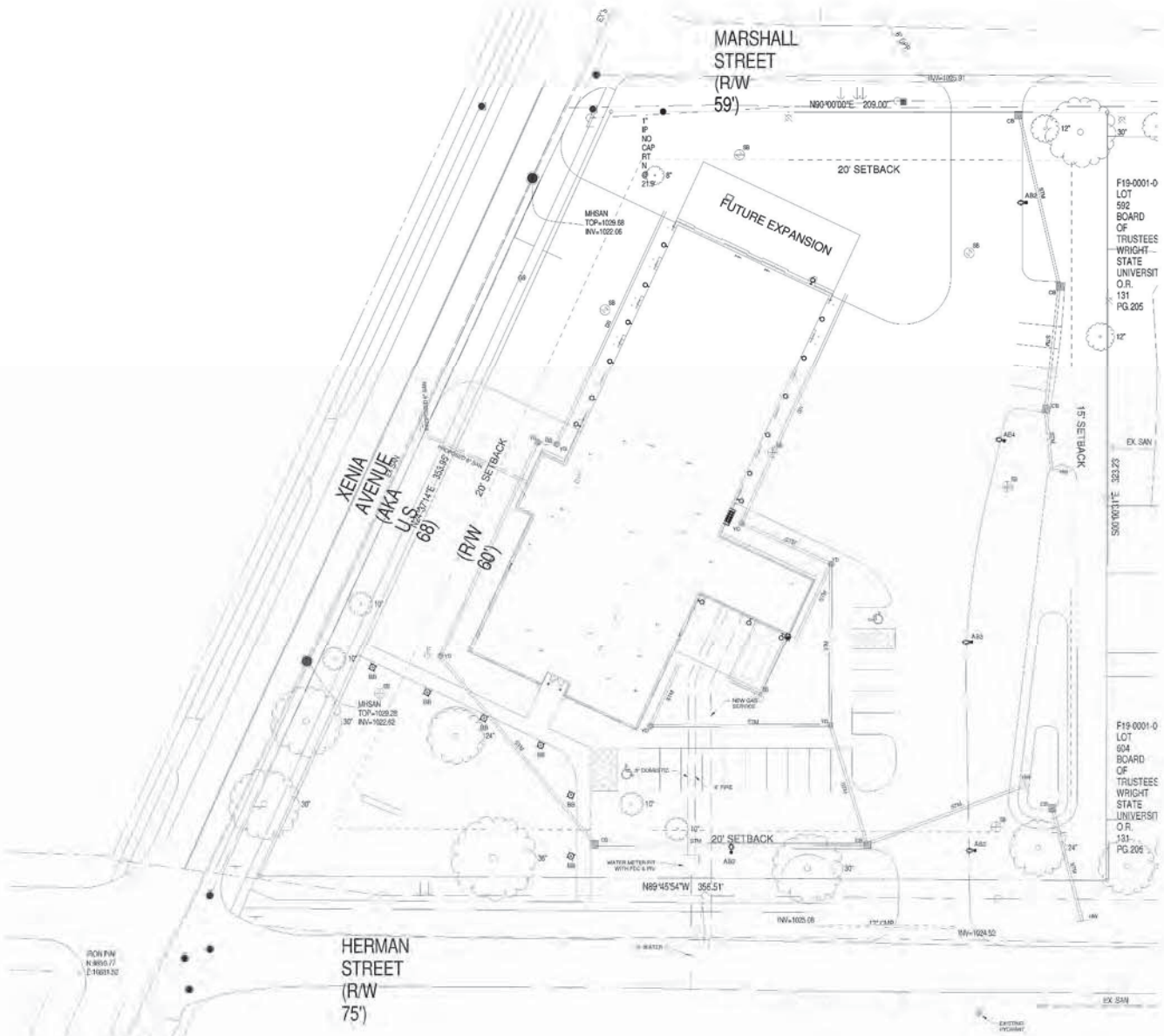
NO.	DATE	REVISION

PROJECT NO. 17158.00

DRAWING TITLE
EXTERIOR ELEVATIONS

A3.0

10/16/2017 3:19:47 PM C:\Users\kehecka\Documents\17158_MIAMI FIRE_v17 Central_kehecka.rvt



SITE ELECTRIC LIGHTING PLAN

MSA

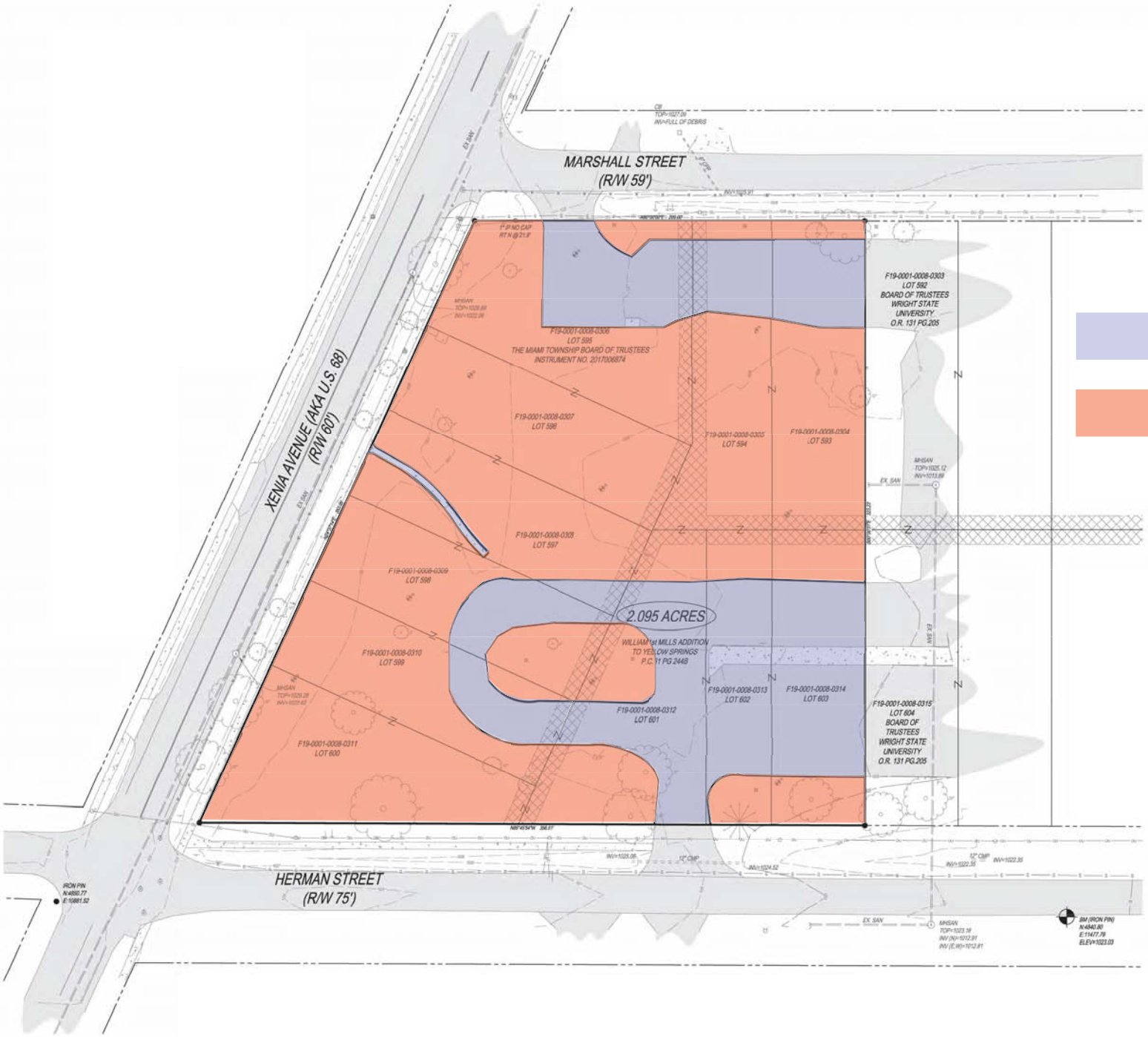
PRELIM

MECHANICAL/ELE
WWW.KLHE
1539 ALEXANDE
11 FT. THOMA
41075 600
859-44
859-442-1
LEXINGTON,
COLUMBI
NEW YORK,

Miami Township Fire-Rescue Station 81
Miami Township Greene County

DATE
NO. DATE
PROJECT NO
DRAWING TI
SITE ELE
LIGHTING

ES



MSA Architects

PRELIMINARY
NOT FOR CONSTRUCTION

Miami Township Fire-Rescue Station 81

Miami Township Greene County

1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

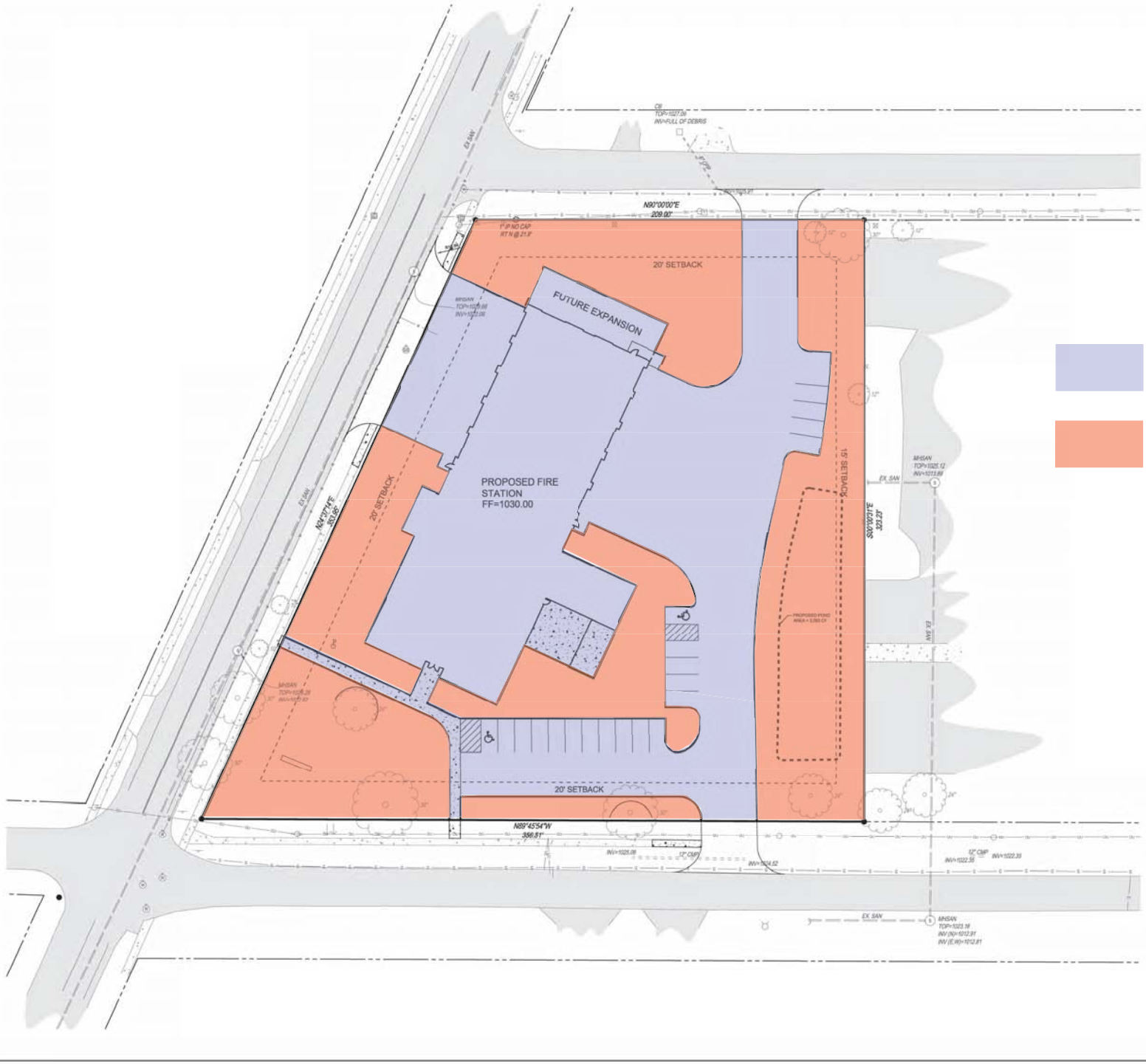
DATE	ISSUED
12/18/2017	ZONING
11/02/2017	PROGRESS SET

NO.	DATE	REVISION

PROJECT NO.

DRAWING TITLE

EXISTING CONDITIONS



IMPERVIOUS AREA
A = 1.09 ACRES

PERVIOUS AREA
A = 1.005 ACRES

% IMPERVIOUS

(1.09)/(2.095) * 100 = 0.52%

*Round up to 60% to stay conservative.

Proposed Pond Volume
3,093 CF

MSA Architects

PRELIMINARY NOT FOR CONSTRUCTION

Miami Township Fire-Rescue Station 81

Miami Township Greene County
1001 XENIA AVENUE
YELLOW SPRINGS, OH 45387

DATE	ISSUED
12/18/2017	ZONING
11/02/2017	PROGRESS SET

NO.	DATE	REVISION

PROJECT NO.
17158.00

DRAWING TITLE
PROPOSED CONDITIONS

Stormwater Detention Calculations

Prop. % Impervious = 60 | *Area (acres)= 2.095 | C_p= 0.45

Storm Duration, td, hrs	Runoff Coefficient C Impervious (%)	Rainfall Intensity, i, inches/hr.	Post Inflow Rate (100 year), I(td)=(CiA), cfs	Pre Allowable Outflow Rate (5 year), O=(C_p*3.81*A), cfs	Storage Rate, I(td)-O, cfs	Required Storage, [I(td)-O]td/12, acre-ft	(Cu. Ft.)
0.17	0.45	6.97	6.57	3.59	2.98	0.042204	1,838.40
0.33	0.49	5.36	5.50	3.59	1.91	0.052537	2,288.50
0.5	0.55	4.28	4.93	3.59	1.34	0.055823	2,431.65
0.67	0.59	3.58	4.39	3.59	0.80	0.044426	1,935.18
0.83	0.62	3.05	3.93	3.59	0.34	0.023366	1,017.81
1	0.64	2.61	3.47	3.59	-0.12	-0.009977	-434.62
1.5	0.69	2.01	2.91	3.59	-0.69	-0.085790	-3,737.02
2	0.73	1.55	2.35	3.59	-1.24	-0.206270	-8,985.13
3	0.76	1.16	1.83	3.59	-1.76	-0.439269	-19,134.56

*red = input value needed

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
1024.00	-----	.0085	.0000	.000	.000
1025.00	-----	.0345	.0600	.020	.020
1026.00	-----	.0702	.1539	.051	.071

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

PLANNING COMMISSION

MEETING DATE: November 13, 2017

STAFF REPORT: Denise Swinger, Zoning Administrator

LOCATION: Dayton-Yellow Springs Road and East Enon Road

ZONING DISTRICT: Planned Unit Development (PUD)

APPLICANT: Village of Yellow Springs

PROPERTY OWNER: Village of Yellow Springs

REQUESTED ACTION: A review of the Final Plan Phase One Replat for the CBE/Commerce Park to re-dedicate rights of way and parcels. This re-dedication will provide the necessary rights-of-way for future streets and utilities construction.

The Village of Yellow Springs Zoning Code requirements for replats are detailed below. Because this change effects the configuration of the rights-of-way, the Zoning Administrator has requested formal action by the Planning Commission.

Chapter 1226.12 REPLATS.

Approval of a replat by the Zoning Administrator, without formal action by the Commission and Council, may be granted if a submitted record plan meets all of the following conditions:

(a) The proposed replat is not contrary to applicable subdivision and zoning regulations, including, but not limited to, the runoff control/sediment abatement regulations.

(b) The same number of lots as in the original plat, or less, are created.

(c) Upon approval, the replat shall be submitted by the applicant to the Greene County Recorder for incorporation into the Official Tax Map records within 90 days.

(d) The applicant will be held responsible for any negative impact on surrounding lots which becomes apparent within one year from the date of recordation of the plat.

HEARING NOTICE: The following notice was published in the Yellow Springs News on November 2, 2017: ***CBE/Commerce Park - Final Plan Phase One Replat*** *– Planned Unit Development (PUD) District. The Village of Yellow Springs has submitted a replat application for the purpose of re-dedicating right-of-ways and parcels for the development of infrastructure to the proposed Cresco Labs medical marijuana cultivation and processing plant, and future mixed use PUD development. Parcel ID #F19000100200000300, F19000100200000600 and F19000100200000700*

PROPERTY INFORMATION AND ANALYSIS:

The property is located on Dayton-Yellow Springs Road and East Enon Road just west and north of Antioch University Midwest. It currently consists of three parcels; Lot 1 containing 19.47 acres, Lot 2 containing 8.214 acres and Lot 3 containing 1.064 acres. Rights-of-way were dedicated for proposed connections to Dayton-Yellow Springs Road, to East Enon Road, and for a connection to the existing parking lot located on the Antioch University Midwest site. This plat was dedicated in 2014 following both a preliminary plat and final plat review. The site is currently undeveloped and used for farming purposes.

STAFF ANALYSIS OF THE APPLICATION:

The application of the Final Plan Phase One Replat is for the purpose of re-dedicating rights-of-way to the Village of Yellow Springs. As a result of the dedication of these rights-of-way, the 35.227 acre tract known as the Center for Business & Education as conveyed to the Village of Yellow Springs, Ohio by Official Record Deed Volume 3770, Page 803 of the Greene County Recorder's records will result in the same number of lots as in the original plat. The replat acreage of 35.227 acres will create three parcels: Lot 1 – 12.255 acres will be the location of Cresco Labs. Lot 2 – 17.159 acres, and Lot 3 - 3.737 acres of which 1.050 acres is non-buildable. This portion of Lot 3 lies just north of the Dayton-Yellow Springs Road right-of-way and is reserved for storm water detention/retention purposes. Rights-of-way for streets and utilities total 2.076 acres and is noted on Lot 2. This acreage will remain Village owned property as permanent right-of-way forever.

Following the CBE specific guidelines in the Zoning Code, the intent of the Village of Yellow Springs is to later submit a Final Plan Phase Two to further subdivide Lot 2 and Lot 3 into smaller lots which will be developed for industrial, educational or business purposes as restricted by the *Declaration of Covenants and Restrictions for the Center for Business and Education,* and to provide for any extension of streets and utilities infrastructure. This final plan may require easements outside of the proposed rights-of-way on future lots to allow for maintenance of some of the public infrastructure.

The infrastructure consists of the construction of a new street approximately 650 feet in length and new water, sanitary sewer and storm piping to serve the 35.227 site for new development. There is a ten (10) foot easement as required in Chapter 1226.06 Design Standards, along the side and rear lot lines. The width of the right-of-way dedication shown varies but maintains a minimum sixty (60) feet width in its entirety. The asphalt pavement width is a consistent twenty-four (24) feet wide and with the curbs and gutters the width measures twenty-nine (29) feet from the back edge of the curb to the back edge of the curb. A twenty (20) foot easement runs along the street.

According to the Codified Ordinances of The Village of Yellow Springs, public improvements relating to streets [Section 1226.08(a)] and minimum requirements for materials and installation procedures [Section 1226.08(c)] must be in compliance with the Greene County Engineer standards. The width of the right-of-way and the pavement width are both consistent with the county standards for a local street and/or a collector street.

The Village of Yellow Springs has completed the infrastructure of public water, sanitary and storm sewers from the intersection of Dayton-Yellow Springs and East Enon Roads, west on the north side of Dayton-Yellow Springs Road one thousand (1,000) feet to the proposed entrance to the CBE.

STAFF RECOMMENDATION: Staff has no objections to the Final Plan Phase One Replat to re-dedicate the parcels and rights-of-way.

CBE / COMMERCE PARK (Phase1)

Village of Yellow Springs Miami Township

Greene County Section 26, Town 4, Range 8

Greene County Recorder:

Plat Book _____ Pages _____

Received for Record this _____ day of _____, 20_____

at _____ am - pm

File Number _____ Fee _____

Greene County Recorder Date

Greene County Auditor:

Transferred this _____ day of _____, 20_____

Greene County Auditor Date

Approval of Village Planning Commission and Council:

Planning Commission Approval Date

Village Council Approval Date

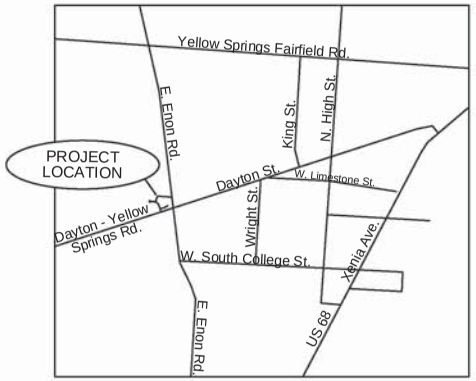
DEDICATION:
We the undersigned, being all the owners and lien holders of the lands herein platted, do hereby voluntarily consent to the execution of the said plat and do dedicate the streets and easements as shown hereon to the public use forever.

Easements as shown on this plat are for the construction, operation, repair, maintenance, replacement, or removal of all gas, water, sanitary sewer, electric, telephone, storm sewer, telecommunication, drainage ditches, and other utility services and for the priviledge of removing any and all trees and other obstructions in the free use of said utilities or improvements and for the providing of ingress and egress to the property for said purposes, and are to be maintained as such forever.

Village of Yellow Springs, Ohio Date

ACKNOWLEDGEMENT:
State of Ohio - County of Greene
Before me, a notary public in and for the State of Ohio, personally appeared the owner/agent of the Village of yellow Springs, Ohio who acknowledged that they did sign such instrument and that said instrument is their free act and deed. In testimony whereof, I have hereunto subscribed my name and affixed my official seal at _____, Ohio this _____ day of _____, 20_____.

Notary Public



Vicinity Map
Yellow Springs, Ohio

PLAT NOTES:

Bearings are based on Ohio State Plane Coordinates as derived from GPS observations.

Building setback lines will be established when zoning is finalized.

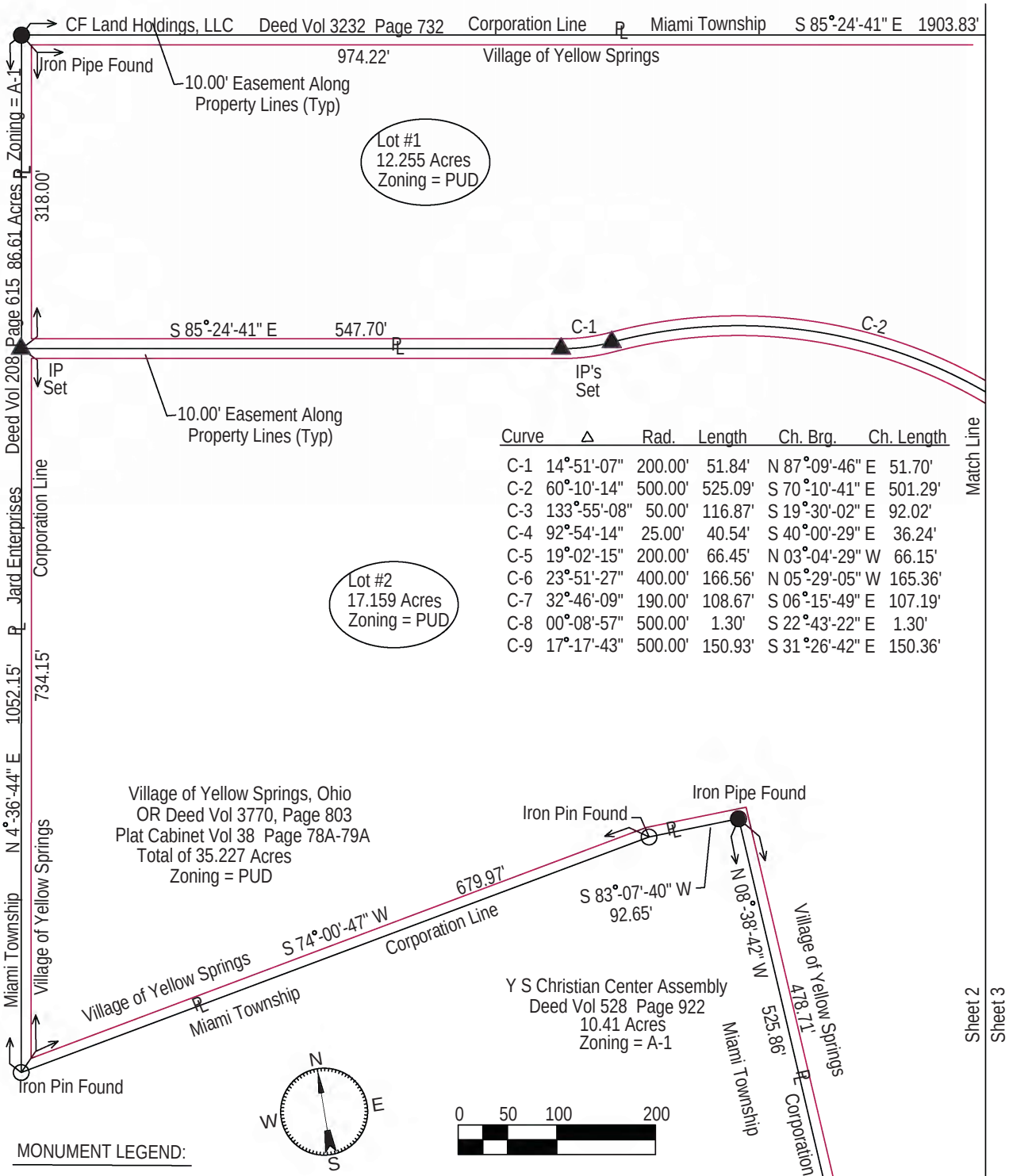
Each building development is to establish a tree planting plan to meet Village requirements.

Any future lot splits will require Village of Yellow Springs Planning Commission approval.

DESCRIPTION: Being a replat of a 35.227 acre tract known as The Center for Business & Education as conveyed to the Village of Yellow Springs, Ohio by Official Record Deed Volume 3770, Page 803 of Greene County Recorder's Records. The subdivision results in creating three parcels of 12.255 acres (Lot#1), 17.159 acres (Lot #2), and 3.737 acres (Lot #3). 2.076 acres is to remain as permanent right-of-way dedicated for public use forever. 1.118 acres of Lot #3 is non-buildable.

CERTIFICATION: All work has been performed with the publication "Minimum Standards for Boundary Surveys in the State of Ohio". The measurements are certified correct and monuments will be set as shown. Curve distances are measured along the arc.

Michael L. Heintz, Reg. Surveyor #7149 Date



Curve	Δ	Rad.	Length	Ch. Brg.	Ch. Length
C-1	14°-51'-07"	200.00'	51.84'	N 87°-09'-46" E	51.70'
C-2	60°-10'-14"	500.00'	525.09'	S 70°-10'-41" E	501.29'
C-3	133°-55'-08"	50.00'	116.87'	S 19°-30'-02" E	92.02'
C-4	92°-54'-14"	25.00'	40.54'	S 40°-00'-29" E	36.24'
C-5	19°-02'-15"	200.00'	66.45'	N 03°-04'-29" W	66.15'
C-6	23°-51'-27"	400.00'	166.56'	N 05°-29'-05" W	165.36'
C-7	32°-46'-09"	190.00'	108.67'	S 06°-15'-49" E	107.19'
C-8	00°-08'-57"	500.00'	1.30'	S 22°-43'-22" E	1.30'
C-9	17°-17'-43"	500.00'	150.93'	S 31°-26'-42" E	150.36'

MONUMENT LEGEND:

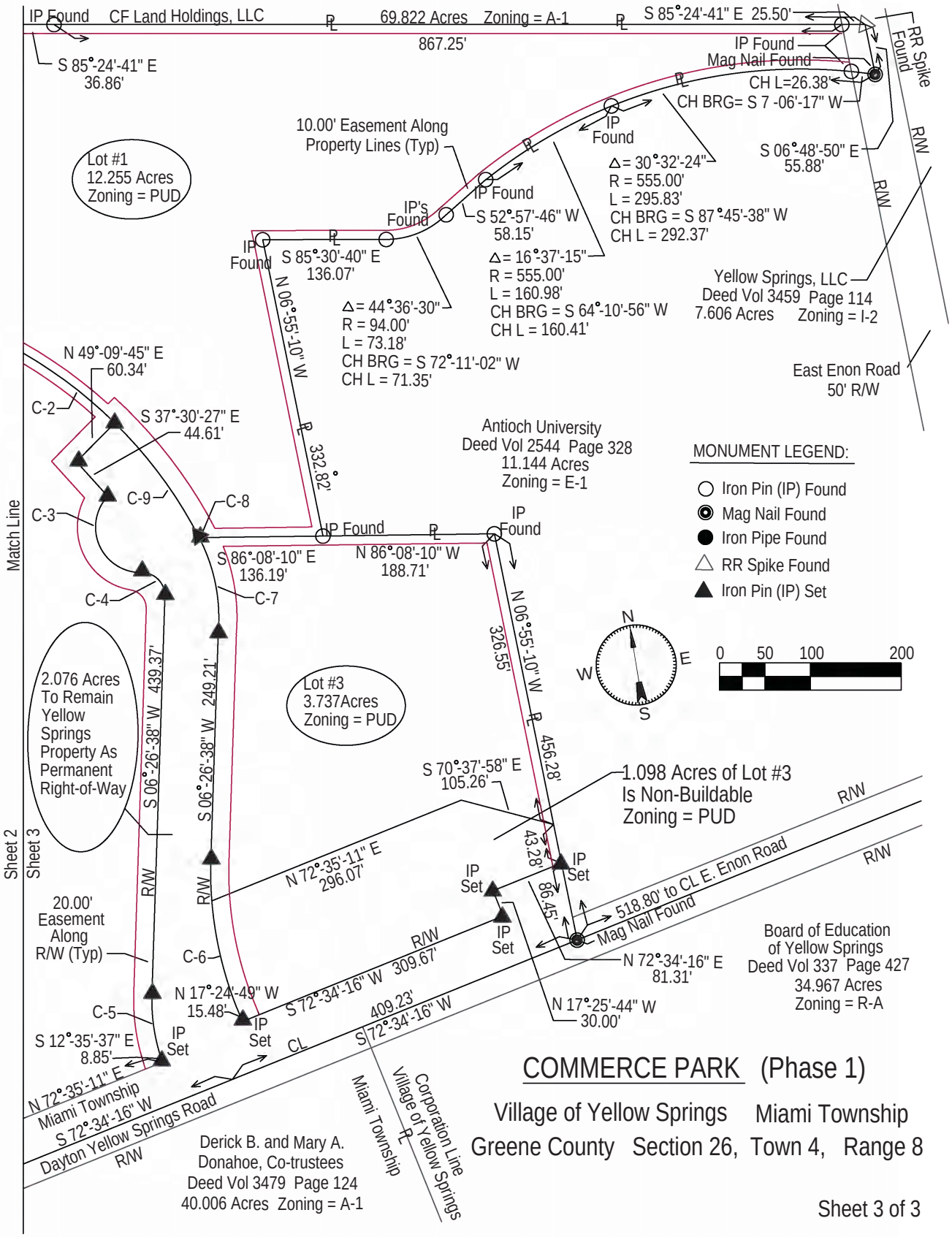
- ○ Iron Pin (IP) Found
- ◉ Mag Nail Found
- ● Iron Pipe Found
- △ RR Spike Found
- ▲ Iron Pin (IP) Set

COMMERCE PARK (Phase 1)

Village of Yellow Springs Miami Township

Greene County Section 26, Town 4, Range 8

Sheet 2 of 3



COMMERCE PARK (Phase 1)

Village of Yellow Springs Miami Township

Greene County Section 26, Town 4, Range 8

Sheet 3 of 3

PLANNING COMMISSION

MEETING DATE: Monday, November 13, 2017

STAFF REPORT: Denise Swinger, Zoning Administrator

LOCATION: CBE/Commerce Park – Dayton Yellow Springs and East Enon Roads

ZONING DISTRICT: PUD Planned Unit Development – I-1 (Mixed Industrial District)

APPLICANT: Cresco Labs – Charlie Bachtell, Co-Founder

PROPERTY OWNER: Village of Yellow Springs

REQUESTED ACTION: Request for a conditional use permit, per Yellow Springs Zoning Ordinance Chapter 1254 PUD – Table 1254.03 Minimum Zoning Requirements for I-1 Industry, Chapter 1252 Industrial Districts, Table 1252.02 Schedule of Uses: Industrial Districts, Table 1258.01 Schedule of Uses by District, Chapter 1262 Conditional Use Requirements, and a site plan review per Yellow Springs Zoning Ordinance Chapter 1268 Site Plan Review, for the purpose of establishing and constructing a medical marijuana cultivation and processing plant.

HEARING NOTICE*: "Cresco Labs – Conditional Use and Site Plan Review* *– PUD District (I-1 Industrial-Mixed Use) at CBE/Commerce Park. Cresco Labs has submitted a conditional use and site plan review application for the purpose of establishing and constructing a medical marijuana cultivation and processing plant."*

GREENE COUNTY PARCEL ID #'s: F19000100200000300; F19000100200000600

PROPERTY INFORMATION AND ANALYSIS:
The property identified as Lot #1 measures 12.255 acres. It is located at the northern edge of the property and extends from the western to the eastern property line. It measures a total acreage of 35.227 and is owned by the Village of Yellow Springs. The property most recently was used for farming. Lot #1 is an irregular parcel size **(Exhibit 1-Cresco Labs Site Plan**).

STAFF ANALYSIS OF THE APPLICATION:
The Zoning Code requires the Planning Commission approve all conditional uses, and consider the operational characteristics of the proposed use. Because the building is over 5,000 square feet, the Planning Commission is also required to review the site plan.

The applicant is requesting a conditional use permit and a site plan review to allow for the construction of a medical marijuana cultivation and processing plant. The CBE/Commerce Park is a PUD (Planned Unit Development) and is zoned as I-1, Mixed Industrial District. The medical marijuana cultivation and processing plant is a conditional use under the categories of greenhouse/nursery and medical and dental laboratories. The other aspects of Cresco Labs

operations are permitted under the use of “manufacturing, compounding, processing, packaging, treating or assembly from previously prepared materials,” and “research, development and testing laboratories.” The zoning code has no *specific conditions* that the Planning Commission must review for the two conditionally permitted uses. The first phase of the cultivation and processing plant proposed is 49,740 sq. ft. and is two buildings, a 26,445 sq. ft. Processing Head House, one-story, slab-on-grade structure, and a 23,294 sq. ft. Grow-Building, one-story steel building with glass roof. **Exhibit 2 with this report is a letter from Cresco further explaining the Processing Head House and Greenhouse use.**

CONDITIONAL USE AND SITE PLAN REVIEW REQUIREMENTS

"I-1," Mixed Industrial District. The I-1 District is intended to provide dedicated locations within the community for office, research, knowledge-based industry, services, light manufacturing and related uses that offer employment opportunities and create economic vitality for the Village and its residents.

Table 1252.02 Schedule of Uses: Industrial Districts			
USE	***I-1***	***I-2***	
Agriculture, Food and Animal-related Uses			
Greenhouse/nursery (not including retail sales)	C	**P**	
Health Care and Social Assistance			
Medical and dental laboratories	C	**C**	
Manufacturing			
Manufacturing, compounding, processing, packaging, treating or assembly from previously prepared materials	P	**C**	
Offices, Research and Technical Facilities			
Research, development and testing laboratories	P	**P**	

Section 1252.03 SPATIAL REQUIREMENTS

(a) All lots and buildings shall meet the minimum area and width requirements of Table 1252.03. New lots shall not be created, except in conformance with these requirements.

Table 1252.03. Lot and Width Requirements: Industrial Districts		
Zoning District	**Minimum Lot Area[1]**	**Minimum Lot Width (Ft.)**
I-1, Industrial	**1 acre**	**150 ft.**
1 Public water and sanitary sewer are required for all property in this district.		

Cresco Labs Lot #1 meets the minimum area and width requirements. Public water and sanitary sewer to the site is being paid for by Cresco Labs.

(b) All structures and their placement on a lot shall conform to the minimum dimensional requirements listed in Table 1252.03a.

Table 1252.03a. Dimensional Requirements: Industrial Districts							
Zoning District	**Maximum Building Height (Ft.)**	**Minimum Yard Setbacks (Ft.)**					**Lot Coverage (%)**
		Front[2]		**Side**		**Rear**	
		Parking	**Building**	**Total**	**Least**		
I-1	**40**	[3]	**20**	**25**	**10**	**25**	**70**
2 Average established setback shall apply, where applicable, in accordance with Section 1260.02(a). **3 Parking and loading shall not be permitted in any front yard.**							

The building height measures 26 feet, 6 inches and is well below the maximum building height of 40 feet. The front yard setback measures 51 feet, 4 inches, the rear yard setback measures 34 feet, the western side yard measures approximately 897 feet and the eastern side yard setback measures approximately 34 feet at its closest point.

The Cresco Labs building meets the required setbacks for I-1, Mixed Industrial District.

Lot #1 is 12.255 acres or 533,828 square feet. The proposed buildings measure 49,740 square feet. Seventy percent of the total square footage of the lot equals 373,679. The proposed building is well below the 70 percent lot coverage requirement, with 323,940 sq. ft. of available acreage to build on. Parking lots are not included in the lot coverage requirement.

The Cresco Labs building meets the lot coverage requirement for I-1, Mixed Industrial District.

Parking is not permitted in the front yard in an I-1 District – see footnote 3 in Table 1252.03a. However, Section 1254.03(d) allows the modification of minimum requirements if certain criteria are met. Please review the following for an exemption to this requirement.

Section 1254.03 PUD REQUIREMENTS

(b) Minimum Lot Size and Zoning Requirements. Lot area, width, setbacks, height, lot coverage, minimum floor area, parking, landscaping, lighting and other requirements for the district applicable to the proposed use, as provided in Table 1254.03, shall be applicable for all such uses within a PUD, unless modified in accordance with Section 1254.03(d). In the case of a mix of uses, the zoning requirements applicable to each use category shall apply to that use.

Table 1254.03 Minimum Zoning Requirements	
Land Use	***Applicable Zoning District***
Single-family	R-B
Two-family	R-B
Townhome	R-B
Multiple-family	R-C
Retail, office, service business	B-2
Industry	I-1
Institutional	E-I

This is an industrial use, so parking requirements for I-1 Mixed Industrial District are followed.

Section 1254.03 PUD REQUIREMENTS.

(d) Modification of Minimum Requirements. District regulations applicable to a land use in the PUD may be altered from the requirements specified in Table 1254.03, including but not limited to, modification from the lot area and width, building setbacks, height, lot coverage, signs and parking. The applicant for a PUD shall identify, in writing, all intended deviations from the zoning requirements. Modifications may be approved by the Village Council during the preliminary development plan review stage, after Planning Commission recommendation. These adjustments may be permitted only if they will result in a higher quality and more sustainable development consistent with the purposes of PUD expressed in Section 1254.01. The modifications shall also satisfy at least four of the following criteria:

(1) Preserve the best natural features of the site;

(2) Create, improve or maintain open space for the residents, employees and visitors beyond the minimum required by subsection (f) of this section;

(3) Commit that at least ten percent of all dwelling units in the PUD will be "permanently" affordable units or 20% affordable units, or commit to a payment in lieu of constructing such units, as agreed to with the Village Council;

(4) Provide a mix of residential types such as single family, townhome and/or multiple family;

(5) Employ low impact design and/or other best practices to manage storm water and reduce the off-site impacts of runoff;

(6) Employ practices in site layout, building construction and materials that will result in a measurable reduction in energy consumption;

(7) Introduce new development concepts, such as co-housing: and/or

(8) Include a mix of residential and nonresidential uses.

Because this is not a PUD approval, but a site plan approval for an existing PUD, staff has requested that Cresco Labs follow the criteria as outlined above. If modifying the parking requirement will result in a higher quality and more sustainable development and meets four of the eight criteria, then the requirement that parking not be allowed in the front yard may be modified. In this case, there are four of the eight criteria that may apply. Those are (1), (2), (5), and (6). If Planning Commission feels that those four criteria are met, then parking may be allowed in the front yard.

Cresco Labs has submitted a response to the four criteria above (Exhibit 3).

To further strengthen their request, staff has reviewed the only other option, which would be to have the frontage off of East Enon Road. However, this location did not meet the 150 foot frontage requirement with a measurement of 56.05 feet. Section 1260.02 (e) Minimum Lot Frontage states, "*Any lot created after the effective date of this code shall have frontage on an improved public street or approved private street or access easement, equal to the minimum required lot width in the zoning district in which it is located.*"

Section 1260.05 Other Provisions

Control of Heat, Glare, Fumes, Noise, Odor, Dust and Vibration. Every use shall be conducted and operated in a way that does not create a nuisance and is not dangerous by reason of heat, glare, fumes, odor, dust, noise or vibration beyond the lot on which it is located.

TABLE 1: Maximum Permissible Sound Levels (in dBA)			
Source Property	***Receiving Property***		
	Residential and Agricultural	***Business and Educational***	***Light Industrial***
Residential and Agricultural	65 7:00 a.m. - 10:00 p.m. 45 10:00 p.m. - 7:00 a.m.	65 (all times)	75 (all times)
Business and Educational	65 daytime 45 nighttime	65 (all times)	75 (all times)
Light Industrial	65 daytime 45 nighttime	65 (all times)	75 (all times)

Cresco has indicated the noise levels should not exceed 55 dBA at the lot line. This is based on the sound power level of 87 dBA for the rooftop HVAC system.

Lighting. All light fixtures shall be direct cut-off fixtures, designed to prevent light spill or trespass beyond the boundaries of the property where the fixture is located.

According to the architect Mark Filoramo, the parking light pole locations are shown on the landscape plan (A02) and the photometric for this is located on (E101) at the end of the set. The building's wall mounted lights are shown on the exterior elevations (A201) and are 100% downlight that will not project past the property lines.

Storm Water. When land is developed or redeveloped and/or the surface characteristics of the property change (increased impervious surfaces, site grading, etc.), these activities shall not result in additional storm water runoff flowing to adjacent properties.

The Village's engineer Mike Heintz has indicated the storm water plan met the requirements but some revisions need to be made. He is requesting approval of the site plan contingent on final approval of the revisions. A letter was forwarded to both Mark Filoramo of Filoramo Talsma, the architectural firm and to Jeff Kunk of Choice One Engineering. (Exhibit 4 Letter from Village Engineer and Exhibit 5 Storm Water Retention Report from Choice One Engineering.

OFF-STREET PARKING AND LOADING

Section 1264.02 General Requirements

Cresco Labs architect, Mark Filoramo followed the zoning code's parking requirements for an industrial use. However, he did not use the 550 sq. ft. of gross floor area. See below:

Table 1264.02 Parking Requirements by Use	
Use	***Number of Parking Spaces***
Industrial Uses	
Industrial establishments, including manufacturing, research and testing laboratories, creameries, bottling works, printing, plumbing or electrical work-shops	1 for every 1.5 employees or 550 sq. ft. of gross floor area, whichever is greater.

The calculation for required parking was based on 1 for every 1.5 employees. With 45 employees at their largest shift, this would require 30 spaces. The parking plan shows 45 spaces, including 2 barrier free parking spaces, and the location of an additional 26 spaces for future expansion of the Cresco facility. The plan shows two spaces for loading/unloading.

Mr. Filoramo indicated that the large greenhouse portion of the facility may only have two or three employees at work during a shift. Cresco has provided a letter further explaining their reason for the lower number of parking spaces (Exhibit 6). Planning Commission will need to consider an exemption to the above which would require 90 spaces.

Section 1264.02 (d) **Modification of Parking Requirements**. The Planning Commission may reduce the parking space requirements of this chapter for any use, based upon a finding that other forms of travel are available and likely to be used and, in particular, the site design will incorporate both bicycle parking facilities and pedestrian connections. In addition, one or more of the following conditions shall also be met:

(1) Shared parking by multiple uses where there will be a high proportion of multi-purpose visits or where uses have peak parking demands during differing times of the day or days of the week and meeting the following requirements:

A. Pedestrian connections shall be maintained between the uses.

B. For separate lots, shared parking areas shall be adjacent to each other, with pedestrian and vehicular connections maintained between the lots.

C. Unless the multiple uses all are within a unified business center, office park or industrial park all under the same ownership, shared parking agreements shall be filed with the Clerk of Council after approval by the Planning Commission.

(2) Convenient municipal off-street parking or on-street spaces are located adjacent to the subject property.

(3) Expectation of walk-in trade is reasonable due to sidewalk connections to adjacent residential neighborhoods or employment centers. To allow for a parking space reduction, the site design shall incorporate pedestrian connections to the site and on-site pedestrian circulation, providing safe and convenient access to the building entrance.

(4) Where the applicant has provided a parking study, conducted by a qualified traffic engineer, demonstrating that another standard would be more appropriate based on actual number of employees, expected level of customer traffic, or actual counts at a similar establishment.

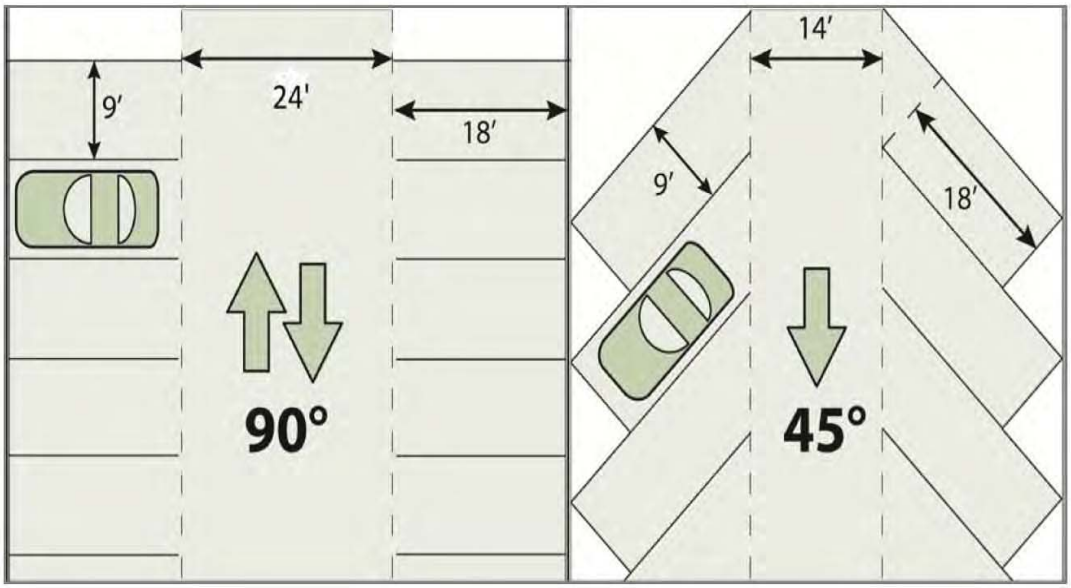
(5) The Planning Commission may require a parking study to document that any one or more of the criteria in subsections (d)(1) through (4) above would be met.

Additionally, excerpted from the Planned Unit Development (PUD) purpose is "***The Planned Unit Development (PUD) District is established as an optional development tool to permit flexibility in the regulation of land development; to encourage innovation in land use, form of ownership and variety of design, layout and type of structures constructed; to achieve economy and efficiency in the use of land***"

The parking space and aisle dimensions meet the requirements of Table 1264.03 below, with a parking pattern of 75 to 90 degrees.

Table 1264.03 Dimensional Requirements (feet)

Parking Pattern	Parking Space		Maneuvering Lane Width	Total One Row of Parking and Maneuvering Lane	Total Bay (Two Rows of Parking and Maneuvering Lane)
	Width	Length			
75° to 90°	9	18	24	42	60



A. Ingress and egress driveways shall be located no closer than 50 feet to the intersecting right-of-way of two streets and no closer than three feet to any adjoining property line.

B. Driveways shall not exceed 30 feet in width, as measured at the right-of-way line**. The driveway entrance measures 24 feet.**

C. A maximum of one driveway shall be permitted per street frontage; provided a second driveway may be allowed where the frontage exceeds 200 feet.

D. No driveway shall be closer than 75 feet to another driveway on the same or abutting property.

E. Driveways shall be perpendicular or no more than 30 degrees from perpendicular to the curb.

F. Driveways shall not be located closer than 25 feet to any property line, unless approved as a shared driveway for two or more properties.

The location of the driveway meets the requirements of the zoning code.

G. All driveways shall be constructed in accordance with the Village engineering standards.

(6) Curbing. A six-inch concrete curb, or alternative as determined by the Planning Commission, shall be provided around all sides of any parking lot of five or more spaces to protect landscaped areas, sidewalks, buildings, or adjacent property from vehicles that might otherwise extend beyond the edge of the parking lot. Curb openings are allowed for storm water drainage, as recommended by the Village Engineer. Plantings shall be set back two feet from curbs to allow for bumper overhang.

(7) Landscaping. Off-street parking areas shall be landscaped and/or buffered, in accordance with the requirements of Chapter 1270. **Please refer to the landscaping section later in this report.**

(8) Lighting. Light fixtures used to illuminate off-street parking areas shall be arranged to deflect the light away from adjoining properties and adjacent streets. Lighting fixtures in parking areas adjacent to any residentially zoned or used property shall not exceed 20 feet in height. Fixtures in all other parking areas shall not exceed 35 feet in height. Light fixtures shall be designed to achieve 90 degree luminary cutoff.

See 1260.05 (d) Lighting on page 6.

(9) Fire lanes. Fire lanes shall be designated on the site and posted with signage prior to occupancy. Vehicle circulation shall meet turning radius requirements set by the Fire Department.

Cresco Labs has consulted with the Fire Chief and a 20' wide fire lane was added to access the front and rear of the proposed buildings. A future fire lane is also included in the site plan around the perimeter of the property as Cresco expands their operations.

(c) Barrier Free Parking in Parking Lots. Within each parking lot, signed and marked barrier free spaces shall be provided at a convenient location, in accordance with the Barrier Free Parking Space Requirements of the Ohio Department of Transportation. Barrier free spaces shall be located as close as possible to building entrances.

Two barrier free parking spaces are provided for. Sidewalks shown are five feet wide.

Section 1264.04 Off-Street Loading Requirements

(a) Uses Requiring Loading Area. On the same premises with every building, structure or part thereof, erected and occupied for manufacturing, storage, warehouse, retails sales, consumer services or other uses similarly involving the receipt or distribution of vehicles, materials or merchandise, there shall be provided and maintained on the lot adequate space for standing, loading and unloading services in order to avoid undue interference with public use of the streets, alleys and parking spaces. This provision shall not apply to uses in the B-1 District.

(b) Loading Area Requirements. Loading and unloading spaces shall be paved and, unless otherwise adequately provided for, shall be ten feet by 50 feet, with 15-foot height clearance, according to the following schedule:

Table 1264.04 Minimum Off-Street Loading Requirements	
Building Net GFA	***Minimum Truck Loading Spaces***
20,001—100,000 sq. ft.	1 space plus 1 space for each 40,000 sq. ft. in excess of 20,000 sq. ft.

There is a 20' x 50' area (two spaces) in front of the shipping and receiving dock, which meets the criteria of the zoning code for off-street loading requirements.

(c) Orientation of Overhead Doors. Overhead doors for truck loading areas shall not face a public right-of-way and shall be screened to not be visible from a public street or an adjacent residential district.

There is one 10 x 12 foot door at the south side of the Processing Head House building. See architectural review report (Exhibit 7) regarding screening of the buildings.

Section 1268.05 Site Plan Requirements

The site plan (Exhibit 1) submitted by Filoramo-Talsma and Choice One Engineering shows the Zoning Code's General Information requirements, minus a legal description of the property and the correct location address. It also shows the Existing Conditions requirements of which many did not apply as it is an undeveloped site, the Proposed Development requirements and the Engineering and Building Details requirements.

Section 1270.02 Greenbelts and Parking Lot Landscaping

(a) Greenbelts Required. Greenbelts and landscaping shall be required in the following situations, except for parking areas within the B-1, Central Business District.

(1) Along the street frontage, between the right-of-way line and the parking lot of any parking lot containing four or more spaces;

(2) Within any required parking setback area; and

(3) Within the interior of any parking lot containing ten spaces or more.

(b) Greenbelt Standards for Front Setbacks. Greenbelts shall meet the requirements of this chapter.

(1) At a minimum, a required greenbelt shall contain one canopy tree, plus two additional canopy or understory trees for each 50 feet of road frontage.

The road frontage on the south property line is 150 LF/50 = 3 canopy trees, plus six canopy or understory trees for a total of 9 canopy and understory trees. Four trees are in the front setback area. Five additional trees are required. Appendix B in Exhibit 7 outlines the type of trees and their diameter.

(c) Parking Lot Landscaping. Where landscaping is required within parking lots, it shall meet the following requirements:

One tree for every ten parking spaces shall be planted within the parking lot. Trees shall be canopy species. While drought tolerant native species are preferred, other species may be planted within parking areas if approved by the Zoning Administrator or Planning Commission, as applicable.

The plan calls for 45 parking spaces, including 2 barrier free spaces. The plan also shows an additional 26 spaces for future expansion of the facility. Including the future parking spaces, there are 71 parking spaces indicated. At the minimum 5 canopy trees (45 spaces) to 7 canopy trees (71 spaces) are required. Eight trees are shown in the parking lot area, which meets the criteria for parking lot landscaping.

ADDITIONAL INFORMATION

Included with this report (Exhibit 8) is the preliminary construction plan for the access road and utilities infrastructure. This is being included for your information as it will be the responsibility of Cresco Labs to fund the project, and the Village of Yellow Springs to oversee the infrastructure construction in order to ensure the standards required by local, state and federal agencies are met.

Any signs for the Cresco facility will require a permit through the Village of Yellow Springs zoning office.

RECOMMENDATION

Staff recommends the Planning Commission review the information provided and any additional information available at the meeting, and consider:

- The expansion is in conformance with goals of the Village's 2010 Comprehensive Plan and the Vision: Yellow Springs and Miami Township visioning plan.
- The expansion will not be detrimental to the health, safety and welfare of the village's residents.
- The expansion is adequately served by essential public facilities.
- The expansion is compatible with the surrounding character of the general vicinity.
- The expansion will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.
- The expansion will not block sight lines.
- The proposal as presented complies with most of the requirements of the Village's Zoning Code.

Staff recommends **APPROVAL** of the conditional use and site plan review, allowing for an exemption to the front yard parking and loading area and the number of parking spaces, and with the following conditions, 1) a legal description of the property, 2) a revised storm water management plan approved by the Village's engineer, 3) a revised landscaping plan showing the additional tree plantings, and 4) a plan for implementing the recommendations of the Architectural Review Committee.

If you have any questions or if I can be of assistance please feel free to contact me at (937) 767-1702 or email at dswinger@vil.yellowsprings.oh.us.

CRESCO LABS - YELLOW SPRINGS OHIO MMJ CULTIVATION FACILITY

344 E. DAYTON YELLOW SPRINGS RD. , YELLOW SPRINGS, OHIO 45387

PLANNING COMMISSION LEVEL-B SITE PLAN REVIEW DRAWINGS

BUILDING CODES:

2011 Ohio Building Code
2011 Ohio Mechanical Code & OBC Chapter 28
2009 International Fuel Gas Code
2014 National Electrical Code
2011 Ohio Plumbing Code & Greene County Plumbing Dept.
2010 NFPA 13: Fire Suppression
2010 NFPA 72: Fire Alarm
2009 NFPA 17A: Fire Extinguishing System
2011 Ohio Accessibility Code, Chapter 11/ICC/ANSI A117.1-2009

LOCATION DATA:

Wind Speed:	90 mph (3 second gusts)
Snow Load:	20 psf (ground), 20 psf (roof)
Seismic Category:	B
Frost Depth:	32" (48" footing depth to be utilized)
Zoning Approval:	Village of Yellow Springs Zoning Department
Building Permit Approval:	Greene County Building Department

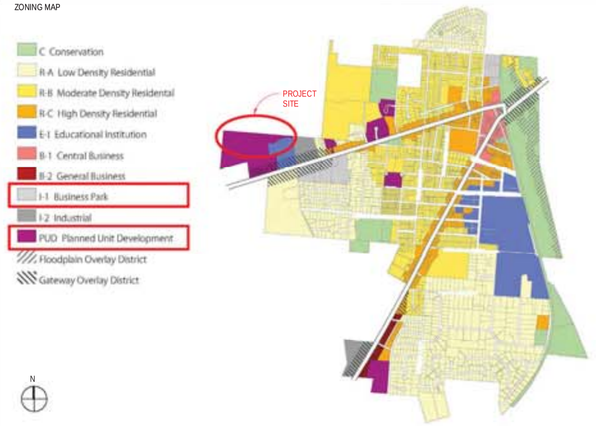
ZONING DATA

ZONING DISTRICT:	I-1 BUSINESS PARK (PLANNED DEVELOPMENT)
PERMITTED-USES:	MANUFACTURING & RESEARCH / DEVELOPMENT
CONDITIONAL-USES:	GREENHOUSE & MEDICALTESTING LABORATORY
LOT AREA:	533,827.80 SF (12.255 acres)
MAX. LOT. COVERAGE:	70%
MAX. BUILDING HEIGHT:	40'
MIN. LOT AREA:	43,560 SF (1.0 acre)
MIN. LOT WIDTH:	150.0'
MIN. LOT FRONTAGE:	NONE
MIN. LOT DEPTH:	NONE
REQUIRED SETBACKS:	
FRONT-YARD SETBACK:	20.0' (bldg.), 3.0' (parking)
SIDE-YARD SETBACK:	10.0' (min.), 25.0' (total)
REAR-YARD SETBACK:	25.0'
PROPOSED SETBACKS:	
FRONT SETBACK:	51'-4"
REAR SETBACK:	34'-0"
WEST SIDE SETBACK:	896'-8"
EAST SIDE SETBACK:	135'-0"
PROPOSED BUILDING:	
PROCESSING HEADHOUSE:	26,446 SF
GROW-BUILDING:	23,294 SF
TOTAL:	49,740 SF
PROPOSED COVERAGE:	
BUILDING AREA:	49,740 SF
PAVING AREA:	37,066.25 SF
TOTAL COVERAGE:	86,806.25 SF (16.26 %)
FUTURE BUILDING EXPANSIONS:	
PROCESSING HEADHOUSE:	20,328 SF
GROW-BUILDINGS:	164,880 SF
TOTAL EXPANSION AREA:	185,208 SF
FUTURE COVERAGE:	
TOTAL BUILDING AREA:	234,948 SF
TOTAL PAVING AREA:	80,958 SF
TOTAL FUTURE COVERAGE:	315,906 SF (59.17 %)

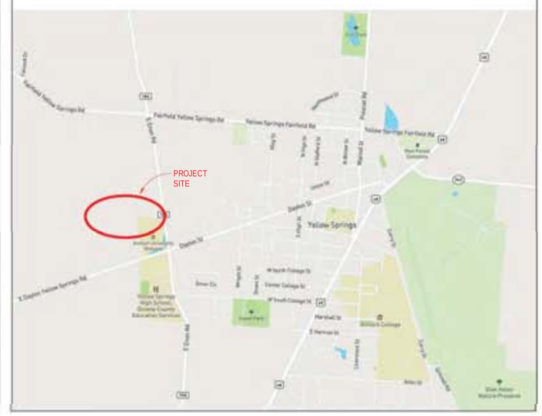
NOTE: PAVING AREA INCLUDES DRIVEWAY, PARKING, WALKS AND FIRE-LANE.

MIN. PARKING:	1 SPACE PER 1.5 EMPLOYEES
REQUIRED PARKING:	30 SPACES (45 EMPLYEES AT LARGEST SHIFT)
PROPOSED PARKING:	50 SPACES, 2 HC
RESERVE PARKING:	27 SPACES, 1 HC
LOADING BERTHS:	1

ZONING MAP



LOCATION MAP



CODE SUMMARY:

Occupancy Classification:

Business Group B:	Professional Offices
Use Group U:	Greenhouse
Factory Group F-1:	Moderate-Hazard Factory (Hemp products or Tobacco)

(Note: Maximum Allowable Quantities of Hazardous Materials per Control Area must not exceed those listed in Tables 307.1

Construction Type : II-B

Allowable Building Heights + Area:

Height:	55 ft.
Group B:	3 stories/23,000 s.f. per floor
Group F-1:	2 stories/15,500 s.f. per floor
Group U:	2 stories/8,500 s.f. per floor

Building Area Modification (Section 506):

General Increase, Equation 5-1:
[15,500 + [15,500 x 0.698] + [15,500 x 3]] = 72,219 sf

Frontage Increase, Equation 5-2:
[877/925 - 0.25] 30/30 = 0.698

Fire Resistance Ratings:

Primary structural frame	0 hrs
Exterior Bearing Walls:	0 hrs
Interior Bearing Walls:	0 hrs
Exterior Nonbearing walls:	0 hrs
Interior Nonbearing walls:	0 hrs
Floor construction :	0 hrs
Roof construction:	0 hrs

Fire Resistance Rating for Exterior Walls:
Fire Separation Distance X > 30 ft 0 hrs

Occupancy Separations (Table 508.4)

Group B to Group F-1:	With Sprinkler System – No separation
Group F-1 to Group U:	With Sprinkler System – 1 hr. separation

Automatic Sprinkler Systems:

Group B:	Not Required
Group U:	Not Required
Group F-1:	Required

An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:
1. A Group F-1 fire area exceeds 12,000 square feet (1115 m2).
2. A Group F-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m2).

Fire Alarm & Detection Systems:

Group U:	Not required
Group B:	Not required

A manual fire alarm system shall be installed in Group B occupancies where one of the following conditions exists:
1. The combined Group B occupant load of all floors is 500 or more.
2. The Group B occupant load is more than 100 persons above or below the lowest level of exit discharge.
3. The Group B fire area contains a Group B ambulatory health care facility.

Group F-1: Not required

A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group F occupancies where both of the following conditions exist:
1. The Group F occupancy is two or more stories in height; and
2. The Group F occupancy has a combined occupant load of 500 or more above or below the lowest level of exit discharge.

Occupant Loads:

Business Areas:	100 sf/persons
Manufacturing:	200 sf/persons
Warehouse:	500 sf/persons
Laboratory:	100 sf/persons
Agricultural:	300 sf/persons
Shipping Areas:	300 sf/persons

Number of Exits :

< 49 people:	1 exit required, 75 ft. max.travel
< 500 people:	2 exits required.

Travel Distance:

	w/o Sprinkler:	w/ Sprinkler:
Occupancy F-1:	200 ft.	250 ft.
Occupancy B:	200 ft.	300 ft.
Occupancy U:	300 ft.	400 ft.

Control Areas:
Control areas shall be separated from each other by fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 712, or both.

Located at 1st Floor: No. of Control Areas Per Floor:4
Rating of Fire Barriers: 1hr.

Incidental Accessory Occupancies:

Furnace Room (>400,000 Btu/hr):	1hr or automatic fire-extinguishing system
Boiler Room (> 15 psi & 10 HP):	1hr or automatic fire-extinguishing system
Fire Pump Room:	1hr w/sprinkler system throughout building

GENERAL NOTES

1. Conditions of AIA Document A201 shall govern, unless noted otherwise.
2. All work shall comply with applicable Federal, State, County and Town laws and municipal ordinances including (but not limited to) the Village of Yellow Springs, OH and the regulations of the National Board of Fire Underwriters. All work shall also comply with the requirements of the American With Disabilities Act Accessibility Guidelines.
3. All references to codes, specifications and standards referred to in the specifications and on the drawings shall mean the latest edition, amendment or revision of such reference standard in effect as of the date of the contract documents.
4. All doors used in connection with exits shall be so arranged as to be readily opened without the use of a key from the side from which egress is made.
5. The Contractor and Subcontractors shall visit the site and become familiar with the existing conditions and the extent of the work before submitting a proposal. All potential conflicts shall be reported to the Architect. Correction of the conflicts is to be included in the work and the proposal.
6. Failure to examine the site and determine existing conditions or nature of new construction, or nature and extent of work to be performed by other trades, will not be considered a basis for granting of additional compensation.
7. In case of conflict between drawings and specifications or within either document, the better quality or greater quantity of work shall be provided.
8. The Contractor and Subcontractors shall verify all dimensions and conditions shown on the drawings at the site, and shall notify the Architect of any discrepancies, omissions and/or conflicts before proceeding with the work.
9. Do not scale the drawings; dimensions shall govern. Large scale details shall govern over small scale. The Contractor and Subcontractors shall field verify all dimensions and existing conditions.
10. The General Contractor shall coordinate the delivery and proper storage of building materials and equipment on the site to avoid overloading of existing floor or impeding the completion of the the work. Materials and equipment are to be properly dispersed over the existing and/or new beams between existing and/or new columns.
11. Where new work adjoins existing, such new work shall be properly integrated with the existing to insure uniform appearance. Any new work required in existing work shall be patched and finished as required to match the new work. The Contractor shall do all necessary cutting, fitting, and patching. He/She shall furnish all necessary labor and materials for this work, whether or not shown and/or specified.
12. All new walls shall align and be level with existing adjacent walls and conditions unless noted otherwise.
13. All partition penetrations shall be sealed to provide the fire resistance required as noted on the drawings or as required by the applicable federal, state and local codes.
14. Omit manufacturer's names, labels and designations from exposed faces on all accessories, glass, etc.
15. The Contractor shall keep accurate records of all concealedwork that differs from contract drawings so that accurate record drawings can be kept.
16. Provide record drawings and pictures furnished by General Contractor for distribution to Architect and Owner.
17. All work shall be warranted for a period of one year from the date of substantial completion or issuance of Certificate of Occupancy as outlined by the General Contractor.
18. The Contractor shall submit all MEP and structural shop drawings to the Architect for distribution to the MEP and structural engineers. The Architect will review the shop drawings only with regard to general compliance and design intent with the information given in the contract documents.
19. Provide shop drawings, catalog cuts, samples and data for all necessary work as required for Architect's review prior to commencement of work.
20. All work shall be of the highest quality following the contract documents, manufacturer's specifications and recommendations, and the best accepted trade practices and standards.
21. Drawings are to be issued to the subcontractors in complete sets so they will know all the architectural and engineering details affecting their work.
22. The Contractor shall make arrangements with the Owner or Owner's Rep. to tour the existing building and site to familiarize themselves with the scope of the existing conditions and the policies and procedures to be followed by contractors performing work in the building and on the site.
23. The Owner and Subcontractors shall in effect be in charge of all work and permits associated with the contract. The Owner and Subcontractors shall apply, secure and pay for all necessary permits and inspections.
24. The Contractor shall make provisions for protecting all existing and new work during demolition and construction.
25. All contractors shall be responsible for supplying the general contractor with items required for permit for their portions of work; electrical permit application & load calculations, riser diagrams, refrigeration permit application, wrecking permit application, letters of work intent, insurance certificates, license No. & information, etc.
26. All contractors shall warrant to the owner that all materials and equipment furnished under their control shall be new, unless noted otherwise and that all work & work-manship will be of good quality and free from faults & defects. All work & materials shall be guaranteed for a minimum of one year from the date of final completion and acceptance of the owner.
27. All manufactured equipment & materials and shall be installed in strict accordance with the manufacturer's printed instructions and recommendations.
28. All contractors shall submit product data, shop drawings, samples and all other miscellaneous submittals as required for specific items of work as identified within these drawings. Submit all submittals to provide sufficient lead time and to avoid delays in work. Provide Architect & Owner (10) work days to review and comment on submittals.
29. Substitutions of products, materials & methods of construction in place of those described within these documents must be made either by addendum during bidding or change order after signature of contract. Requirements of substitution are as follows:
    a) Provide documentation for each proposed substitution in the form of product data, drawings, dimensions, or any other information deemed necessary by the Architect & Owner to evaluate how the proposed substitution will affect the design & work.
    b) Provide documentation in the form of a proposal illustration how substitution will affect contract sum and/or contract time.
    c) Substitution shall be approved only by issuance of an addendum or change order.
30. All contractors are responsible for repairing, patching, caulking and painting of any damaged portion of work caused by their work. All repairs shall be made with the same quality materials and workmanship as the original work and shall not be visible when completed.
31. All contractors are responsible for cleaning their own construction debris and related debris caused by their work.
32. The site and premises shall be kept clean and hazard free.
33. All contractors shall review entire drawing set to avoid interferences with other trades work and shall report any and all discrepancies and potential interferences with other trades work to Architect in writing, immediately.
34. All contractors are required to review the entire drawing set and the project specifications prior to submitting bids and construction.
35. The Contractor shall verify insurance requirements with the Owner and/or Owner's Rep. and shall include as additional insured's the Owner, the Owner's Agent and the Architect for any claims stemming from the demolition & construction from any workers or visitors on the premises.

ABBREVIATIONS

AC	Air Conditioning	Lav	Lavatory
Add'l	Additional	Lev	Level
Adj	Adjacent	LH	Left Hand
AD	Area Drain	LL	Lower Level
AFF	Above Finish Floor	LP	Low Point
AFG	Above Finish Grade	L/V	Light & Vent
Alum	Aluminum	Mezz	Mezzanine
Alt	Alternate	Matl	Material
Approx	Approximate(ly)	Max	Maximum
Arch	Architect(ural)	Mech	Mechanical
Act	Acoustical Ceiling Tile	MDF	Medium Density Fiberboard
@	At	Mfr	Manufacturer
Ang	Angle	Min	Minimum
Bd	Board	Misc	Miscellaneous
Btwn	Between	MO	Masonry Opening
Bldg	Building	Mtd	Mounted
Blk	Blocking	Mtl	Metal
B/	Bottom of	NC	Non-Combustible
Brg	Bearing	NIC	Not In Contract
Brz	Bronze	NR	Not Required
Bsmt	Basement	No	Number
C/C	Center-to-Center	Nom	Nominal
CI	Cast Iron	NTS	Not To Scale
C.I.S.	Crop Input Storage	OC	On Center
CJ	Control joint	OFCI	Owner Furnished Contractor Installed
Clos	Closet	Opng	Opening
CL	Center Line	Opp	Oppsite
Clg	Ceiling	Partn	Partition
Clr Opg	Clear Opening	Perp	Perpendicular
CMU	Concrete Masonry Unit	Plwd	Plywood
Col	Column	Pol	Polished
Conc	Concrete	Pnl	Panel
Const	Construction	Pr	Pair
Cont	Continuous	PL	Plastic Laminate
Corr	Corridor	Prefab	Prefabricated
CPT	Carpet	PS	Plumbing Stack
CT	Ceramic Tile	PSF	Pounds Per Square Foot
Ctr	Center	PSI	Pounds Per Square Inch
Dbl	Double	Pt	Point
Dia	Diameter	Ptd	Painted
Dim	Dimension	PVC	Polyvinyl Chloride
DS	Down Spout	QT	Quarry Tile
DN	Down	Qty	Quantity
Dtl	Detail	R	Riser
DW	Dishwasher	Rad	Dadius
Dwg	Drawing	RD	Roof Drain
Ea	Each	Ref	Reference
EC	Exposed Construction	Refr	Refrigerater
Exh	Exhaust	Reinf	Reinforced
EJ	Expansion Joint	Req'd	Required
EL	Elevation	Rev	Revise
Elect	Electric	RH	Right Hand
Eq	Equal	Rm	Room
Equip	Equipment	RO	Rough Opening
EWC	Electric Water Cooler	R&S	Rod & Shelf
Exist'g	Existing	Sched	Scheduled
Exp	Exposed	Sect	Section
Expd	Expanded	SE	Sealed Ejector
Ext	Exterior	Sht	Sheet
FA	Fire Alarm	Sim	Similar
FD	Floor Drain	SC	Solid Core
FDVC	Fire Dept. Valve Cabinet	S.C.W.S.	Secured Crop Waste Storage
FE	Fire Extinguisher	SP	Sump Pump
FF	Finish Floor	Spec	Specification
Fin	Finish	SS	Stainless Steel
FR	Fire Retardant	ST	Stone Tile
FP	Fireplace	STC	Sound Transmission Coefficient
FPHB	Frost Proof Hose Bibb	Stl	Steel
Flr	Floor	Stor	Storage
Ft	Foot	Std	Standard
Ftg	Footing	Struct	Structural
Ga	Gauge	Susp	Suspended
Galv	Galvanized	T	Tread
GC	General Contractor	TBD	To Be Determined
GL	Glass	Tel	Telephone
GB	Gypsum Board	Temp'd	Tempered
Gyp	Gypsum	T&G	Tongue & Grooved
Hdw	Hardware	Thk	Thickness
HC	Hollow Core	T/	Top of
HM	Hollow metal	Typ	Typical
Horiz	Horizontal	UNO	Unless Noted Otherwise
HP	High Point	Var	Varies
Hr	Hour	VCT	Vinyl Composite Tile
Ht	Height	Vert	Vertical
HVAC	Heating Ventilation Air Conditioning	Vest	Vestibule
In	Inch	VIF	Verify In Field
Incl	Included	W/	With
Info	Information	W/O	Without
Insul	Insulation	WC	Water Closet
Int	Interior	Wd	Wood
JC	Janitor Closet	WH	Water Heater
JT	Joint	Wdw	Window
Lam	Laminated	Wt	Weight
Lav	Lavatory	WWF	Welded Wire Fabric

MATERIALS

Aluminum
Brick
Cmu
Concrete
Drywall
Earth
Gasket or Firesafing
Glass - Elevation
Grate
Gravel
Insulation - Batt
Insulation - Rigid
OSB
Plywood
Sand
Steel
Stone - Granite
Wood - Finished
Wood - Blocking

SUMMARY OF WORK

All work proposed and to be preformed as shown within this drawing package shall include but not limited to the following:

1. Building pad construction and site grading.
2. Construction of Processing Head-house.
3. Construction of Greenhouse Grow Building.
4. Mechanical, Electrical, Plumbing, Fire Suppression and Fire Alarm systems installation.
5. Underground piping and site utility installation.
6. Construction of storm water management system - Retention Area & related piping and connection to storm sewer system.
7. Construction of driveway, walkways, parking lot, fire lane, site signage and security fence and access gate systems.
8. Installation of parking lot landscaping and parking lot lighting.

OWNERSHIP & DOCUMENT USE:

1. These drawings, specifications and copies thereof, as instruments of service, are and shall remain the property of the Architect.
2. The Owner shall be permited to retain copies, including reproducible copies of the drawings and specifications, for information and reference in connection with Owner's use and occupancy of this project and property.
3. The Owner may use these plans and specifications for third party use as reference only, for additions and alterations. No changes or additions may be made on the original drawings, specifications, or copies thereof.
4. These plans and specifications are to be used with respect to the named project and not necessarily reflect any field changes. They are not to be considered verified "As Built" drawings.
5. Third party users of these drawings and specifications shall verify all existing conditions before proceeding with any work and be responsible for such work.
6. The use of these drawings and specifications by any Contractor, Subcontractor, Builder, Tradesmen, or Worker shall instigate a hold harmless agreement between the drawing user and the Architect.
7. The user shall in fact agree to hold the Architect harmless for any responsibility in regard to construction means, methods, techniques, sequences or procedures and for any safety precautions and programs in connection with the work and further shall hold the Architect harmless for costs and problems arising from negligence of the Contractor, Subcontractor, Tradesmen or Workmen. The use of these drawings and specifications also implies that the Architect shall take no responsibility for the plan user's failure to carry out the work in accordance with the drawings or contract documents.

GRAPHIC SYMBOLS

DRAWING INDEX

ARCHITECTURAL DRAWINGS

A000	COVER SHEET
A001	ARCHITECTURAL SITE PLAN
A002	LANDSCAPE PLAN + NOTES
A201	FACILITY EXTERIOR ELEVATIONS
A202	PRECAST PANEL ELEVATIONS + NOTES

CIVIL DRAWINGS

C101	GENERAL CIVIL NOTES
C102	GENERAL CIVIL DETAILS
C103	GENERAL CIVIL DETAILS
C201	OVERALL SITE PLAN
C202	GRADING PLAN
C203	PAVEMENT ELEVATION PLAN
C204	SITE UTILITY PLAN
C205	DIMENSIONIGN + PAVEMENT PLAN
C301	SWPPP COVER SHEET
C302	SWPPP EROSION CONTROL NOTES + DETAILS
C303	SWPPP EROSION CONTROL NOTES + DETAILS
C304	SWPPP EROSION CONTROL PLAN
E101	PARKING LOT PHOTOMETRIC PLAN

CIVIL CONSULTANT:
CHOICE ONE ENGINEERING
440 E. HOEWISHER RD.
SIDNEY, OHIO 45365
Contact: Jeff Puthoff
Phone: 937.497.0200
email: jsp@choiceoneengineering.com

STRUCTURAL ENGINEER:
LARSON ENGINEERING, INC.
1488 BOND STREET , SUITE 100
NAPERVILLE , ILLINOIS 60563
Contact: Jerry Tobola
Phone: 630.357.0540
email: jtobola@larsonengr.com

MEP ENGINEER:
THE ENGINEERING STUDIO, INC.
701 LEE STREET, SUITE 510
DES PLAINES , ILLINOIS 60616
Contact: Eric Stein
Phone: 847.795.8810
email: estein@engineeringstudio.com

GREENHOUSE ENGINEER/SUPPLIER:
NEXUS GREENHOUSE CORP.
10983 LEROY DRIVE
NORTHGLENN, COLORADO 80233
Contact: Al Sray
Phone: 847.373.4730
email: alsray@nexuscorp.com

GENERAL CONTRACTOR:
R.F.C. CONTRACTING, INC.
13477 PROSPECT ROAD
STRONGSVILLE, OHIO 44149
Contact: Roger Riachi
Phone: 440.572.9444
email: rriachi@aol.com

OWNERS REPRESENTATION:
STOUT DEVELOPMENT SERVICES, INC.
978 W. WINCHESTER ROAD
LIBERTYVILLE, ILLINOIS 60048
Contact: Robert Guarnaccio
Phone: 847.274.3074
email: rwstout@att.net

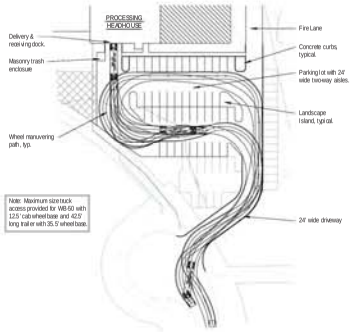
FILORAMO TALSMA
ARCHITECTURE
1765 N.ELSTON AVE. #206
CHICAGO, ILLINOIS 60642
INFO@FT-ARCH.COM

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA, LLC. Use of these drawings is limited to a specified project for persons herein and for this project only. These drawings are not to be reproduced, changed or copied in any form or manner whatsoever, nor are they to be assigned to any third party, without the written consent of FILORAMO TALSMA, LLC.
Do not scale drawings. Written dimensions preside over scale. These drawings may have been reproduced at a size different than originally drawn. Owner and Architect assume no responsibility for use of incorrect scale.

CERTIFICATION:

No.	Date	Issue Description
1	11/08/2017	Iss'd for Plan Commission Level-B Review

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
OWNER: CRESCO LABS
344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
SHEET NO: A000
PRINT DATE: 11/08/2017
SHEET NAME: COVER SHEET



2 DELIVERY TRUCK MANUVERING PLAN
1" = 60'-0"

GENERAL SITE NOTES

REFER TO SITE SURVEY, PREPARED BY CHOICE ONE ENGINEERING SURVEYORS, WEST CENTRAL OHIO OFFICE - 440 E. HOBASHIER RD., SIDNEY, OH 45365 (937-497-0200) FOR PROPERTY DIMENSIONS, COORDINATES, AREA AND LEGAL DESCRIPTION.

REFER TO PD PLAT/SURVEY SITE DIVISION DRAWINGS PREPARED BY HEINTZ ENGINEERING, LLC, 231 SANDPIPER PLACE, SIDNEY, OH 45365 (937-710-3310) FOR PD INFORMATION, INCLUDING ROADWAY, ROW EASEMENTS AND PD UTILITY INFORMATION.

REFER TO SURVEY & APPROVED CIVIL DRAWING PACKAGE PREPARED BY CHOICE ONE ENGINEERING SURVEYORS, WEST CENTRAL OHIO OFFICE - 440 E. HOBASHIER RD., SIDNEY, OH 45365 (937-497-0200), FOR EXACT DIMENSIONS, COORDINATES, AREA, SITE CONTOURS, WETLAND & FLOOD PLAIN LOCATIONS, EASEMENTS AND PROPOSED CONSTRUCTION LOCATIONS, ETC.

ARCHITECTURAL SITE PLAN IS SCHEMATIC FOR REFERENCE ONLY, REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. NOTIFY ARCHITECT AND CIVIL ENGINEER OF ANY CONFLICTS. REFER TO LANDSCAPE PLAN OVERSHEET A001-1 FOR LANDSCAPE INFORMATION, PARKING LOT LIGHTING AND ADDITIONAL PARKING DIMENSIONING.

PERIMETER SITE SECURITY FENCE:
8' foot high chain-link security fence with 7-gauge coil spring in lieu of top rail with three-strand 45 degree barb-wire out support. Fence all bottom to prevent removal. All vertical supports encased in concrete pier with bottom rail horizontal support 12" above grade.

HVAC EQUIPMENT:
The type of HVAC equipment is RTU (Rooftop Packaged Units) to be located on the Processing Headhouse roof. These units have an A-weighted sound power level of 87 dB, measured in accordance with AHRI standard 270-2008. Mechanical design and specific equipment selection has not been completed but sound levels should not exceed 55 dBA at the lot line.

ADA PARKING REQUIREMENTS

1) Accessible parking spaces need to be at least 96 inches (2440 mm or 8 feet) wide and should have an adjacent access aisle.
2) In case of Van Accessible parking spaces, an adjacent access aisle that is 8 feet wide is required. Standard vehicle parking space (Cars) must have a 5 feet wide access aisle adjacent to parking space.
3) Regulations allow two adjacent parking spaces to share a common access aisle.
4) Parking spaces and access aisles shall be in level with surface slopes not exceeding 1.50 (2%) in all directions.
5) All access aisles should remain free of obstructions at all times. Parked vehicle overhangs shall not reduce the clear width of an accessible route.
6) The boundary of the access aisle must be clearly marked. The end may be a curved or square shape.
7) Vertical Clearance: A minimum 98-inch of height clearance at van parking space, access aisle, and on vehicular route to and from van space is required.

SITE PLAN LEGEND

- PROPOSED MANU-FACTURING HEADHOUSE
- PROPOSED SOLID WALL GREENHOUSE
- CONCRETE PAVING OR WALKWAY
- FUTURE FIRE-LANE EXTENSION
- AREA FOR FUTURE BUILDING EXPANSIONS
- PROPOSED STORM WATER RETENTION AREA

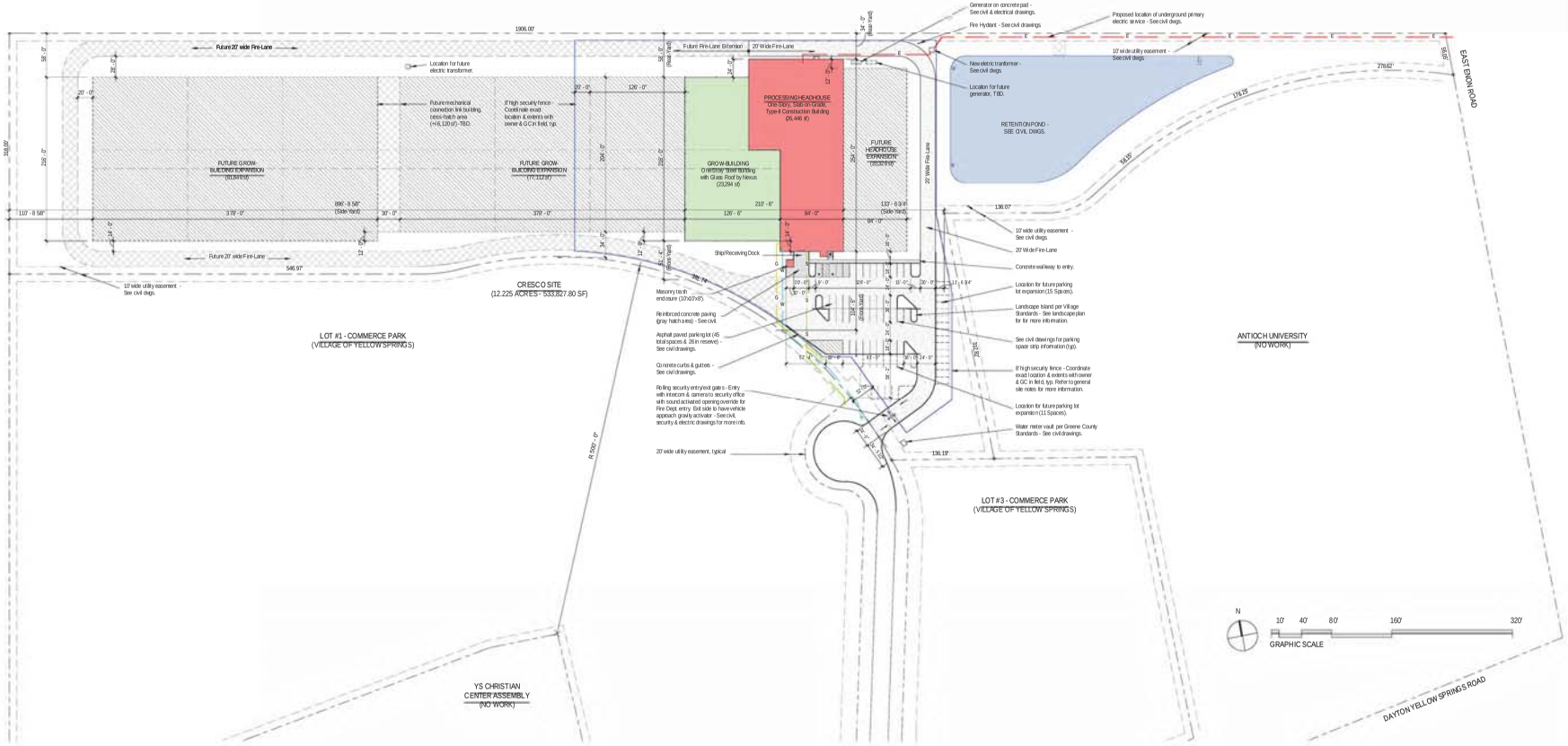
UTILITY LEGEND

- WATER SERVICE — W — W
- ELECTRIC SERVICE — E — E — E
- GAS SERVICE — G — G
- SAN. SEWER — SAN — SAN
- STORM-WATER SEWER — SS — SS

ZONING DATA

ZONING DISTRICT:	I-1 BUSINESS PARK (PLANNED DEVELOPMENT)
PERMITTED USES:	MANUFACTURING & RESEARCH / DEVELOPMENT
CONDITIONAL USES:	GREENHOUSE & MEDICAL TESTING LABORATORY
LOT AREA:	533,827.80 SF (12.255 acres)
MAX. LOT. COVERAGE:	70%
MAX. BUILDING HEIGHT:	40'
MIN. LOT AREA:	43,560 SF (1.0 acre)
MIN. LOT WIDTH:	150.0'
MIN. LOT FRONTAGE:	NONE
MIN. LOT DEPTH:	NONE
REQUIRED SETBACKS:	
FRONT YARD SETBACK:	20.0' (bldg.), 3.0' (parking)
SIDE-YARD SETBACK:	10.0' (min.) 25.0' (total)
REAR-YARD SETBACK:	25.0'
PROPOSED SETBACKS:	
FRONT SET BACK:	51'-4"
REAR SETBACK:	34'-0"
WEST SIDE SETBACK:	890'-8 58"
EAST SIDE SETBACK:	133'-5 34"
PROPOSED BUILDING:	
PROCESSING HEADHOUSE:	26,446 SF
GROW-BUILDING:	23,294 SF
TOTAL:	49,740 SF
PROPOSED COVERAGE:	
BUILDING AREA:	49,740 SF
PAVING AREA:	37,066.25 SF
TOTAL COVERAGE:	86,806.25 SF (16.26 %)
FUTURE BUILDING EXPANSIONS:	
PROCESSING HEADHOUSE:	20,328 SF
GROW-BUILDINGS:	164,880 SF
TOTAL EXPANSION AREA:	185,208 SF
FUTURE COVERAGE:	
TOTAL BUILDING AREA:	234,948 SF
TOTAL PAVING AREA:	80,958 SF
TOTAL FUTURE COVERAGE:	315,906 SF (59.17 %)
MIN. PARKING:	1 SPACE PER 1.5 EMPLOYEES
REQUIRED PARKING:	30 SPACES (45 EMPLYEES AT LARGEST SHIFT)
PROPOSED PARKING:	45 SPACES (2 HC)
RESERVE PARKING:	26 SPACES (1 HC)
LOADING BERTHS:	1

NOTE: PAVING AREA INCLUDES DRIVEWAY, PARKING, WALKS AND FIRE LANE.



1 ARCHITECTURAL SITE PLAN
1" = 60'-0"

DISCLAIMER:
These drawings are the property of the Architect and may not be used for any purpose or on any other project without prior written consent of the Architect. Reproduction of these drawings in whole or in part without written consent of the Architect is a violation of the Copyright Laws of the United States.
Do not scale drawings. Write dimensions on plans where dimensions are not shown. Report any errors, omissions or discrepancies to the Architect. Do not proceed with work in question if there is a discrepancy between the drawings and the contract documents.

FILORAMO TALSMA ARCHITECTURE
1700 SOUTH MAIN, #105
DAYTON, OHIO 45409
937.297.1460 FAX
WWW.FTARCHITECTS.COM

CERTIFICATION:

No.	Date	Issue Description
1	11/08/2017	Issued for Plan Commission Level B Review

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS

PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

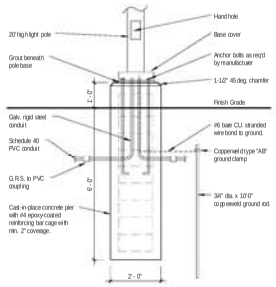
OWNER: CRESCO LABS — 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

SHEET NO.: A001

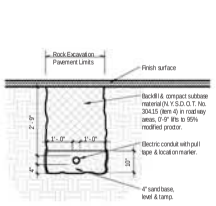
PRINT DATE: 11/08/2017

SHEET NAME: ARCHITECTURAL SITE PLAN

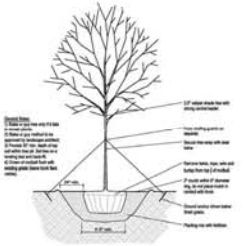
'SKYLINE' HONEY LOCUST



4 POLE LIGHT BASE DETAIL
1/2" = 1'-0"



3 PARKING LIGHT CONDUIT DETAIL
1/2" = 1'-0"



2 DECIDUOUS TREE PLANTING DETAIL
1/4" = 1'-0"

YELLOW SPRINGS LANDSCAPE REQUIREMENTS

Minimum Plant Material Standards.

1. All plant materials shall be hardy, free of disease and insects, and indigenous to Greene County.
2. Artificial plant material shall not be used within any required landscaped area. This shall not preclude the use of stone, shredded bark, wood chips, lava rock or similar accent materials within planting beds.
3. All plant material shall be installed in a manner that does not alter drainage patterns on site or adjacent properties, or obstruct vision for safety of ingress or egress.
4. No substitution of plant species or sizes shall be allowed unless approved by the Zoning Administrator in writing.
5. All plant material shall be planted in a manner that will not cause damage to utility lines (above- and below-ground) and public roadways.
6. Existing plant material which complies with the standards and intent of this chapter may be credited toward meeting the landscape requirements.
7. The overall landscape plan shall not contain more than 33% of any one plant species.
8. Plant material shall not be placed closer than four feet to any fence or property line.
9. Where trees are placed in two or more rows, planting shall be staggered in rows.

Minimum Standards for Berms.

1. If berms are constructed, they shall be constructed to maintain a side slope not to exceed a one- foot rise to a three-foot run ratio. When topography or other site conditions prevent construction of berms at this ratio, retaining walls or terracing may be permitted. If a berm is constructed with a retaining wall or by terracing, the earthen slope shall face the exterior of the site.
2. Bermed areas not containing planting beds shall be covered with grass or other living ground cover maintained in a healthy condition.
3. Berms shall be constructed so drainage patterns on site or toward adjacent properties will not be altered and vision will not be obstructed for safety of ingress and egress.
4. If berms are used for any part of a screen or greenbelt, all required plant material shall be placed on the top and side slope facing the exterior property line.

GENERAL LANDSCAPE NOTES

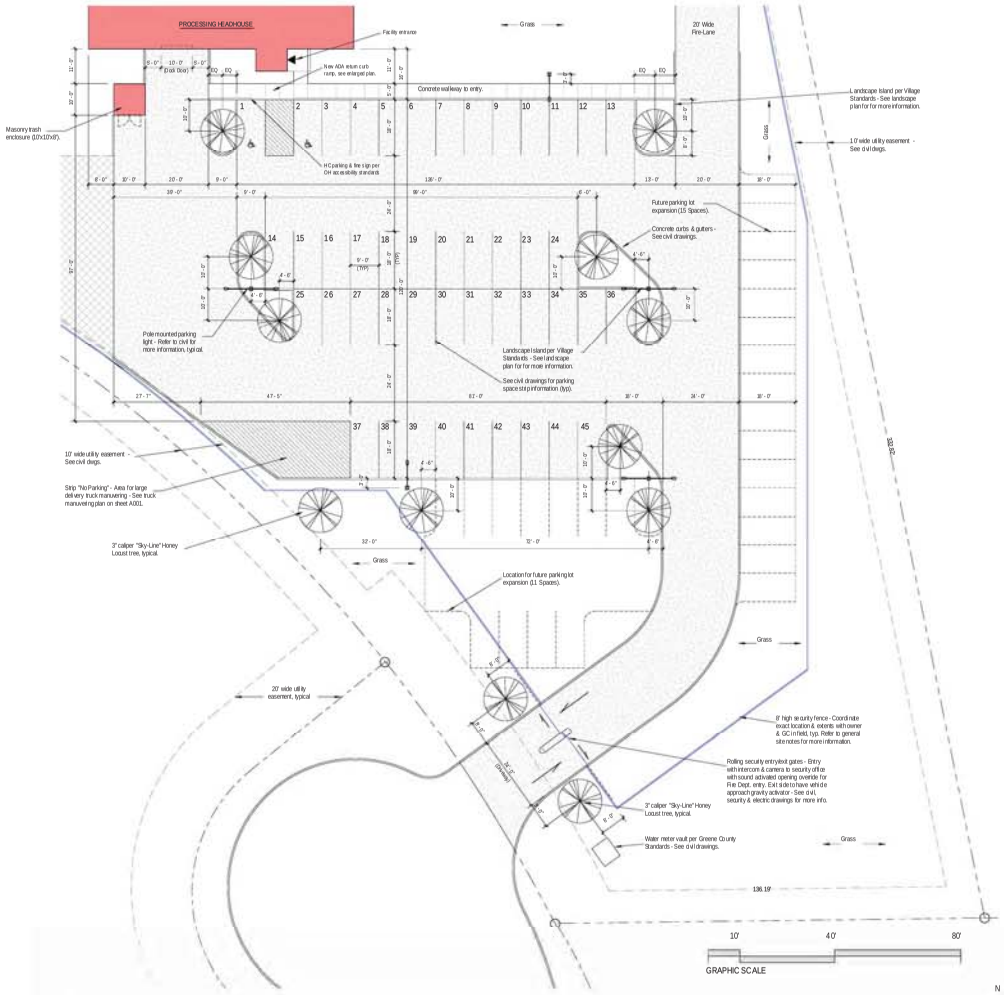
1. All plant material shall be high-quality nursery-grown stock. Substandard "B-Grade" or "Park Grade" plants are not acceptable.
2. All plant material shall be installed free of disease and in a manner that ensures the availability of sufficient soil and water to sustain healthy growth.
3. All plant material shall be planted with a minimum of 6" of organic soil and mulched to a depth of 3".
4. All plant material shall be planted in a manner which is not intrusive to utilities or pavement.
5. All shrub beds and landscape islands shall have 3" shredded hardwood mulch.
6. Plants shall be disease free and without broken twigs or branches.
7. Shrub beds shall have spaded edges.
8. All plant material shall be guaranteed for one full growing season after installation.
9. Planting specifications, other then those mentioned above shall conform with the American Standards for Nursery Stock, published by The American Association of Nurserymen.

GROWING MEDIUM

1. Three (3) foot minimum depth.
2. Three-Six (3'-6") minimum inside clear width; greater than Five (5) feet is desirable.
3. Soil Composition: 45-77% Silt, 0-25% Clay, 25-33% Sand.
4. Soil Acidity: pH 6.0 to 7.0. Amend soil as required to achieve this pH range.
5. Soil Organic Content: Three (3) to Five (5) percent.
6. Parkway planters to be as long and as continuous as possible.
7. Minimum Five (5) feet from the inside edge of the planter or tree pit to the last tree in any series or group of trees.
8. Percolation testing to be done prior to installation of any plantings.
9. Soil testing of existing soils to be done prior to installation of any plantings.
10. Mechanical subsurface drainage required in areas with poor percolation and drainage rates.
11. Groundcover and low shrub planting required instead of grass, bark or grave mulch, or other non-live materials.
12. "Structural Soil" (E.G. "Cornell" Mix, etc.) at a depth of Two foot Six (2' 6") inches and/or root paths required below sidewalk slabs between parkway planter and other planting areas or greenspaces.
13. When sidewalks are replaced, "Structural Soil" or root paths are required below sidewalk slabs to permit root growth beyond small pit or cut-out sidewalk.

LANDSCAPE MAINTENANCE

1. All required landscaping on private property to be maintained throughout the life of the project; obligation assumed by subsequent owners.
2. Rainfall to be supplemented with water for a total rate of One (1) inch per week during the growing seasons for the first Three (3) years.
3. All required landscaping to be replaced throughout the life of the project, as required, obligation assumed by subsequent owners.



1 PROPOSED LANDSCAPE PLAN
1/16" = 1'-0"

DISCLAIMER:
These drawings are the property of Filoramo Talsma Architecture. Any reproduction, in whole or in part, without the written permission of Filoramo Talsma Architecture is prohibited. Only the original signature, seal, or certification is an original work product of Filoramo Talsma Architecture.

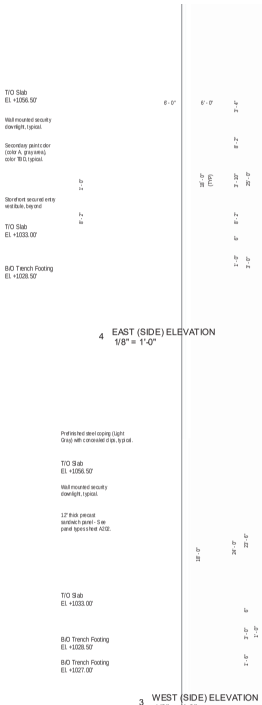
Do not scale drawings. Write dimensions on site. Verify all dimensions, notify architect of any discrepancies or of a size different than specified. Do not proceed with work in question until all discrepancies are resolved.

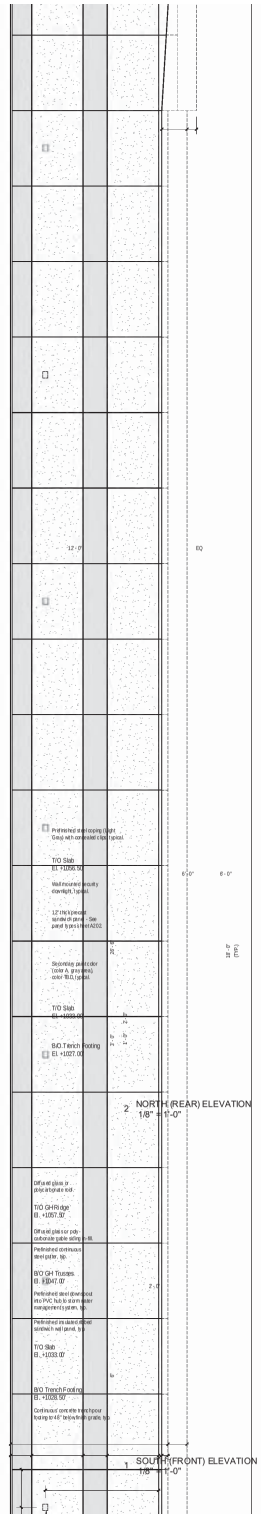
FILORAMO TALSMA ARCHITECTURE
1295 N. YELLOW SPRINGS ST. #C100
SPRINGFIELD, OHIO 45504
(937) 322-7000

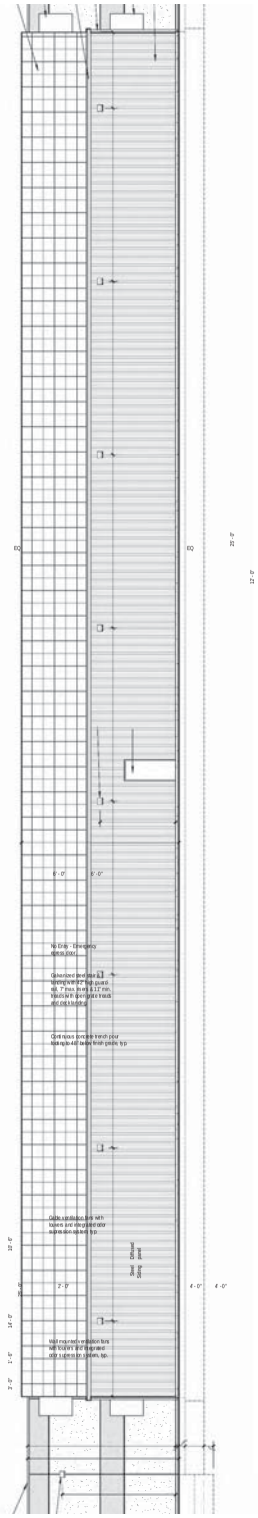
CERTIFICATION:

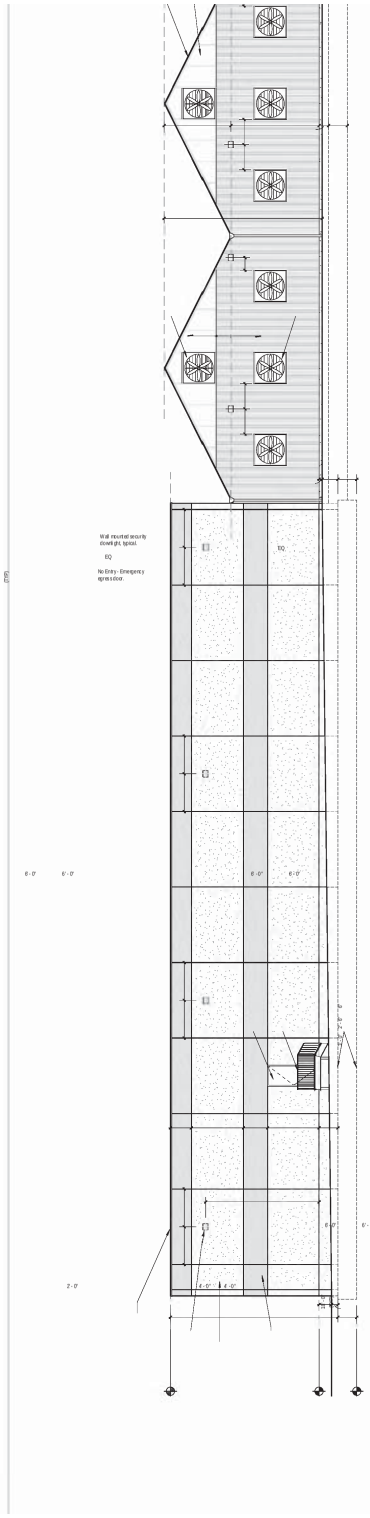
PROJECT NAME:	CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS:	344 E. Dayton Yellow Springs Rd., Fairborn Springs, OH 45387
OWNER:	CRESCO LABS
	344 E. Dayton Yellow Springs Rd., Fairborn Springs, OH 45387

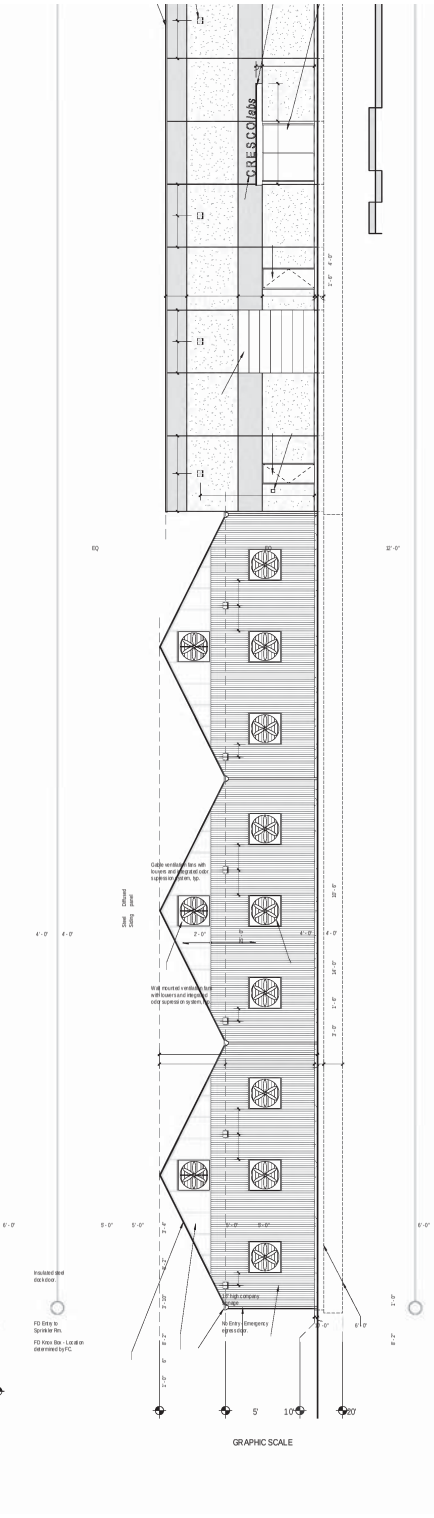
SHEET NO.:	A002
PRINT DATE:	11/09/2017
SHEET NAME:	LANDSCAPE PLAN











GENERAL ELEVATION NOTES

1) All windows and exterior doors to have extruded, dark-bronze or black anodized alum. frames (4 1/2" depth) with thermal breaks. Windows supplier / installer to submit shop drawings to general contractor for approval.

2) All windows and exterior door glazing to be insulated, Low-E.

3) a) All door glazing shall be tempered safety glass. b) All glazing within 24" horizontally and 60" vertically from floor adjacent to doors shall be tempered safety glass. c) all glazing less than 18" above finish floor and over 9 square feet in sized individual pane) shall be tempered safety glass. e) Glazing adjacent to stairways and landings within 36" horizontally and with in 60" from walking surface shall be tempered safety glass.

4) All door glazing to be tempered.

5) Window supplier installer to field measure all openings prior to window fabrication and installation. Coordinate field time with general contractor.

6) Window supplier / installer to provide all flashings, receptors, fasteners, corner dadding, backer rod, sealants and all other materials to complete job.

7) Sealants to match color of window and/or door frames. Color samples to be submitted to general contractor for approval.

8) All exterior paints & sealers to be approved by general contractor and architect prior to purchase and work. Color samples to be submitted to general contractor for approval.

9) All sealants used for expansion joints, control joints or joints between precast panels shall be colored as to match paint/sealant to be applied to the panel. Color samples to be submitted to general contractor for approval.

10) Storefront system shall be Tubelite 14000 multiplane series or equal. 2" wide x 4-1/2" thermally broken frames with 1" insulated low-e glass.

U-Value: 0.42
Air Infiltration: 0.047 CFM/ft2 @ 6.24 PSF

Refer to Nexus drawings for all Grow-Building information. Grow-Building siding, solid roofs, scupper boxes, downspouts and related trim shall be "Polar White", UNO.

Refer to sheet A202 for precast panel plan, elevations and notes.

DISCLAIMER:
These drawings are the property of Kitchen Design Group and are protected by copyright laws. Reproduction, publication or use of the drawings without permission is prohibited. Any reproduction, publication or use of the drawings without permission, or any other use assigned to Kitchen Design Group, shall be deemed a violation of the rights of Kitchen Design Group.

Do not scale drawings. Written dimensions provide the only basis for layout. Verify all dimensions and report any discrepancies to the Architect. Do not reproduce in a size different from specified. Copies of these drawings are available for use on a licensed basis.

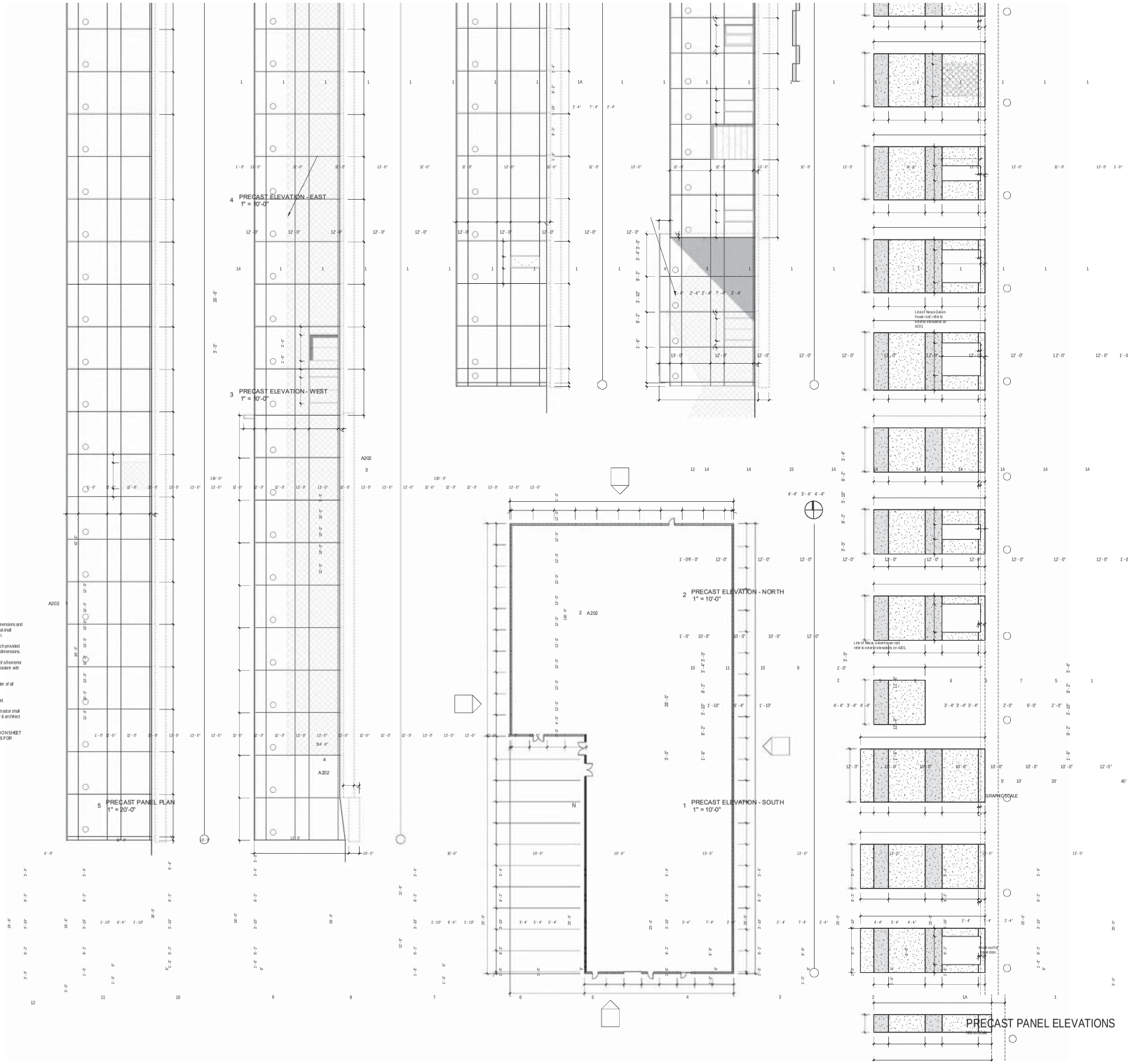
CERTIFICATION:

No.	Date	Issue Description
1	11/18/2021	Issued for Plan Commission Level B Review

PROJECT NAME:
CRESCO LABS - YELLOW SPRINGS

PROJECT ADDRESS:
344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER:
CRESCO LABS
344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387



PRECAST PANEL ELEVATIONS

PRECAST PANEL NOTES

1) Refer to panel elevations for panel configurations, type, dimensions and openings on sheet A400. Precast mfr. shall be Fabcon or equal shall submit shop drawings for review & approval prior to fabrication.

2) Bar truss roof structure shall bear on steel or concrete hanch provided by precast mfr. Refer to structural drawings for truss bearing dimensions.

3) Precast mfr. shall provide chamfer edges along perimeter of all exterior door & window openings (exterior side) as to align and be consistent with decorative reveal chamfers.

4) Precast mfr. shall provide 1/2" chamfer edge along perimeter of all exterior door & window openings (interior side)

5) Precast walls to be painted - Paint specification & colors tbd.

6) All precast wall sealant color to match adjacent panel. Contractor shall submit color samples and specifications for general contractor & architect approval prior to installation.

NOTE: REFER TO FULL BUILDING ELEVATIONS SHOWN ON SHEET A301 AND FULL FACILITY FLOOR PLAN SHOWN ON A101 FOR MORE INFORMATION.

DISCLAIMER:
These drawings are the property of Kitchen Design Group and are not to be used for any other purpose than the specific project shown on the drawings. Any other use, reproduction or distribution without the express written consent of Kitchen Design Group is prohibited. Copyright © 2017 Kitchen Design Group, LLC.

Do not scale drawings. Written dimensions provide the only basis for layout. Contractor shall verify all dimensions and report any discrepancies to the designer. Do not proceed with any work if there is a conflict between the specified dimensions and the actual conditions.

CERTIFICATION:

No.	Date	Issue Description
1	11/08/2017	Issued for Plan Commission Level B Review

PROJECT NAME:
CRESCO LABS - YELLOW SPRINGS

PROJECT ADDRESS:
344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER:
CRESCO LABS
344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

ELEVATION DATUM
ALL ELEVATIONS ARE BASED ON NAVD 88 (ODOT VRS GEOID 12A).

GENERAL NOTES AND DETAILS
ALL CONSTRUCTION METHODS, MATERIALS, AND SPECIFICATIONS SHALL COMPLY WITH VILLAGE OF YELLOW SPRINGS STANDARDS AND SPECIFICATIONS AND/OR OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARDS AND SPECIFICATIONS (INCLUDING CURRENT SUPPLEMENTAL SPECIFICATIONS 800 AND 832), WHICHEVER IS MORE RESTRICTIVE AS DETERMINED BY VILLAGE OF YELLOW SPRINGS.

UNDERGROUND UTILITIES
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION ACCORDING TO THE BEST AVAILABLE DATA. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING THEM IN THE FIELD PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THEM. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) 48 HOURS PRIOR TO CONSTRUCTION.

NON-MEMBERS MUST BE CALLED DIRECTLY.

UTILITY OWNERSHIP
LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

STREETS AND STORM SEWER
VILLAGE OF YELLOW SPRINGS
100 DAYTON STREET
YELLOW SPRINGS, OHIO 45387
(937) 767-7205
ATTN: JASON HAMBY

TELEPHONE
AT&T
3233 WOODMAN DRIVE, ROOM 225
DAYTON, OHIO 45420
(937) 296-3894
ATTN: JESSE WEAD

WATER AND SANITARY
VILLAGE OF YELLOW SPRINGS
100 DAYTON STREET
YELLOW SPRINGS, OHIO 45387
(937) 767-7208
ATTN: BRAD AULT

CABLE
CHARTER COMMUNICATIONS
3691 TURNER DRIVE
DAYTON, OHIO 45414
(937) 396-8386
ATTN: CHRIS GRAVES

ELECTRIC
DP&L
1900 DRYDEN ROAD
DAYTON, OHIO 45439
(937) 331-4521
ATTN: WILLIAM GOURLEY

GAS
VECTREN
6500 CLYO ROAD
CENTERVILLE, OHIO 45459
(937) 312-2533
ATTN: DON SPECHT

OHIO UTILITIES PROTECTION SERVICE 2 WORKING DAYS BEFORE YOU DIG CALL TOLL FREE 800-362-2764

UTILITY INTERFERENCE
IF, DURING THE CONSTRUCTION, INTERFERENCE ARISES WITH EXISTING UTILITIES IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY AND COORDINATE AS NEEDED WITH THE UTILITY COMPANY INVOLVED. ANY AND ALL WORK REQUIRED FOR PRIVATE UTILITIES SHALL BE COORDINATED WITH AND, IF REQUIRED, DONE BY THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS. THE CONTRACTOR SHALL NOTIFY, AT LEAST 7 DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING WIRES, POLES, PIPES, CONDUITS, MANHOLES, OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS.

EXISTING TILE HOOKUPS
THE DRAINAGE TILE CURRENTLY CONNECTED TO THE EXISTING STORM SEWER SHALL BE CONNECTED TO THE PROPOSED STORM SEWER. ANY DRAINAGE TILE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. ALL TILE REMOVED, REPLACED AND/OR CONNECTED TO THE STORM SEWER SHALL BE NOTED ON THE RECORD DRAWINGS AND SHALL BE INSPECTED BY VILLAGE OF YELLOW SPRINGS BEFORE THEY ARE COVERED.

ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS OR PLUGGED AS APPROVED AND DIRECTED BY VILLAGE OF YELLOW SPRINGS CONNECTION OF INTERSECTING DRAIN TILES AND THE PROPOSED STORM SEWER SHALL BE THROUGH MANUFACTURED TEES, UNLESS OTHERWISE APPROVED BY VILLAGE OF YELLOW SPRINGS. COST OF ALL THE ITEMS ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES
WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, VILLAGE OF YELLOW SPRINGS SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT THE EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, VILLAGE OF YELLOW SPRINGS SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY. COST OF ALL THE ITEMS ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

MUD
THE TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON PUBLIC STREETS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR.

EXISTING UTILITY CONFLICT NOTE
IF A CONFLICT ARISES WITH EXISTING UTILITIES, THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY TO GET THE CONFLICT RESOLVED.

UTILITY STATEMENT
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. CHOICE ONE ENGINEERING CORPORATION MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN-SERVICE OR ABANDONED. CHOICE ONE ENGINEERING CORPORATION FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. CHOICE ONE ENGINEERING CORPORATION HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SAFETY
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

MASONRY COLLAR
A CONCRETE COLLAR SHALL BE PROVIDED WHERE PROPOSED STORM SEWER PIPE IS CONNECTED TO AN EXISTING PIPE. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTORS OVERALL LUMP SUM BID FOR THE PROJECT.

DEWATERING
ANY NECESSARY DEWATERING OR PUMPING NECESSARY FOR THE CONSTRUCTION OF ANY ITEMS SHALL BE INCIDENTAL TO THOSE PARTICULAR CONSTRUCTION ITEMS AND SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT.

CLEAN WATER NOTE
ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED

STORM SEWER INSTALLATION
THIS WORK CONSISTS OF CONSTRUCTING STORM SEWER. THE CONTRACTOR SHALL PROVIDE ALL TOOLS AND EQUIPMENT REQUIRED FOR INSTALLING THESE ITEMS. THE WORK ALSO INCLUDES FURNISHING ALL MATERIALS, EXCAVATING, BEDDING, LAYING PIPE, JOINTING, BACKFILLING, REMOVAL AND RESTORATION OF DISTURBED FACILITIES AND SURFACES, CURB REPAIR, SIDEWALK REPAIR, PAVEMENT REPAIR (i.e. PAVEMENT IN STREETS, ALLEYS AND DRIVEWAYS), DISPOSAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIALS, AND OTHER WORK NECESSARY TO COMPLETE THE ITEMS. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD LOCATE ALL EXISTING STORM SEWER, AND OTHER UTILITIES, PRIOR TO INSTALLING THE PROPOSED STORM SEWER SYSTEM. THE EXISTING STORM SEWER AND LATERALS SHOWN ON THE PLANS ARE IN THE APPROXIMATE LOCATION AND IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD LOCATE PROPOSED TIE-INS TO THE EXISTING STORM PRIOR TO ANY STORM SEWER CONSTRUCTION. ALL TIE-INS SHALL BE THROUGH PREMANUFACTURED TEES OR HOLES INSTALLED USING A CORING MACHINE. PIPE MAY BE ANY OF THE PIPE TYPES LISTED BELOW UNLESS OTHERWISE SPECIFIED ON THE PLANS.

TYPES OF PIPE PERMITTED	ODOT MATERIALS NUMBERS
CORRUGATED POLYETHYLENE SMOOTH-LINED PIPE (CPSLP)	707.33
POLYVINYL CHLORIDE SOLID WALL PIPE (SDR-35)	707.45
REINFORCED CONCRETE PIPE	706.02

GENERAL NOTES
1. INSTALL AND TEST ALL UTILITIES PER GREENE COUNTY STANDARDS.

2. ALL DISTURBED AREAS AND ALL NON-PAVEMENT AREAS SHALL HAVE A MINIMUM OF 6" OF TOP SOIL PLACED AND ARE TO BE SEEDED AND MULCHED PER ODOT ITEM 659.

3. ALL CONCRETE SHALL BE ODOT QC MISC. (CEMENT ONLY - NO POZZOLAN MATERIAL).

4. CONTRACTOR TO BE RESPONSIBLE FOR ANY PERMITS OR FEES THAT MAY BE NECESSARY FOR THE COMPLETION OF THE SITE WORK.

5. ALL WORK SHALL CONFORM WITH ALL FEDERAL, STATE, AND LOCAL ADA REGULATIONS AND STANDARDS.

6. ALL ITEMS ON SITE PLAN SHALL BE CONSTRUCTED PER GREENE COUNTY STANDARDS.

7. ALL PIPING/CONDUITS AND RELATED WORK IS TO BE IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 811, DATED JANUARY 18, 2013

MAINTAINING TRAFFIC
MAINTAIN TRAFFIC AS INDICATED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS". ALSO THE FOLLOWING REQUIREMENTS SHALL APPLY.

EXCAVATIONS WITHIN PUBLIC RIGHT-OF-WAY LIMITS SHALL BE CLOSED AT TIMES WHEN WORK IS NOT BEING PERFORMED.

LOCAL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING THE TIME THAT AN APPROVED CLOSURE AND DETOUR IS ALLOWED BY THE GOVERNING AUTHORITY.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING NECESSARY TRAFFIC CONTROL DEVICES AND PAVEMENT REPAIR MATERIALS TO MAINTAIN THE TRAVELED PAVEMENT SAFELY.

NO SHUT DOWN OF ANY OWNER FACILITY DRIVE, ROADWAY OR PARKING LOT WILL BE ALLOWED WITHOUT WRITTEN CONSENT FROM THE OWNER. ALL OWNER ROADWAYS MUST HAVE AT LEAST ONE LANE OPEN AT ALL TIMES. NO STAGING OF TRUCKS OUTSIDE OF CONSTRUCTION LIMITS WILL BE PERMITTED WITHOUT CONSENT FROM THE OWNER.

SUBCONTRACTOR SUPERVISION
THE CONTRACTOR IS REQUIRED TO HAVE SOMEONE ON-SITE TO SUPERVISE THE SUBCONTRACTOR FOR QUALITY CONTROL PURPOSES AND TO PROVIDE ANY NECESSARY ASSISTANCE TO THE SUBCONTRACTOR TO ENSURE QUALITY WORK.

COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTORS OVERALL LUMP SUM BID FOR THE PROJECT.

EXCAVATION AND EMBANKMENT
TOPSOIL SHALL BE REMOVED FROM ALL DISTURBED AREAS AND ALL AREAS TO BE EXCAVATED OR EMBANKED. A MINIMUM OF 6" OF TOPSOIL SHALL BE FINE GRADED ON ALL DISTURBED AREAS.

ALL EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR OR AS DETERMINED BY THE OWNER. TESTING MAY BE REQUIRED BY THE OWNER.

SAWCUT PAVEMENT JOINTS
MORE THAN ONE SAWCUT MAY BE NECESSARY TO ENSURE A CLEAN CUT. JUST PRIOR TO ASPHALT OR CONCRETE PLACEMENT, ASPHALT MATERIAL SHALL BE PLACED ON THE VERTICAL FACE OF SAWCUT JOINTS PRIOR TO PAVING AS PER 401.14. AFTER THE ASPHALT WORK IS COMPLETED, THE TRANSVERSE JOINTS SHALL BE SEALED WITH LIQUID ASPHALT.

WATER LINE CROSSING SEPARATION
WATER LINE SHALL BE LAID AT LEAST 10' HORIZONTALLY FROM ANY SEWERS. AT CROSSINGS, THE WATER MAIN SHALL HAVE A MINIMUM VERTICAL DISTANCE OF 18" FROM STORM AND SANITARY SEWERS. ALSO ONE FULL LENGTH OF WATER MAIN SHALL BE LOCATED SO THE JOINTS ARE AS FAR FROM THE STORM AND SANITARY SEWERS AS POSSIBLE.

PAVEMENT MARKINGS
ALL PAVEMENT MARKINGS SHALL BE PER ODOT ITEM 640 AND 642. ALL PAVEMENT MARKINGS TO BE TYPE 1, UNLESS APPLICATION IS REQUIRED WHEN AIR AND PAVEMENT TEMPERATURES ARE BETWEEN 35 °F AND 50 °F, THEN OBTAIN APPROVAL FROM THE OWNER AND APPLY ONLY PRE-QUALIFIED TYPE 1A COLD WEATHER TRAFFIC PAINT MATERIALS PER ITEM 642 AND 740.

ALL MARKING LAYOUT AND COLOR SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

DOWNSPOUTS
THE CONTRACTOR SHALL CONNECT ANY DOWNSPOUTS AS SHOWN ON THE SITE PLAN OR TO THE CLOSEST STORM PIPING OR CATCH BASINS USING CPSLP OR PVC SDR-35 SEWER OR APPROVED EQUAL.

UTILITIES
CONTRACTOR SHALL INSTALL AND/OR COORDINATE THE INSTALLATION OF GAS, ELECTRIC, TELEPHONE AND CABLE TELEVISION. CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES PRIOR TO INSTALLATION OF ANY FACILITIES. ALL UTILITIES SHALL BE INSTALLED PER EACH PARTICULAR UTILITY COMPANY'S STANDARDS AND PROCEDURES. CONTRACTOR TO VERIFY ACTUAL SIZES, LOCATIONS (POINTS OF ENTRY INTO THE BUILDING) AND INVERTS OF ALL UTILITIES TYING INTO THE BUILDING WITH ARCHITECT PLANS BEFORE CONSTRUCTION.

ASPHALT PAVEMENT REPLACEMENT NOTE
ANY EXISTING PAVEMENT THAT IS TO BE REMOVED SHALL BE SAWCUT FULL DEPTH AND RESTORED TO MATCH THE EXISTING PAVEMENT CROSS SECTION UNLESS OTHERWISE NOTED IN THE PLANS.

ASPHALT
ALL ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY TO THIS PROJECT EXCEPT FOR ODOT ITEM 401.20 ASPHALT BINDER PRICE ADJUSTMENT (ASPHALT CONCRETE BID ITEMS ARE NOT ELIGIBLE FOR ANY ASPHALT BINDER PRICE ADJUSTMENT).

ALL ASPHALT DELIVERED SHALL BE ACCOMPANIED WITH A LOAD TICKET AS PER ITEM 401.21.

REVIEW OF DRAINAGE FACILITIES
BEFORE FINAL ACCEPTANCE BY THE OWNER, REPRESENTATIVES OF THE OWNER, AND THE CONTRACTOR, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. ALL EXISTING SEWERS INSPECTED BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO PRE-EXISTING CONDITION OF THE SEWER. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO SATISFACTION OF THE OWNER.

ALL NEW CONDUITS, UNDERDRAINS (INCLUDING THE STONE BACKFILL ABOVE THE UNDERDRAIN PIPING), INLETS, CATCH BASINS, MANHOLES, SWALES/DITCHES, DETENTION BASINS AND BIO-RETENTION PONDS CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER (INCLUDING SEDIMENT) AND IN A CLEAN CONDITION AND FULLY AND PROPERLY FUNCTIONAL BEFORE THE PROJECT WILL BE ACCEPTED BY THE OWNER.

CLEARING AND GRUBBING
CONTRACTOR TO CLEAR THE AREA AS SHOWN ON THE PLANS AND/OR AS NEEDED TO WORK ON THIS PROJECT. UNLESS STATED ELSEWHERE IN THE PLANS, CLEARING AND GRUBBING IS TO BE KEPT TO A MINIMUM IN ORDER TO PRESERVE THE WOODED AREAS.

MODIFICATIONS
ANY MODIFICATIONS TO THE SPECIFICATIONS OR CHANGES TO THE WORK AS SHOWN ON THE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE OWNER.

RESTORATION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DISTURBED AND/OR DAMAGED AREAS, INCLUDING PAVEMENT, TO CONDITIONS EQUAL TO OR BETTER THAN CONDITIONS PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF THE OWNER.

MISCELLANEOUS
THE INTENT OF THESE DRAWINGS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. PERFORMANCE BY THE CONTRACTOR SHALL BE REQUIRED TO THE EXTENT CONSISTENT WITH THE CONTRACT DOCUMENTS AND REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INTENDED RESULTS.

IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE OWNER'S REPRESENTATIVE'S INTERPRETATION.

CONTRACTORS SHALL VERIFY ALL GRADES, ELEVATIONS, AND EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

CONTRACTOR'S LUMP SUM BID PRICE SHALL INCLUDE ALL ITEMS AND OPERATIONS NEEDED, REQUIRED AND NECESSARY FOR THE PROPER EXECUTION OF THE PROJECT AND TO COMPLETE ALL WORK.

GEOTECHNICAL ENGINEERING REPORT
CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT FOR THE PROPOSED PROJECT AND PERFORM ALL GEOTECHNICAL WORK IN ACCORDANCE WITH THIS REPORT.

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA, LLC. Use of these drawings is limited to a specified project for persons herein and for this project only. These drawings are not to be reproduced, changed or copied in any form or manner whatsoever, nor are they to be assigned to any third party, without the written consent of FILORAMO TALSMA, LLC.
Do not scale drawings. Written dimensions preside over scale. These drawings may have been reproduced at a size different than originally drawn. Owner and Architect assume no responsibility for use of incorrect scale.

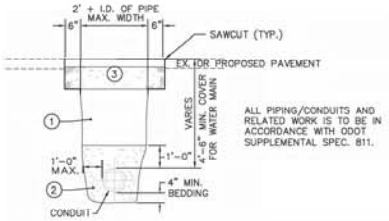
FILORAMO TALSMA ARCHITECTURE

Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
WWW.CHOICEONEENGINEERING.com

CERTIFICATION:

No:	Date	Issue Description
1	11/08/2017	Iss'd for Plan Commission Level-B Review

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
OWNER: CRESCO LABS
344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
SHEET NO: C101
PRINT DATE: 11/08/2017
SHEET NAME: GENERAL NOTES



TRENCH DETAIL

NO SCALE

NOTES

A. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONES, ROCKS, ETC., GREATER THAN 3" IN DIAMETER.

B. ALL TRENCHES WITHIN 5' OF FUTURE OR EXISTING BUILDINGS, PAVEMENT EDGES, CURB, DRIVEWAYS OR WALKS SHALL BE BACKFILLED WITH STRUCTURAL MATERIAL.

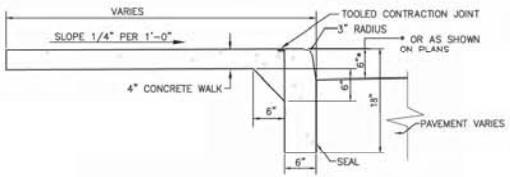
C. THE OPEN ENDS OF ALL PIPES AND SPECIAL CASTINGS SHALL BE PLUGGED OR OTHERWISE CLOSED WITH A WATERTIGHT PLUG TO THE APPROVAL OF THE GOVERNING AGENCY BEFORE LEAVING THE WORK FOR THE NIGHT.

(1) OFF-PAVEMENT BACKFILL CAN BE COMPACTED EXISTING NATIVE MATERIAL IN 12" MAXIMUM LIFTS OR AS APPROVED BY THE GOVERNING AGENCY. IN-PAVEMENT STRUCTURAL BACKFILL MATERIAL SHALL BE ODOT SPECIFICATION 304 CRUSHED STONE IN 6" MAXIMUM LIFTS UNLESS OTHERWISE APPROVED OTHERWISE ON COMPACTING METHOD AND EQUIPMENT. IN EXISTING ROADWAYS BACKFILL SHALL CONSIST OF LOW DENSITY MORTAR BACKFILL.

(2) STRUCTURAL BEDDING SHALL BE CRUSHED STONE OR GRAVEL, ODOT SPECIFICATION #57 OR #67, OR OTHER APPROVED EQUAL.

(3) OFF PAVEMENT AREAS SHALL BE PROVIDED WITH A MINIMUM OF 6" OF TOPSOIL OVER THE COMPACTED NATIVE MATERIAL AND THEN SEEDED AND MULCHED PER ITEM 659.

IN-PAVEMENT AREAS.
SEE PAVEMENT COMPOSITION. WHERE THE EXISTING PAVEMENT IS THICKER, THE CONTRACTOR SHALL INCREASE THE PAVEMENT THICKNESS TO MATCH EXISTING.



COMBINED CURB AND SIDEWALK DETAIL

NOTES

A. WALK TO BE POURED ON 4" MIN. COMPACTED STRUCTURAL BEDDING.

B. PROVIDE BROOM FINISH TO ALL EXPOSED SURFACES.

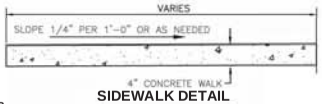
C. CONCRETE SHALL CONFORM TO ODOT ITEM 499 CONCRETE. CONCRETE WORK SHALL CONFORM TO ODOT ITEM 608, UNLESS OTHERWISE SPECIFIED WITHIN.

D. PROVIDE EDGING AROUND ALL EXPOSED SURFACES.

E. USE WHITE PIGMENTED CURING COMPOUND IMMEDIATELY AFTER FINISHING SURFACES. ANY OTHER METHOD OR TYPE OF CURING COMPOUND MUST BE PREAPPROVED.

F. ALL CONCRETE SHALL BE ODOT QC MISC. (CEMENT ONLY – NO POZZOLAN MATERIAL).

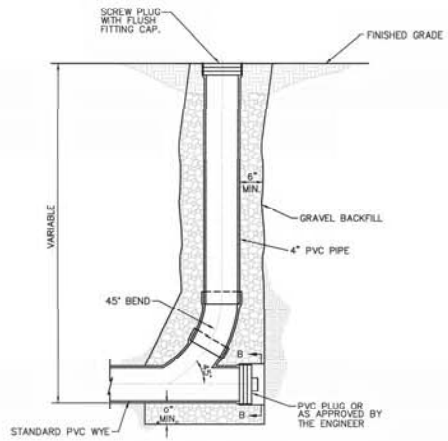
G. PROPOSED CONCRETE SIDEWALK SHALL BE JOINTED AS CLOSE TO SQUARE AS POSSIBLE. JOINT SPACING MAY VARY SLIGHTLY DEPENDING ON THE LENGTH AND WIDTH OF THE PROPOSED SIDEWALK AREAS. JOINT SPACING SHALL TYPICALLY RANGE FROM 4'X4' TO 10'X10'. IN ALL CASES THE SIDEWALK SHALL BE JOINTED SO THAT THE MAXIMUM ASPECT RATIO (OF PANEL LENGTH TO WIDTH) OF THE JOINTING IS 1.25:1 OR LESS. CONTRACTOR TO VERIFY METHOD AND TYPE OF CONTROL JOINTING WITH OWNER PRIOR TO PERFORMING WORK.
H. CURB/SIDEWALK SHALL HAVE EXPANSION JOINTS EVERY 100'.



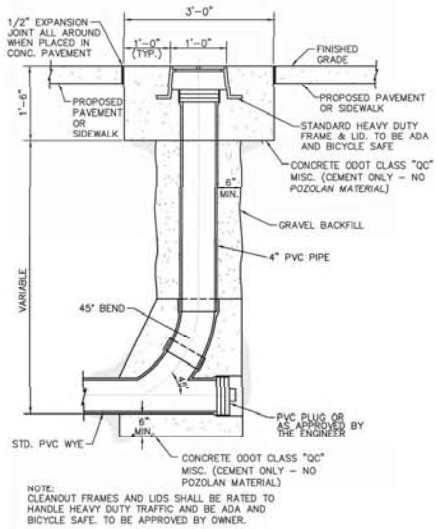
SIDEWALK DETAIL

NOTES

A. WALK TO BE POURED ON 4" MIN. COMPACTED STRUCTURAL BEDDING.
B. PROVIDE BROOM FINISH TO ALL EXPOSED SURFACES.
C. CONCRETE SHALL CONFORM TO ODOT ITEM 499 CONCRETE. CONCRETE WORK SHALL CONFORM TO ODOT ITEM 608, UNLESS OTHERWISE SPECIFIED WITHIN.
D. PROVIDE EDGING AROUND ALL EXPOSED SURFACES.
E. USE WHITE PIGMENTED CURING COMPOUND IMMEDIATELY AFTER FINISHING SURFACES. ANY OTHER METHOD OR TYPE OF CURING COMPOUND MUST BE PREAPPROVED.
F. ALL CONCRETE SHALL BE ODOT QC MISC. (CEMENT ONLY – NO POZZOLAN MATERIAL).
G. PROPOSED CONCRETE SIDEWALK SHALL BE JOINTED AS CLOSE TO SQUARE AS POSSIBLE. JOINT SPACING MAY VARY SLIGHTLY DEPENDING ON THE LENGTH AND WIDTH OF THE PROPOSED SIDEWALK AREAS. JOINT SPACING SHALL TYPICALLY RANGE FROM 4'X4' TO 10'X10'. IN ALL CASES THE SIDEWALK SHALL BE JOINTED SO THAT THE MAXIMUM ASPECT RATIO (OF PANEL LENGTH TO WIDTH) OF THE JOINTING IS 1.25:1 OR LESS. CONTRACTOR TO VERIFY METHOD AND TYPE OF CONTROL JOINTING WITH OWNER PRIOR TO PERFORMING WORK.
H. SIDEWALK SHALL HAVE EXPANSION JOINTS EVERY 100'.



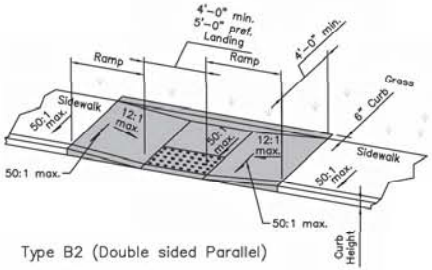
CLEANOUT DETAIL



NOTE:
CLEANOUT FRAMES AND LIDS SHALL BE RATED TO HANDLE HEAVY DUTY TRAFFIC AND BE ADA AND BICYCLE SAFE. TO BE APPROVED BY OWNER.

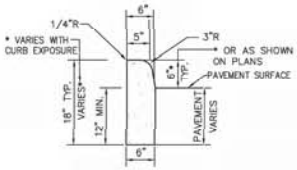
CLEANOUT DETAIL IN PAVEMENT/WALK

NO SCALE



Type B2 (Double sided Parallel)

PARALLEL CURB RAMP DETAIL



TYPE 6 BARRIER CURB

CURB NOTES

A. CONCRETE AND WORK SHALL MEET THE REQUIREMENTS SET FORTH IN ODOT ITEM 609 CURBING.

B. CURBING SHALL HAVE CONTRACTION JOINTS EVERY 10' AND EXPANSION JOINTS EVERY 100'.

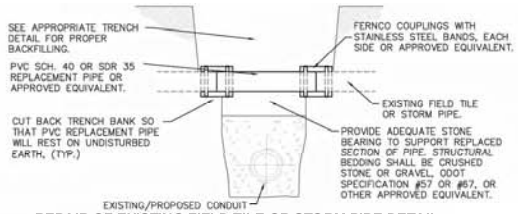
C. MINIMUM OF 6" OF ODOT 304 SHALL BE PLACED UNDER CURBING.

D. CURBING SHALL BE BACKFILLED IMMEDIATELY AFTER FORMS ARE REMOVED OR AS SOON AS PRACTICAL WHEN SLIPFORMING PRIOR TO OTHER CONSTRUCTION OPERATIONS.

E. PROVIDE BROOM FINISH AND EDGING TO ALL EXPOSED SURFACES.

F. APPLY WHITE PIGMENTED CURING COMPOUND ON ALL SURFACES INCLUDING BACK IMMEDIATELY AFTER FINISHING SURFACES. ANY OTHER METHOD OR TYPE OF CURING COMPOUND MUST BE PREAPPROVED.

G. ALL CONCRETE SHALL BE ODOT QC MISC. (CEMENT ONLY – NO POZZOLAN MATERIAL).



REPAIR OF EXISTING FIELD TILE OR STORM PIPE DETAIL

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA ARCHITECTURE. Reproduction or publication in whole or in part, without written permission is prohibited. The information contained herein is to be used only for the project specified in agreement between the owner and FILORAMO TALSMA LLC.

Do not scale drawings. Written dimensions provide the location of walls, openings, and other features. Verify dimensions and report any discrepancies to the architect before proceeding with work. Do not proceed with work in question until resolved.

FILORAMO TALSMA ARCHITECTURE
1306 N. FULTON AVE. #205
EVANSVILLE, INDIANA
812.477.1100 FAX
www.FTARCHITECTURE.com

Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8534
PORTLAND, INDIANA 260.766.2500
www.CHOICEONEENGINEERING.com

No.	Date	Issue Description
1	11/06/2017	30 DAY Plan Commission Level 2 Review

CERTIFICATION:

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS

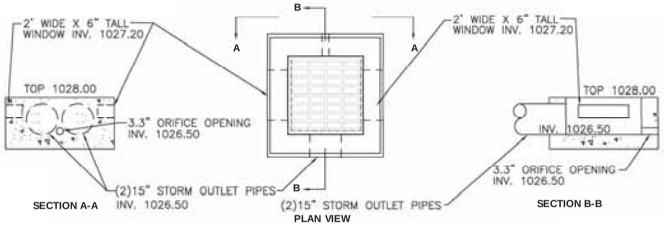
PROJECT ADDRESS: 3410 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER: CRESCO LABS

SHEET NO.: C102

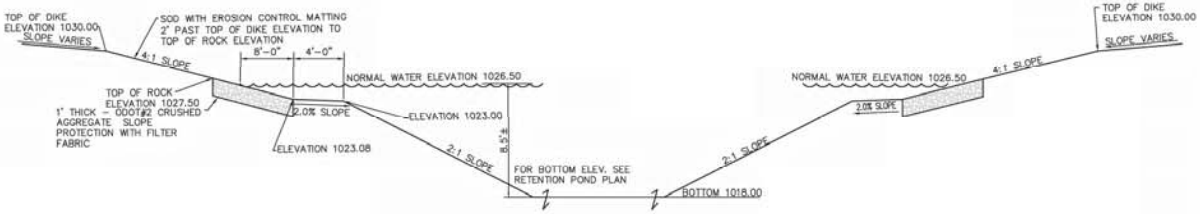
PRINT DATE: 11/06/2017

SHEET NAME: GENERAL DETAILS



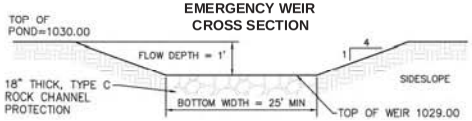
DETENTION BASIN OUTLET - TYPE 2-3 CATCH BASIN

NOT TO SCALE

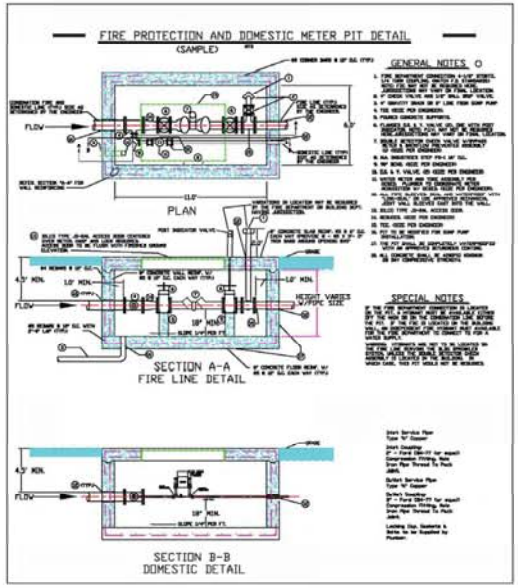


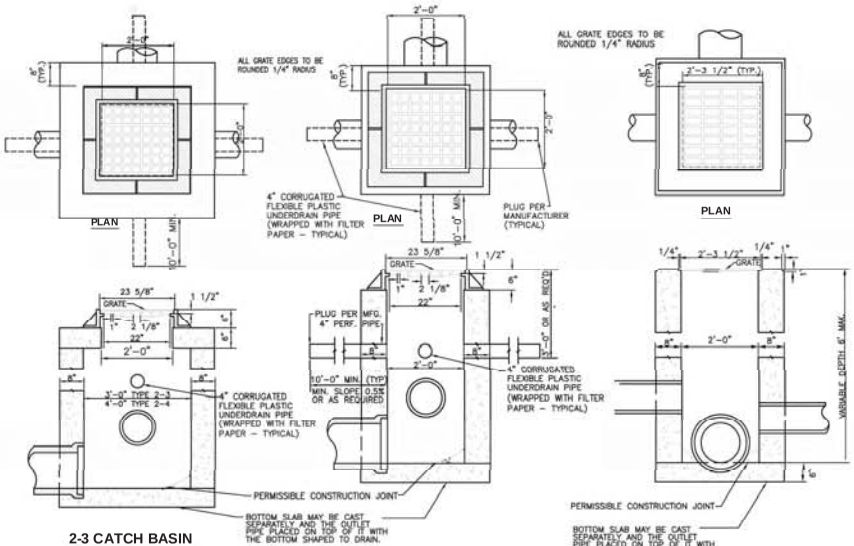
RETENTION POND TYPICAL SECTION

EMERGENCY WEIR CROSS SECTION



Regulations and Specifications
Greene County, Ohio
Part B-Regulations





2-3 CATCH BASIN
2-4 CATCH BASIN

PAVED AREAS
2-2B CATCH BASIN

NON-PAVED AREAS
2-2B CATCH BASIN

NOTE: ALL STRUCTURES AND RELATED WORK IS TO BE IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPEC. 811.

2-2B, 2-3 AND 2-4 CATCH BASIN NOTES

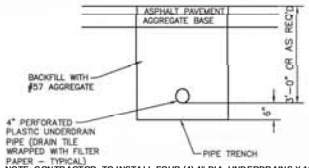
A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE. WHEN SIDE OPENINGS ARE PROVIDED, ELEVATION SHALL BE THE FLOW LINE OF THE SIDE INLET.

B. GRATE ELEVATION TO BE PLACED 4" TO 6" BELOW NORMAL DITCH RETURNING TO NORMAL 10' EACH SIDE OF BASIN.

C. CONCRETE, CAST-IN-PLACE, TO BE ODOT QC MISC. (CEMENT ONLY - NO POZZOLAN MATERIAL). ALL PRECAST CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13 WITH 6 ± 2% AIR VOID CONTENT IN THE HARDENED CONCRETE AND BE MARKED WITH CATCH BASIN NUMBER. OPENINGS FOR PIPES SHALL BE O.D. +2" WHEN FABRICATED OR FIELD CUT.

D. CATCH BASINS NOT PERMITTED IN PAVEMENT AREAS UNLESS USING A FRAME AND GRATE EQUIVALENT OF NEENAH CATALOG NO. R-3405 OR EAST JORDAN IRON WORKS NO. V-5250.

E. CARE SHALL BE TAKEN WHEN CONNECTING TO AN EXISTING CATCH BASIN TO KEEP OPENING AS MINIMAL AS POSSIBLE. IF POSSIBLE, SAW CUT OR USE ROTARY HAMMER FOR OPENING TO MINIMIZE DAMAGE TO CATCH BASIN. PIPE TO INTRUDE INTO CATCH BASIN 1" ONLY AND PIPE MUST BE CUT PARALLEL TO CATCH BASIN. USE NONSHRINK GROUT AROUND PIPE TO SEAL BETWEEN PIPE AND CATCH BASIN.



NOTE: CONTRACTOR TO INSTALL FOUR (4) 4" DIA. UNDERDRAINS X 10' LONG AT ALL 2-2B, 2-3, 2-4, TYPE 1 AND 1A CATCH BASINS AND AT ALL MANHOLES WITH GRATES INSTALLED IN PAVED AREAS.

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA ARCHITECTURE. Any reproduction, publication or use for any purpose other than that for which they are specifically prepared and intended by FILORAMO TALSMA ARCHITECTURE is prohibited without the written permission of FILORAMO TALSMA ARCHITECTURE.
Do not scale drawings. Written dimensions governs. Contractor shall verify all dimensions and report any discrepancies to the architect before proceeding with the work. Contractor shall be responsible for all dimensions and conditions on the job and shall report any discrepancies to the architect before proceeding with the work.

FILORAMO TALSMA ARCHITECTURE
1306 N. FULTON AVE. #205
EVANSVILLE, INDIANA 47710
812.867.1100 FAX
MFORTI@FTCAIA.COM

Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8534
PORTLAND, INDIANA 260.726.2200
www.CHOICEONEENGINEERING.com

No.	Date	Issue Description
1	11/06/2017	Issued for Plan Commission Review & Review

CERTIFICATION:

SHEET NO. C103
PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS: 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
PRINT DATE: 11/06/2017
OWNER: CRESCO LABS
SHEET NAME: 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
GENERAL DETAILS

SHEET NO. C201

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS

PROJECT ADDRESS: 345 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER: CRESCO LABS

SHEET NAME: OVERALL SITE PLAN

PRINT DATE: 11/18/2021

No.	Date	Issue Description
1	12/28/2021	Issued for Plan Commission Level of Review

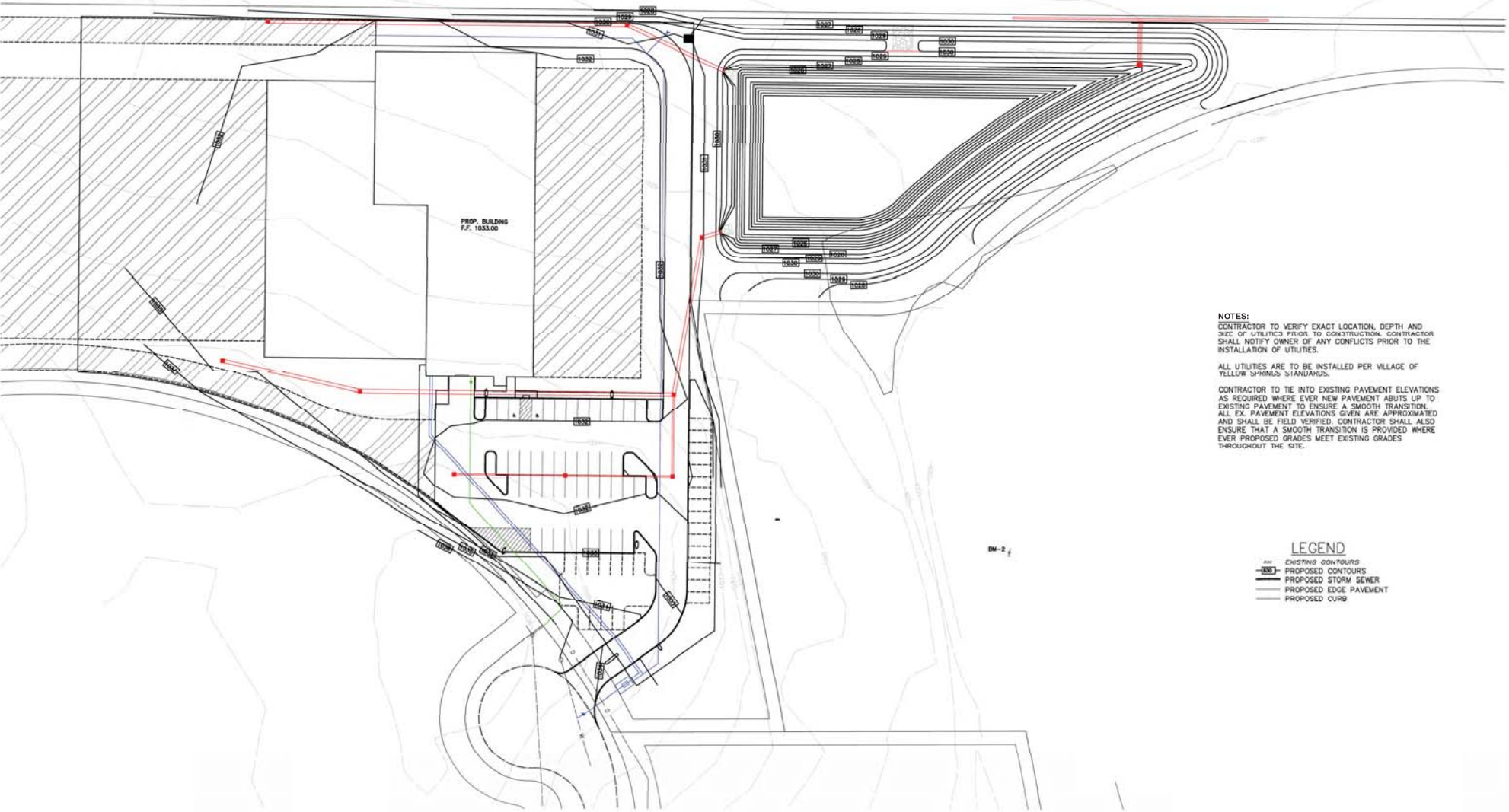
CERTIFICATION:

SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
WWW.CHOICEONENGINEERING.COM

ChoiceOne Engineering

FILORAMO TALSMA ARCHITECTURE
116 N. LISTON AVE. #C15
DEXCOM, IL 60515
Mr. Jay J. McCoy

DISCLAIMER:
These drawings are protected intellectual property of FILORAMO TALSMA, LLC. Use of these drawings is limited to the original project for which they were prepared. Any other use, reproduction, modification, adaptation or copies of any kind or purpose whatsoever, are not to be accepted or authorized by FILORAMO TALSMA, LLC.



NOTES:

CONTRACTOR TO VERIFY EXACT LOCATION, DEPTH AND SIZE OF UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OF ANY CONFLICTS PRIOR TO THE INSTALLATION OF UTILITIES.

ALL UTILITIES ARE TO BE INSTALLED PER VILLAGE OF YELLOW SPRINGS STANDARDS.

CONTRACTOR TO TIE INTO EXISTING PAVEMENT ELEVATIONS AS REQUIRED WHERE EVER NEW PAVEMENT ABUTS UP TO EXISTING PAVEMENT TO ENSURE A SMOOTH TRANSITION. ALL EX. PAVEMENT ELEVATIONS GIVEN ARE APPROXIMATED AND SHALL BE FIELD VERIFIED. CONTRACTOR SHALL ALSO ENSURE THAT A SMOOTH TRANSITION IS PROVIDED WHERE EVER PROPOSED GRADES MEET EXISTING GRADES THROUGHOUT THE SITE.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED STORM SEWER
- PROPOSED EDGE PAVEMENT
- PROPOSED CURB

SCALE IN FEET

0 15 30 60

BENCHMARK-2 ELEV. 1032.83
CUT SQUARE IN LIGHT POLE BASE.

DISCLAIMER:

These drawings are the property of FILORAMO TALSMA ARCHITECTURE. Any reproduction, publication or use by the owner/client of these drawings for purposes other than those for which they were prepared is prohibited. Any reproduction, publication or use by the owner/client of these drawings for purposes other than those for which they were prepared is prohibited. Any reproduction, publication or use by persons other than the owner/client is prohibited. Copyright © 2017 FILORAMO TALSMA, LLC

Do not scale drawings. Written dimensions provide the primary information for construction. Contractor shall verify all dimensions and report any discrepancies to the architect before proceeding with work. Contractor shall be responsible for all dimensions and conditions on the job.

FILORAMO TALSMA ARCHITECTURE

1306 N. FULTON AVE. 46795
FORT WAYNE, INDIANA
260.747.1277
WWW.FTARCH.COM

ChoiceOne Engineering

SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2200
www.CHOICEONEENGINEERING.com

No.	Date	Item Description
1	11/08/2017	Issued for Plan Commission Level 2 Review

CERTIFICATION:

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS

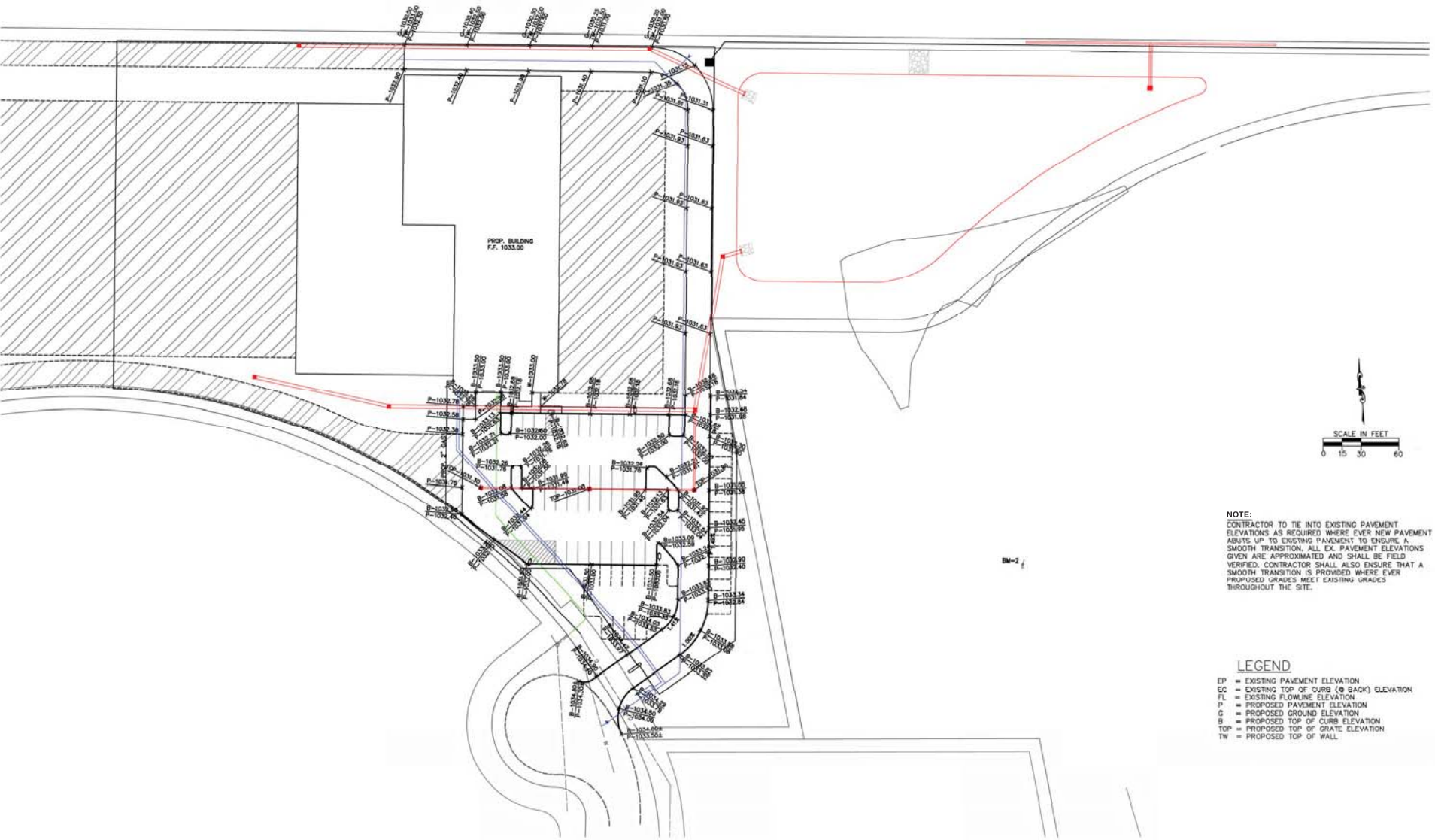
PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER: CRESCO LABS 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

SHEET NO. C202

PRINT DATE: 11/08/2017

SHEET NAME: GRADING PLAN



NOTE:
CONTRACTOR TO TIE INTO EXISTING PAVEMENT ELEVATIONS AS REQUIRED WHERE EVER NEW PAVEMENT ABUTS UP TO EXISTING PAVEMENT TO ENSURE A SMOOTH TRANSITION. ALL EX. PAVEMENT ELEVATIONS GIVEN ARE APPROXIMATED AND SHALL BE FIELD VERIFIED. CONTRACTOR SHALL ALSO ENSURE THAT A SMOOTH TRANSITION IS PROVIDED WHERE EVER PROPOSED GRADES MEET EXISTING GRADES THROUGHOUT THE SITE.

LEGEND

EP = EXISTING PAVEMENT ELEVATION
EC = EXISTING TOP OF CURB (@ BACK) ELEVATION
FL = EXISTING FLOWLINE ELEVATION
P = PROPOSED PAVEMENT ELEVATION
G = PROPOSED GROUND ELEVATION
B = PROPOSED TOP OF CURB ELEVATION
TOP = PROPOSED TOP OF GRATE ELEVATION
TW = PROPOSED TOP OF WALL

BENCHMARK-2 ELEV. 1032.83
CUT SQUARE IN LIGHT POLE BASE.

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA ARCHITECTURE. Any use of these drawings without the express written consent of FILORAMO TALSMA ARCHITECTURE is prohibited. Any use of these drawings for purposes other than those for which they were prepared is prohibited. Any use of these drawings by other parties is prohibited. Any use of these drawings by other parties for purposes other than those for which they were prepared is prohibited. Any use of these drawings by other parties for purposes other than those for which they were prepared is prohibited. Any use of these drawings by other parties for purposes other than those for which they were prepared is prohibited.
© 2017 FILORAMO TALSMA, LLC

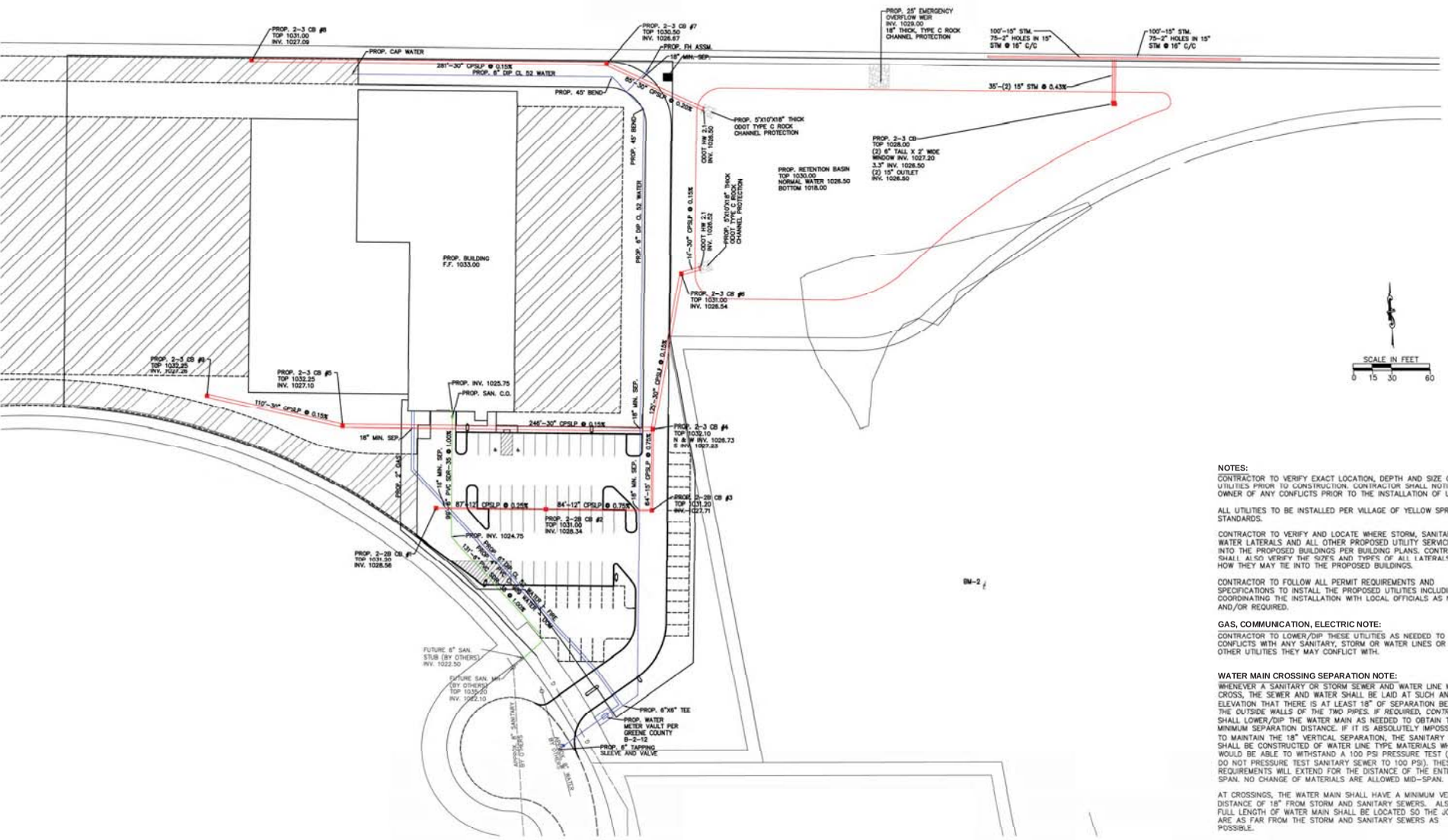
FILORAMO TALSMA ARCHITECTURE
1700 N. ELLETTSVILLE RD. #270
BLOOMINGTON, INDIANA 47408
812.337.1100 | FTARCH.COM

ChoiceOne Engineering
SIDNEY, OHIO 937.497.0300
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
www.CHOICEONEENGINEERING.com

No.	Date	Item Description
1	11/08/2017	Issued for Plan Commission Level II Review

CERTIFICATION:

SHEET NO. C203
PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS: 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
PRINT DATE: 11/08/2017
OWNER: CRESCO LABS
SHEET NAME: PROPOSED ELEVATION PLAN
3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387



BENCHMARK-2 ELEV. 1032.83
CUT SQUARE IN LIGHT POLE BASE.

NOTES:

CONTRACTOR TO VERIFY EXACT LOCATION, DEPTH AND SIZE OF UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OF ANY CONFLICTS PRIOR TO THE INSTALLATION OF UTILITIES.

ALL UTILITIES TO BE INSTALLED PER VILLAGE OF YELLOW SPRINGS STANDARDS.

CONTRACTOR TO VERIFY AND LOCATE WHERE STORM, SANITARY, AND WATER LATERALS AND ALL OTHER PROPOSED UTILITY SERVICES TIE INTO THE PROPOSED BUILDINGS PER BUILDING PLANS. CONTRACTOR SHALL ALSO VERIFY THE SIZE'S AND TYPE'S OF ALL LATERALS AND HOW THEY MAY TIE INTO THE PROPOSED BUILDINGS.

CONTRACTOR TO FOLLOW ALL PERMIT REQUIREMENTS AND SPECIFICATIONS TO INSTALL THE PROPOSED UTILITIES INCLUDING COORDINATING THE INSTALLATION WITH LOCAL OFFICIALS AS NEEDED AND/OR REQUIRED.

GAS, COMMUNICATION, ELECTRIC NOTE:

CONTRACTOR TO LOWER/DIP THESE UTILITIES AS NEEDED TO AVOID CONFLICTS WITH ANY SANITARY, STORM OR WATER LINES OR ANY OTHER UTILITIES THEY MAY CONFLICT WITH.

WATER MAIN CROSSING SEPARATION NOTE:

WHENEVER A SANITARY OR STORM SEWER AND WATER LINE MUST CROSS, THE SEWER AND WATER SHALL BE LAID AT SUCH AN ELEVATION THAT THERE IS AT LEAST 18" OF SEPARATION BETWEEN *THE OUTSIDE WALLS OF THE TWO PIPES. IF REQUIRED, CONTRACTOR* SHALL LOWER/DIP THE WATER MAIN AS NEEDED TO OBTAIN THE 18" MINIMUM SEPARATION DISTANCE. IF IT IS ABSOLUTELY IMPOSSIBLE TO MAINTAIN THE 18" VERTICAL SEPARATION, THE SANITARY SEWER SHALL BE CONSTRUCTED OF WATER LINE TYPE MATERIALS WHICH WOULD BE ABLE TO WITHSTAND A 100 PSI PRESSURE TEST (NOTE: DO NOT PRESSURE TEST SANITARY SEWER TO 100 PSI). THESE REQUIREMENTS WILL EXTEND FOR THE DISTANCE OF THE ENTIRE SPAN. NO CHANGE OF MATERIALS ARE ALLOWED MID-SPAN.

AT CROSSINGS, THE WATER MAIN SHALL HAVE A MINIMUM VERTICAL DISTANCE OF 18" FROM STORM AND SANITARY SEWERS. ALSO ONE FULL LENGTH OF WATER MAIN SHALL BE LOCATED SO THE JOINTS ARE AS FAR FROM THE STORM AND SANITARY SEWERS AS POSSIBLE.

DOWNSPOUT PIPING NOTE:

THE CONTRACTOR SHALL CONNECT ANY DOWNSPOUTS AS SHOWN ON THE SITE PLAN OR TO THE CLOSEST STORM PIPING OR CATCH BASINS USING CPSLP OR PVC SDR-35 SEWER OR APPROVED EQUAL.

CONTRACTOR SHALL INSTALL THE INDIVIDUAL DOWNSPOUT LINES FROM EACH OF THE INDIVIDUAL DOWNSPOUTS FOR THE PROPOSED BUILDING AND TIE THEM INTO THE DOWNSPOUT COLLECTOR LINES. REFERENCE ARCHITECTURAL SHEETS FOR INFORMATION REGARDING DOWNSPOUT LOCATIONS AND DOWNSPOUT BOOT DETAILS.

FIRE HYDRANT NOTE:

FIRE HYDRANTS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AWWA C502, "FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE."

FIRE HYDRANTS SHALL BE PER THE REGULATIONS AND SPECIFICATIONS OF GREENE COUNTY, OHIO AS DESCRIBED ON PAGE B-2-18.

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA ARCHITECTURE and are protected by copyright laws. Reproduction, publication or use of these drawings without the express written consent of FILORAMO TALSMA ARCHITECTURE is prohibited by law. Violators will be prosecuted to the fullest extent of the law.
Do not scale drawings. Written dimensions provide precedence over scaled dimensions. Contractor shall verify and be responsible for all dimensions and conditions. Report any discrepancies to the Architect before proceeding with work.

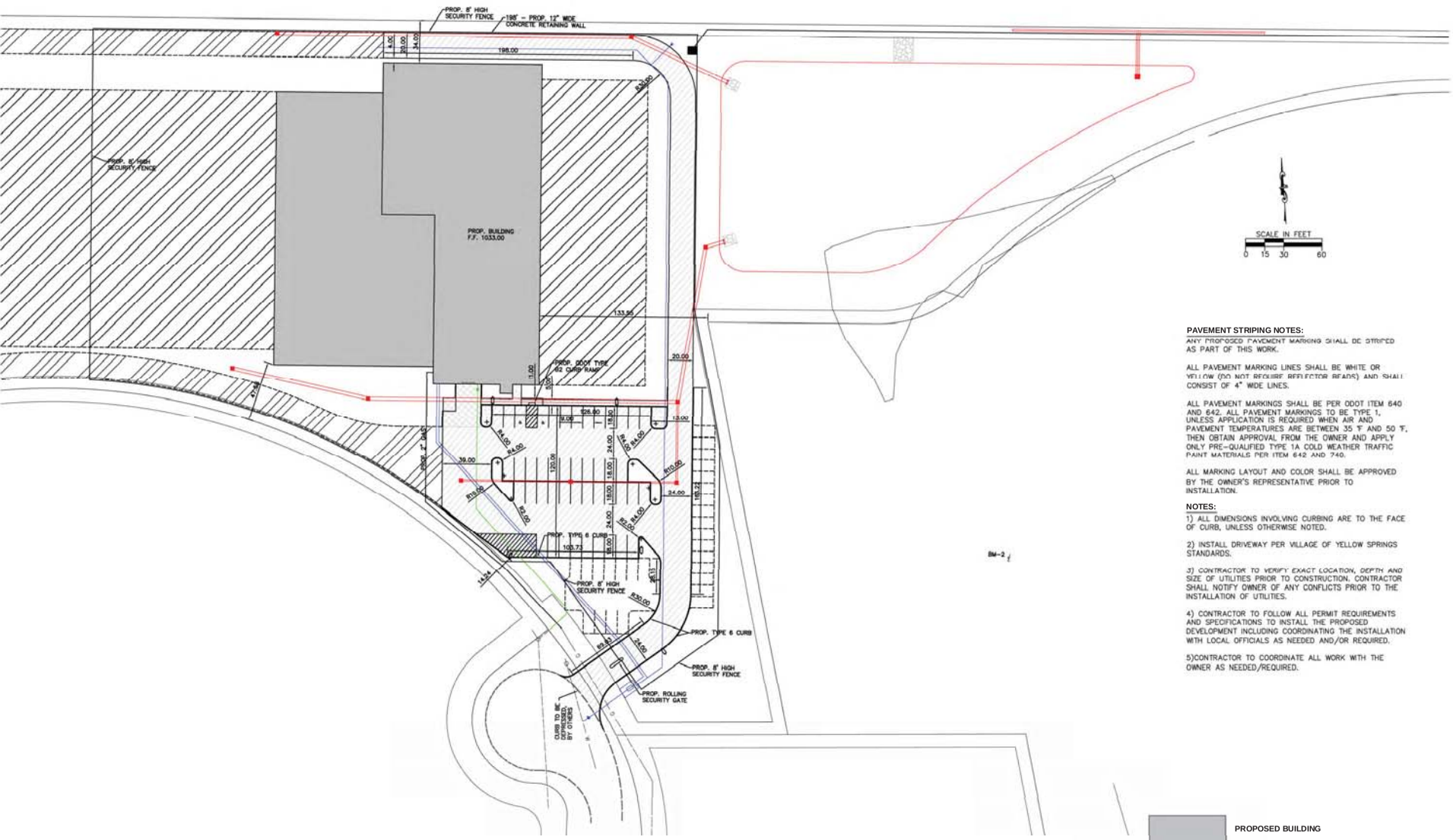
FILORAMO TALSMA ARCHITECTURE
130 N. ELLETSON AVE. #270
CINCINNATI, OHIO 45267
FILORAMOTALSMA.COM

Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
www.CHOICEONEENGINEERING.com

No.	Date	Issue Description
1	11/08/2017	Issued for Plan Commission Review

CERTIFICATION:

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
OWNER: CRESCO LABS
SHEET NO. C204
PRINT DATE: 11/08/2017
SHEET NAME: UTILITY PLAN



PAVEMENT STRIPING NOTES:

ANY PROPOSED PAVEMENT MARKING SHALL BE STRIPED AS PART OF THIS WORK.

ALL PAVEMENT MARKING LINES SHALL BE WHITE OR YELLOW (DO NOT REQUIRE REFLECTOR BEADS) AND SHALL CONSIST OF 4" WIDE LINES.

ALL PAVEMENT MARKINGS SHALL BE PER ODOT ITEM 640 AND 642. ALL PAVEMENT MARKINGS TO BE TYPE 1, UNLESS APPLICATION IS REQUIRED WHEN AIR AND PAVEMENT TEMPERATURES ARE BETWEEN 35 °F AND 50 °F, THEN OBTAIN APPROVAL FROM THE OWNER AND APPLY ONLY PRE-QUALIFIED TYPE 1A COLD WEATHER TRAFFIC PAINT MATERIALS PER ITEM 642 AND 740.

ALL MARKING LAYOUT AND COLOR SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

NOTES:

1) ALL DIMENSIONS INVOLVING CURBING ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.

2) INSTALL DRIVEWAY PER VILLAGE OF YELLOW SPRINGS STANDARDS.

3) CONTRACTOR TO VERIFY EXACT LOCATION, DEPTH AND SIZE OF UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OF ANY CONFLICTS PRIOR TO THE INSTALLATION OF UTILITIES.

4) CONTRACTOR TO FOLLOW ALL PERMIT REQUIREMENTS AND SPECIFICATIONS TO INSTALL THE PROPOSED DEVELOPMENT INCLUDING COORDINATING THE INSTALLATION WITH LOCAL OFFICIALS AS NEEDED AND/OR REQUIRED.

5)CONTRACTOR TO COORDINATE ALL WORK WITH THE OWNER AS NEEDED/REQUIRED.

PROPOSED BUILDING

FUTURE BUILDING

FUTURE FIRE LANE

CONCRETE SIDEWALK

ITEM 608 – 4" CONCRETE SIDEWALK WITH 3 LBS/CY OF 2-1/4" LONG, FORTA-FERRO, MACROSYNTHETIC, POLYPROPYLENE/CO-POLYMER BLEND FIBERS ON
ITEM 411 – 4" STABILIZED AGGREGATE BASE

HEAVY DUTY CONCRETE PAVEMENT CONCRETE PAVEMENT SECTION

ITEM 452 – 8" NON-REINFORCED CONCRETE PAVEMENT WITH 3 LBS/CY OF 2-1/4" LONG, FORTA-FERRO, MACROSYNTHETIC, POLYPROPYLENE/CO-POLYMER BLEND FIBERS ON
ITEM 304 – 6" AGGREGATE BASE ON ITEM 204 – SUBGRADE COMPACTION

HEAVY DUTY ASPHALT PAVEMENT -RECOMMENDED ALTERNATE BID

ITEM 441 – 1 1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (448) PG 64-22 ON
ITEM 441 – 1 3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, (448) ON
ITEM 301 – 3" ASPHALT CONCRETE BASE ON
ITEM 304 – 8" AGGREGATE BASE (2 EQUAL LIFTS) ON
ITEM 204 – SUBGRADE COMPACTION

REGULAR DUTY ASPHALT PAVEMENT BASE BID

ITEM 441 – 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (448) PG 64-22 ON
ITEM 441 – 2 1/2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, (448) ON
ITEM 304 – 8" AGGREGATE BASE (2 EQUAL LIFTS) ON
ITEM 204 – SUBGRADE COMPACTION

DISCLAIMER:

FILORAMO TALSMA ARCHITECTURE

CHOICE ONE Engineering

SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
www.CHOICEONEENGINEERING.com

No.	Date	Item Description
1	11/08/2017	Issued for Plan Commission Level B Review

CERTIFICATION:

SHEET NO. C205

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS

PRINT DATE: 11/08/2017

PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER: CRESCO LABS

344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

SHEET NAME: DIMENSIONING AND PAVEMENT PLAN

CRESCO FACILITY SITE PLAN - SWPPP

VICINITY MAP

SWPPP NOTE:
THIS STORMWATER POLLUTION PREVENTION PLAN PLAN HAS BEEN PREPARED FOR CRESCO LABS FOR THE PERFORMANCE OF A NEW BUILDING PROJECT IN THE VILLAGE OF YELLOW SPRINGS, GREENE COUNTY, OHIO. ALL WORK SHALL BE PER AND COMPLY WITH THE OEPA CONSTRUCTION SITE STORM WATER GENERAL PERMIT PERMIT #OH000004. THIS INCLUDES FILING A CO-PERMITTEE NOI FORM WITH THE OEPA FOR ALL OPERATORS ENGAGED IN SITE WORK ON THE SITE. CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS, INSTALLATION, MAINTENANCE AND REQUIREMENTS OF ODOT'S SUPPLEMENTAL SPECIFICATION 832 "TEMPORARY SEDIMENT AND EROSION CONTROL" INCLUDING THE STANDARD CONSTRUCTION DRAWING REFERENCES LISTED IN SECTION 832.03. ALL WORK SHALL ALSO BE PER ODOT CMS 107.19. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH LOCAL STORMWATER AND EROSION CONTROL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH AND INSTALLING ALL ITEMS NOTED AND AS REQUIRED BY OEPA AND LOCAL AUTHORITIES FOR MEETING ALL STORM WATER POLLUTION PREVENTION REQUIREMENTS. THE CONTRACTOR SHALL BE THE RESPONSIBLE PARTY IN CHARGE OF THE SWPPP AND BMP'S.

WATERS EDGE NOTE: ALL MATERIAL AND EQUIPMENT STAGING OR STORAGE AREAS, DEWATERING AREAS, CONCRETE TRUCK WASH OUT AREAS, CONSTRUCTION ACCESS LOCATIONS, AND VEHICLE FUELING AND REFUELING LOCATIONS MUST BE LOCATED A MINIMUM OF 100' FROM ANY CREEK/RIVER/STREAM WATERS EDGE.

CLEAN STORM SYSTEM NOTE:
IMMEDIATELY PRIOR TO FINAL COMPLETION OF THE PROJECT, CONTRACTOR SHALL ENSURE THE ENTIRE STORM SYSTEM, INCLUDING BUT NOT LIMITED TO, THE RETENTION BASINS, BIO-RETENTION PONDS, CATCH BASINS, MANHOLES, PIPING, UNDERDRAINS AND UNDERDRAIN TRENCHES ARE FREE FROM SEDIMENTATION AND OTHER POLLUTANTS AND FOREIGN MATERIALS AND ARE TO BE CLEANED AS NEEDED TO ENSURE MAXIMUM STORMWATER QUALITY AND FULL FUNCTIONALITY.

SITE DATA:
LOCATION SOIL TYPES___BROOKSTON SILTY CLAY LOAM/CROSBY/MIAMIAN SILT LOAM
PROJECT AREA (NOI AREA FOR ALL PHASES)__12.25 ACRES
EARTH DISTURBED AREA (FOR THIS PHASE)___7.03 ACRES
PROPOSED IMPERVIOUS AREA ADDED (FOR THIS PHASE):_1.98 ACRES
PRE-CONSTRUCTION RUNOFF COEFFICIENT:___0.30
POST-CONSTRUCTION RUNOFF COEFFICIENT:___0.40
DESCRIPTION OF PRIOR LAND USE___ROW CROP/AGRICULTURAL FARM FIELD
EXISTING QUALITY OF DISCHARGE FROM SITE___FAIR QUALITY UNTREATED /ROW CROP RUNOFF
IMMEDIATE RECEIVING WATERS:___ON-SITE RETENTION POND
SUBSEQUENT RECEIVING WATERS:___FARM FIELD
LATITUDE 39.80457° LONGITUDE -83.91128°

OFFSITE CONSTRUCTION ACTIVITIES:
IT IS EXPECTED ALL CONSTRUCTION ACTIVITIES WILL TAKE PLACE ON SITE.

SPILL REPORTING REQUIREMENTS:
IN THE EVENT OF A SMALL RELEASE (LESS THAN 25 GALLONS) OF PETROLEUM WASTE, SPECIAL HANDING PROCEDURES MUST BE USED. IN THE EVENT OF A LARGE RELEASE (25 GALLONS OR MORE) OF PETROLEUM WASTE, YOU MUST CONTACT THE OHIO EPA (AT 1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS.

CONCRETE WASHOUT NOTE: CONCRETE WASHOUT OPERATIONS SHALL TAKE PLACE WITHIN THE GRAVEL BED OF THE PROPOSED PROJECT AREA UTILIZING THE CONTRACTOR'S PORTABLE CONCRETE WASHOUT CONTAINER OR WITHIN A BERMED AREA. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE WASHOUT MATERIAL DOES NOT LEAVE THE GRAVEL BED OR ENTER THE STORM SYSTEM. CONTRACTOR SHALL CLEAN UP AND PROPERLY DISPOSE OF ALL LEFTOVER WASHOUT MATERIAL.

GREENE COUNTY, OHIO
INDEX OF SHEETS

SWPPP TITLE SHEET	C301
SWPPP EROSION CONTROL NOTES AND DETAILS	C302–C303
SWPPP SITE EROSION CONTROL PLAN	C304

CONTACT INFORMATON:
FACILITY SITE LOCATION: 344 E. YELLOW SPRINGS ROAD, YELLOW SPRINGS, OHIO
OWNER CONTACT – ROBERT GUARNACCIO, 847-274-3074
SWPPP/CONTRACTOR CONTACT – TO BE DETERMINED

WASTE DISPOSAL NOTE:
CONTAINERS (e.g. DUMPSTERS, DRUMS) MUST BE AVAILABLE FOR THE DISPOSAL OF DEBRIS, TRASH, HAZARDOUS MATERIAL AND PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF.

CLEAN HARD FILL NOTE:
NO CLEAN CONSTRUCTION WASTES SHALL BE DISPOSED OF INTO THE PROPERTY.

CONSTRUCTION & DEMOLITION DEBRIS NOTE:
ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) WASTE SHALL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714. MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS (SEE OHIO ADMINISTRATIVE CODE 3745-20).

CONTAMINATED SOILS NOTE:
SOILS CONTAMINATED BY PETROLEUM OR OTHER CHEMICAL SPILLS SHALL BE HANDLED AND DISPOSED OF PROPERLY. ALL CONTAMINATED SOILS MUST BE TREATED AND/OR DISPOSED OF IN AN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITY OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITY (TSDFs). IF CONTAMINATION HAPPENS TO OCCUR, TARPS ARE TO BE USED TO PREVENT STORM WATER FROM COMING INTO CONTACT WITH THE MATERIAL.

OPEN BURNING NOTE:
OPEN BURNING IS NOT PERMITTED IN THE CORPORATION LIMIT.

PROCESS WASTEWATER/LEACHATE MANAGEMENT NOTE:
ALL PROCESS WASTEWATERS (e.g. EQUIPMENT WASHING, LEACHATE ASSOCIATED WITH ON-SITE WASTE DISPOSAL, AND CONCRETE WASH-OUTS) MUST BE COLLECTED AND DISPOSED OF PROPERLY (e.g. TO A PUBLICLY-OWNED TREATMENT WORKS). THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT ONLY AUTHORIZES THE DISCHARGE OF STORM WATER AND CERTAIN UNCONTAMINATED NON-STORM WATERS. THE DISCHARGE OF NON-STORM WATERS TO WATERS OF THE STATE MAY BE IN VIOLATION OF LOCAL, STATE, AND FEDERAL LAWS OR REGULATIONS.

HANDLING OF TOXIC OR HAZARDOUS MATERIALS NOTE:
NO SOLID, SANITARY, OR TOXIC WASTE IS TO BE DISPOSED OF ON THE PROJECT SITE. RECYCLING OF USED OR UNUSED HAZARDOUS MATERIALS SHALL NOT OCCUR ON SITE EITHER. AREAS DESIGNATED FOR CEMENT TRUCK WASHOUTS, AND VEHICLE FUELING SHALL NOT TAKE PLACE ON PARKING LOT BASE.

CONSTRUCTION CHEMICAL COMPOUNDS NOTE:
NO MIXING OR STORAGE OF CHEMICAL COMPOUNDS SUCH AS FERTILIZERS, LIME, ASPHALT, OR CONCRETE ARE PERMITTED TO TAKE PLACE ON-SITE. ALL MIXING SHALL TAKE PLACE BEFORE ENTERING THE SITE.

ChoiceOne Engineering
440 E. HOEWISHER ROAD | SIDNEY, OHIO 45365 | 937.497.0200
203 W. LOVELAND AVENUE | LOVELAND, OHIO 45140 | 513.239.8554
607 N. MERIDIAN STREET | PORTLAND, INDIANA 47371 | 260.766.2500
www.CHOICEONEENGINEERING.com

NOVEMBER 8, 2017

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW BUILDING AND ASSOCIATED DRIVE AND PARKING. SITE WORK TO INCLUDE STORM SEWER, SANITARY SEWER, WATER, SITE GRADING, PAVEMENT WORK AND BUILDING CONSTRUCTION.

PROJECT WORK CONSTRUCTION DATES:
START: MARCH 2018
ESTIMATED COMPLETION: OCTOBER 2018

SWPPP AND INSPECTION REPORTS LOCATION:
NOTE: THE SWPPP AND INSPECTION REPORTS WILL BE KEPT ON-SITE IN THE JOB TRAILER/FOREMAN'S PICK-UP.

EROSION CONTROL NOTES:
1. INSTALL AND MAINTAIN FILTER FABRIC FENCE AND INLET PROTECTION WHERE SHOWN AND AS NEEDED TO MINIMIZE SEDIMENT LADEN WATER FROM LEAVING THE SITE OR ENTERING ANY STORM SYSTEM, ADJACENT DITCHES, STREAMS ETC. IF STORMWATER RUNOFF CONTAINING SEDIMENTS IS FOUND TO BE LEAVING THE PROJECT SITE IN AN AREA WHERE NO BMP/CONTROL MEASURE IS SHOWN OR IN PLACE, CONTRACTOR SHALL IMMEDIATELY INSTALL THE APPROPRIATE BMP/CONTROL MEASURE AS NEEDED TO REMEDY THE SITUATION (TYP. INLET PROTECTION, FILTER FABRIC FENCE, ETC.).

2. INSTALL INLET PROTECTION ON ALL STORM INLET STRUCTURES (YARD DRAINS, CATCH BASINS, ETC.) AND TO ANY EXISTING STORM STRUCTURES WITHIN THE PROJECT AREA WHICH MAY RECEIVE RUNOFF FROM THE CONSTRUCTION SITE AND AS NEEDED. INLET PROTECTION MAY CONSIST OF DEVICES SUCH AS SEDCAGE (WWW.SEDCATCH.COM), DANDY BAGS, SEDIGUARD FILTERS, FLEXSTORM INLET FILTERS, SEDIMENT FENCE OR OTHER DEVICES WHICH ARE EFFECTIVE AT MINIMIZING THE AMOUNT OF SEDIMENT ENTERING THE STRUCTURE.

3. CONTRACTOR IS RESPONSIBLE FOR IMMEDIATELY CLEANING UP ANY MUD, *DIRT AND DEBRIS WHICH IS TRACKED OR SPILLED ONTO THE ROADWAYS.*

4. PRE CONSTRUCTION – CONTRACTOR IS RESPONSIBLE TO INSTALL A CONSTRUCTION ENTRANCE AS NEEDED TO MINIMIZE ANY MUD, DIRT AND DEBRIS TRACKED ONTO THE ROADWAYS.

5. DURING CONSTRUCTION – THE CONTRACTOR MUST MAINTAIN EROSION CONTROL UNTIL AREA IS STABILIZED INCLUDING TEMPORARY SEEDING AS NEEDED. CONTRACTOR SHALL TEMPORARYILY SEED ALL CRITICAL EXPOSED SLOPES TO MINIMIZE SEDIMENT RUNOFF.

6. FINAL/POST CONSTRUCTION – CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. CONTRACTOR SHALL ENSURE GRASS IS PERMANENTLY AND PROPERLY ESTABLISHED IN ALL AREAS WHERE GRASS IS SPECIFIED. ALL SEDIMENT AND EROSION CONTROL STRUCTURES, INCLUDING SEDIMENT FENCE, SHALL REMAIN IN PLACE UNTIL GRASS IS IN PLACE AND SITE IS STABILIZED. ONCE SITE IS STABILIZED AND ALL CONSTRUCTION IS COMPLETE, ALL SEDIMENT FENCE, INLET PROTECTION AND ANY OTHER TEMPORARY BMP'S SHALL BE REMOVED FROM THE SITE.

BMP NOTES:
FOR ALL BMP'S INSTALLED, ENSURE THAT THE PONDING OF WATER BEHIND THE BMP WILL NOT DAMAGE PROPERTY OR POSE A SAFETY THREAT.

IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL MEASURE/BMP HAS BEEN USED INAPPROPRIATELY, THE CONTRACTOR MUST REPLACE AND ADJUST THE CONTROL/BMP TO MEET SITE CONDITIONS AS REQUIRED. THE CONTRACTOR SHALL ADJUST THE SWPPP AND ITS CONTROLS/BMPS AND THEIR QUANTITIES TO MEET FIELD CONDITIONS AND THE OHIO EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION ACTIVITIES GENERAL PERMIT.

SWPPP AND INSPECTION AVAILABILITY AND UPDATES NOTE:
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE SWPPP AND INSPECTION REPORTS ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM AND DOCUMENT ALL REQUIRED SWPPP INSPECTIONS AND ALL UPDATES AND AMENDMENTS TO THE SWPPP.

VEHICLE FULEING:
VEHICLE FUELING AND MAINTENANCE WILL BE PERFORMED VIA A SMALL REFUEL TANK ON THE BACK OF A PICK-UP TRUCK.

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA, LLC. Use of these drawings is limited to a specified project for persons herein and for this project only. These drawings are not to be reproduced, changed or copied in any form or manner whatsoever, nor are they to be assigned to any third party, without the written consent of FILORAMO TALSMA, LLC.
Do not scale drawings. Written dimensions preside over scale. These drawings may have been reproduced at a size different than originally drawn. Owner and Architect assume no responsibility for use of incorrect scale.
FILORAMO TALSMA ARCHITECTURE
ChoiceOne Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
www.CHOICEONEENGINEERING.com
CERTIFICATION:
No. | Date | Issue Description
1 | 11/08/2017 | Iss'd for Plan Commission Level-B Review
PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
OWNER: CRESCO LABS
344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
SHEET NO.: C301
PRINT DATE: 11/08/2017
SHEET NAME: SWPPP COVER SHEET

IMPLEMENTATION SCHEDULE (EROSION CONSTRUCTION SEQUENCE)

THE CONTRACTOR OR ITS APPOINTED REPRESENTATIVES WILL ASSUME RESPONSIBILITY FOR INSTALLATION, INSPECTION AND MAINTENANCE OF ALL SOIL EROSION CONTROL MEASURES DURING CONSTRUCTION. THE INSTALLATION OF THE SOIL EROSION CONTROL MEASURES WILL BE COMPLETED, AS FOLLOWS:

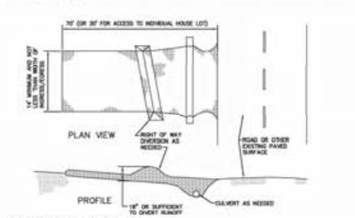
A. PRIOR TO ANY GRADING OR EARTHWORK:
A-1. SILT FENCE AND INLET PROTECTION (ON EX. STORM STRUCTURES) TO BE INSTALLED AS SHOWN ON SWPPP.
A-2. INSTALL CONSTRUCTION ENTRANCE(S) IF NEEDED AS SHOWN ON SWPPP. INSTALLATION OF ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES, E.G. ROCK CHECK DAMS, CONCRETE WASHOUT PIT, SEDIMENT BASIN, ETC.
B. PERFORM ROUGH GRADING, INSTALL UTILITIES, BUILDINGS, PAVEMENT:
B-1. CLEAR AND GRUB AREA AS NEEDED
B-2. PERFORM SITE GRADING, INSTALL BUILDING(S)
B-3. INSTALL SANITARY, STORM, WATER LINES, OTHER UTILITIES, GRAVEL BASE, AND CURB AND GUTTER, AS PER PLAN(S). INSTALL INLET PROTECTION ON ALL PROPOSED STORM INLET STRUCTURES AS INDICATED ON THE PLANS AS SOON AS THEY ARE INSTALLED.
B-4. PERFORM TEMPORARY SEEDING AS NEEDED ON ANY DISTURBED AREAS PER THE TIME REQUIREMENTS FOR TEMPORARY SEEDING SPECIFIED ON THIS DRAWING.
B-5. INSTALL PAVEMENT.
C. PERFORM FINAL GRADING:
C-1. PLACE TOPSOIL AND PERFORM FINAL RAKING AND GRADING ON ALL DISTURBED AREAS.
C-2. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED (SEEDED AND/OR MULCHED).
C-3. CLEAN UP SITE, AND ONCE SITE HAS REACHED FINAL STABILIZATION REMOVE ALL TEMPORARY BMP'S.
NOTES: A) CARE WILL BE TAKEN NOT TO DISTURB ANY EXISTING NATURAL VEGETATION NOT INVOLVED IN THE CONSTRUCTION PROCESS, WHENEVER POSSIBLE. B) TIMELY INSPECTIONS OF THE EROSION CONTROL MEASURES WILL BE MADE, BY THE CONTRACTOR, EVERY 7 DAYS, AND/OR AFTER ANY RAINFALL OF AT LEAST 1/2" IN A 24-HOUR PERIOD. REPORTS MUST BE KEPT ON-SITE AND SUPPLIED TO THE GOVERNING AUTHORITY IF REQUESTED.

INSPECTION SCHEDULE

1. THE SITE WILL BE INSPECTED PER OHIO EPA PERMIT No. OHC000004:

PART III.G.2
[illegible]

PART III.G.2.i
[illegible]

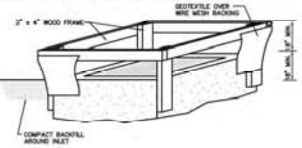


CONSTRUCTION ENTRANCE

1. STONE SIZE – 2" STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS, BUT NOT LESS THAN 70' (EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS – THE STONE LAYER SHALL BE AT LEAST 6" THICK.
4. WIDTH – THE ENTRANCE SHALL BE AT LEAST 10' WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. BEDDING – A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. [illegible]
6. CULVERT – A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE, IF NEEDED, TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES. [illegible]
7. WATER BAR – A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE, IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
8. MAINTENANCE – [illegible]
9. CONSTRUCTION ENTRANCE SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFFSITE TRACKING. [illegible]

INLET PROTECTION FOR STORM STRUCTURES W/ GRATE

INLET PROTECTION MAY CONSIST OF SEDIMENT FENCE, FLEXSTORM INLET FILTERS, SEDIGUARD FILTERS, DANDY BAGS OR OTHER DEVICES WHICH ARE EFFECTIVE AT MINIMIZING THE AMOUNT OF SEDIMENT ENTERING THE STRUCTURE. INSTALL INLET PROTECTION ON ALL PROPOSED YARD DRAINS AND CATCH BASINS AND TO EXISTING STORM STRUCTURES WITHIN THE PROJECT AREA WHICH MAY RECEIVE RUNOFF FROM THE CONSTRUCTION SITE.



INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.

2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH OF AT LEAST 18".

3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2" BY 4" CONSTRUCTION GRADE LUMBER. THE 2" BY 4" POST SHALL BE DRIVEN 1' INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2" BY 4" FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6" BELOW ADJACENT ROAD, IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.

5. GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20–40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAY ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.

6. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.

7. A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION, AND IF RUNOFF BY PASSING THE INLET WILL NOT FLOW TO A SETTING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.

NON-SEDIMENT POLLUTION CONTROL

1. CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES:

DISPOSAL AND HANDLING OF HAZARDOUS AND OTHER CONSTRUCTION WASTE

DO:
- PREVENT SPILLS
- USE PRODUCTS UP
- FOLLOW LABEL DIRECTIONS FOR DISPOSAL
- REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
- RECYCLE WASTE WHENEVER POSSIBLE

DON'T:
- DON'T POUR INTO WATERWAYS, STORM DRAINS, OR ONTO THE GROUND
- DON'T POUR DOWN THE SINK, FLOOR DRAIN, OR SEPTIC TANKS
- DON'T BURY CHEMICALS OR CONTAINERS
- DON'T BURN CHEMICALS OR CONTAINERS
- DON'T MIX CHEMICALS TOGETHER

2. CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM, AND ANY HAZARDOUS MATERIALS TO BE USED ON SITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.

3. NO WASTE MATERIALS SHALL BE BURIED ON SITE. SITE PERSONNEL, INCLUDING SUBCONTRACTORS, SHALL BE NOTIFIED THAT NO CONSTRUCTION-RELATED MATERIALS ARE TO BE BURIED ON SITE.

4. MIXING, PUMPING, TRANSFERRING, OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH, OR STORM DRAIN.

5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.

6. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER.

7. IF HAZARDOUS SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF [illegible]

8. SPILLS OF 25 GAL. OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE.

9. STREETS NEED TO BE SWEPT AS OFTEN AS NECESSARY TO KEEP THEM CLEAN AND FREE FROM SEDIMENT. SEDIMENT TO BE SWEPT BACK ONTO THE LOT – NOT DOWN THE STORM SEWER.

10. STOCKPILES OF SOIL AND OTHER MATERIALS SHALL BE STORED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, AND SHALL HAVE EROSION CONTROL MATERIALS PLACED AROUND THEM.

11. ALL STREAM CROSSINGS SHALL BE CONSTRUCTED ENTIRELY OF NON-ERODIBLE MATERIAL.

FUELING AND STAGING NOTE:

[illegible]

SOIL STOCKPILE NOTE:

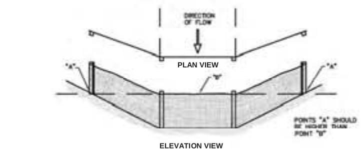
[illegible]

DEWATERING NOTE:

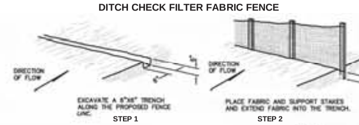
[illegible]

DUST CONTROL

DUST CONTROL SHALL BE PROVIDED AS NEEDED TO PREVENT SEDIMENT FROM BECOMING AIRBORNE. MEASURES SHALL INCLUDE WATERING VIA A WATER TRUCK OR OTHER WATERING DEVICE AS NEEDED TO REDUCE AND/OR ELIMINATE AIRBORNE DUST CREATED BY CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES.



PLACEMENT AND CONSTRUCTION OF DITCH CHECK FILTER FABRIC FENCE



PLACEMENT AND CONSTRUCTION OF PERIMETER FILTER FABRIC FENCE

CONSTRUCTION OF A FILTER BARRIER (SILT FENCE)

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.

3. TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.

4. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.

5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5' (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.

6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16" ABOVE THE ORIGINAL GROUND SURFACE.

7. THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6" DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.

8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8" OF CLOTH IS BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6" DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.

9. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.

10. MAINTENANCE – SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. ALL THE GAPS AND TEARS IN THE FENCE MUST BE ELIMINATED AND REPAIRED. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

CRITERIA FOR SILT FENCE MATERIAL:
1. FENCE POSTS – THE LENGTH SHALL BE A MINIMUM OF 48" LONG. WOOD POSTS WILL BE 2"-BY-2" HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 5'. POSTS/SUPPORT STAKES SHALL BE DRIVEN A MINIMUM OF 16" INTO THE GROUND.

2. SILT FENCE FABRIC SHALL CONFORM TO THE AASHTO SILT FENCE SPECIFICATION 100X AND SHALL HAVE A MINIMUM 100# GRAB TENSILE.

3. SILT FENCE SHALL BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PERMANENT STABILIZATION

ALL AREAS AT FINAL GRADE MUST BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF REACHING FINAL GRADE. THIS IS USUALLY ACCOMPLISHED BY USING SEED AND MULCH, BUT SPECIAL MEASURES ARE SOMETIMES REQUIRED. THIS IS PARTICULARLY TRUE IN DRAINAGE DITCHES/SWALES, LOW AREAS, DETENTION POND BOTTOMS AND SIDES OR ON STEEP SLOPES. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, THE INSTALLATION OF EROSION CONTROL BLANKETS AND/OR MATTING, ADDITION OF TOPSOIL, OR ROCK RIP-RAP. CONTRACTOR SHALL UTILIZE THESE AND ANY OTHER SPECIAL MEASURES AS NEEDED TO PERMANENTLY STABILIZE THE SITE. PERMANENT SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 AND AUGUST 1 TO SEPTEMBER 30. DORMANT SEEDING CAN BE DONE FROM NOVEMBER 20 TO MARCH 15. AT ALL OTHER TIMES OF THE YEAR, THE AREA SHOULD BE TEMPORARILY STABILIZED UNTIL A PERMANENT SEEDING CAN BE APPLIED.

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50' OF A SURFACE WATER OF THE STATE (STREAM, WATERWAY, WATER BODY, ETC.) AND AT FINAL GRADE	WITHIN 2 DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE.	WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

TEMPORARY SEEDING SPECIES SELECTION			
SEEDING DATES	SPECIES	LB./1000 SQ. FT.	PER ACRE
MARCH 1 TO AUGUST 15	OATS TALL FESCUE ANNUAL RYEGRASS	3 1 1	4 BUSHELS 40 LBS. 40 LBS.
	PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 LBS. 40 LBS. 40 LBS.
AUGUST 16 TO NOVEMBER 1	RYE TALL FESCUE ANNUAL RYEGRASS	3 1 1	2 BUSHELS 40 LBS. 40 LBS.
	WHEAT TALL FESCUE ANNUAL RYEGRASS	1 1 1	2 BUSHELS 40 LBS. 40 LBS.
	PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 LBS. 40 LBS. 40 LBS.
NOVEMBER 1 TO SPRING SEEDING	USE MULCH ONLY, SODDING PRACTICES OR DORMANT SEEDING		
NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.			

SPECIFICATIONS FOR TEMPORARY SEEDING

1. TO MINIMIZE COSTS OF TEMPORARY STABILIZATION, LEAVE NATURAL COVER IN PLACE FOR AS LONG AS POSSIBLE. ONLY DISTURB AREAS YOU INTEND TO WORK WITHIN THE NEXT 14 DAYS.

2. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.

3. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. HOWEVER, TEMPORARY SEEDING SHALL NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.

4. SOIL AMENDMENTS – APPLICATIONS OF TEMPORARY VEGETATION SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. SOIL TESTS SHOULD BE TAKEN ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.

5. SEEDING METHOD – SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY PLACED USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

MULCHING TEMPORARY SEEDING

1. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES AND WITH FAVORABLE SOIL CONDITIONS AND ON VERY FLAT AREAS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.

2. MATERIALS:

A. STRAW – IF STRAW IS USED, IT SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/ACRE OR 90 LBS./1,000 SQ. FT. (TWO TO THREE BALES). THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ. FT. SECTIONS AND SPREAD TWO 45 LBS. BALES OF STRAW IN EACH SECTION.

B. HYDROSEEDERS – IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2,000 LB/AC. OR 46 LBS./1,000 SQ. FT.

C. OTHER – OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS/AC.

D. STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:

-MECHANICAL – A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED, BUT GENERALLY, BE LEFT LONGER THAN 6".

-MULCH NETTINGS – NETTINGS SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATION RUN OFF AND ON CRITICAL SLOPES.

-ASPHALT EMULSION – ASPHALT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURER OR AT THE RATE OF 160 GAL./AC.

-SYNTHETIC BINDERS – SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.

-WOOD CELLULOSE FIBER – WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LBS./AC. THE WOOD-CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS./1000 GAL.

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50' OF A SURFACE WATER OF THE STATE (STREAM, WATERWAY, WATER BODY, ETC.) AND NOT AT FINAL GRADE.	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN 1 YEAR, AND NOT WITHIN 50' OF A SURFACE WATER OF THE STATE (STREAM, WATERWAY, WATER BODY, ETC.) INCLUDING SOIL STOCKPILES	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST 7 DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER
WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED.	

ITEM 659 SEEDING AND MULCHING, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 659 SEEDING AND MULCHING, EXCEPT AS HEREIN MODIFIED.

AREAS REQUIRING SEEDING SHALL RECEIVE A MINIMUM OF 6" OF TOPSOIL FURNISHED AND PLACED. THE ADDITIONAL TOPSOIL FURNISHED AND PLACED SHALL BE INCLUDED IN THIS WORK. THE AREA SHALL BE HAND RAKED AND DRESSED READY FOR SEEDING. NO STONE IS PERMITTED. COMMERCIAL FERTILIZER 12-12-12 SHALL BE INCLUDED IN ITEM 659 SEEDING AND MULCHING AS PER PLAN AND SHALL BE APPLIED AT THE RATE OF 20 POUNDS PER 1000 SQUARE FEET.

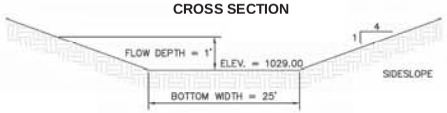
SEEDING APPLICATION SHALL BE AT THE RATE OF 6 POUNDS PER 1000 SQUARE FEET. THE FOLLOWING SEED MIXTURE OR EQUIVALENT SHALL BE USED THROUGHOUT THE LIMITS OF THIS PROJECT IN LIEU OF THE MIXTURES LISTED IN 659.09:
30% KENTUCKY BLUE(VNS)
23% PALMER II PERENNIAL RYE
22% YORKTOWN III PERENNIAL RYE
15% CREEPING RED FESCUE(VNS)
10% BARON KENTUCKY BLUEGRASS

SEEDING AND MULCHING SHALL BE APPLIED TO ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THE GRASS IS ESTABLISHED TO THE SATISFACTION OF THE OWNER, WHICH MAY REQUIRE WATERING AND RESEEDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REGRADING AND RESEEDING ANY AREAS THAT HAVE ERODED OR AREAS THAT NEW GRASS DID NOT GERMINATE UNTIL THE ENTIRE AREA IS STABILIZED, SHAPED AND DRAINED AS PER DRAWINGS. THE ABOVE SHALL BE INCIDENTAL TO THE PROJECT.

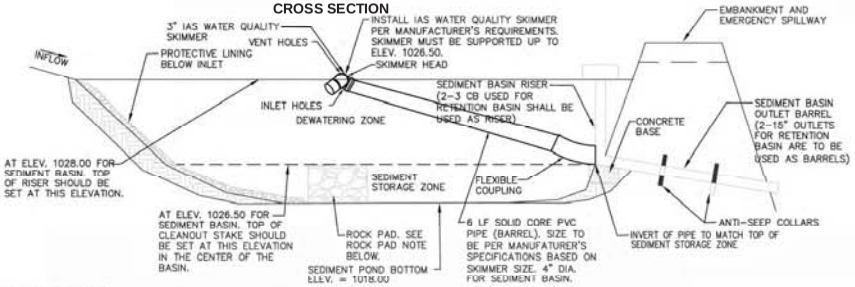
FILORAMO TALSMA ARCHITECTURE
Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
www.CHOICEONEENGINEERING.com
CERTIFICATION:
No.	Date	Issue Description
1	11/08/2017	Iss'd for Plan Commission Level-B Review
PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PROJECT ADDRESS: 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
OWNER: CRESCO LABS 344 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
SHEET NO: C302
PRINT DATE: 11/08/2017
SHEET NAME: SWPPP EROSION CONTROL NOTES AND DETAILS

DISCLAIMER: These drawings are the property of FILORAMO TALSMA, LLC. Use of these drawings is limited to a specified project for persons herein and for this project only. These drawings are not to be reproduced, changed or copied in any form or manner whatsoever, nor are they to be assigned to any third party, without the written consent of FILORAMO TALSMA, LLC.
Do not scale drawings. Written dimensions preside over scale. These drawings may have been reproduced at a size different than originally drawn. Owner and Architect assume no responsibility for use of incorrect scale.

EMERGENCY SPILLWAY CROSS SECTION



SEDIMENT BASIN NOTES AND DETAILS
SEDIMENT BASIN DETAIL CROSS SECTION



ROCK PAD NOTE:
IT IS VERY IMPORTANT THAT A ROCK PAD BE CONSTRUCTED TO THE HEIGHT OF THE TOP OF THE SEDIMENT STORAGE ZONE. IF THIS IS NOT DONE OR IF THE PAD IS NOT BUILT TO THE SAME HEIGHT AS THE TOP OF THE SEDIMENT STORAGE ZONE, THE SKIMMER WILL NOT FUNCTION PROPERLY .

WHEN COMPLETE THE IAS FLEXIBLE COUPLING SHOULD BE LYING FLAT ON THE ROCK PAD. THE UNIT WILL BE TOUCHING AT TWO POINTS: THE TOP OF THE BARREL/MIDDLE OF THE SKIMMER HEAD AND THE POINT AT WHICH THE BARREL IS ATTACHED TO THE IAS FLEXIBLE COUPLING. SEE MANUFACTURER'S ASSEMBLY INSTRUCTIONS.

SEDIMENT BASIN CALCULATIONS

SEDIMENT BASIN
REQUIRED SEDIMENT STORAGE VOLUME = 37 C.Y./ACRE * 7.03 ACRES = 261 C.Y.
TOP OF SEDIMENT STORAGE ZONE ELEVATION = 1026.50 (6,337 C.Y.). SET CLEANOUT STAKE AT THIS ELEVATION.
REQUIRED DEWATERING ZONE VOLUME = 67 C.Y./ACRE * 14.00 ACRES = 938 C.Y.
DEWATERING ZONE VOLUME (BETWEEN 1026.50 AND 1028.00) = 1,728 C.Y.
TOTAL BASIN VOLUME REQUIRED TO TOP OF DEWATERING ZONE = 261 C.Y. + 938 C.Y. = 1,199 C.Y.
TOP OF DEWATERING ZONE ELEVATION = 1028.00 (8,065 C.Y.)
TOTAL SEDIMENT BASIN VOLUME PROVIDED TO ELEV. 1,030.00 = 10,835 C.Y.
RISER AND BARREL: PROPOSED (2) 15" RETENTION OUTLETS AND 2-3 CB ARE TO BE USED AS OUTLETS FOR SEDIMENT BASIN.
EMERGENCY SPILLWAY: EMERGENCY SPILLWAY TO BE TRAPEZOIDAL WITH A BOTTOM WIDTH OF 25'.
DEWATERING TIME : 2.50 DAYS
938 C.Y. * 27 = 25,326 C.F. VOLUME TO BE DEWATERED USING AN IAS WATER QUALITY SKIMMER WITH A 3" SKIMMER SIZE, IT DISCHARGES 10,205 CF PER 24 HOURS THEREFORE IT WILL TAKE 2.50 DAYS TO DEWATER THIS SEDIMENT BASIN.

SEDIMENT BASIN NOTES:
1. SEDIMENT BASINS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

2. SITE PREPARATION –THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS NEEDED TO FACILITATE SEDIMENT CLEANOUT. GULLIES AND SHARP *BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. THE SURFACE OF THE FOUNDATION AREA WILL BE THOROUGHLY SCARIFIED* BEFORE PLACEMENT OF THE EMBANKMENT MATERIAL.

3. EMBANKMENT –THE FILL MATERIAL SHALL BE FREE OF ALL SOD, ROOTS, FROZEN SOIL, STONES OVER 6 IN. IN DIAMETER, AND OTHER OBJECTIONABLE MATERIAL. THE PLACING AND SPREADING OF THE FILL MATERIAL SHALL BE STARTED AT THE LOWEST POINT OF THE FOUNDATION AND THE FILL SHALL BE BROUGHT UP IN APPROXIMATELY 8 IN. HORIZONTAL LAYERS OR OF SUCH THICKNESS THAT THE REQUIRED COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED. CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER EACH LAYER IN A WAY THAT WILL RESULT IN THE REQUIRED COMPACTION. SPECIAL EQUIPMENT SHALL BE USED WHEN THE REQUIRED COMPACTION CANNOT BE OBTAINED WITHOUT IT. THE MOISTURE CONTENT OF FILL MATERIAL SHALL BE SUCH THAT THE REQUIRED DEGREE OF COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED. THE EMBANKMENTS OF THE SEDIMENT BASIN AND THE AREAS THAT LIE DOWNSTREAM OF THE POND MUST BE STABILIZED.

4. PIPE SPILLWAY –THE PIPE CONDUIT BARREL SHALL BE PLACED ON A FIRM FOUNDATION TO THE LINES AND GRADES SHOWN ON THE PLANS. CONNECTIONS BETWEEN THE RISER AND BARREL, THE ANTI-SEEP COLLARS AND BARREL AND ALL PIPE JOINTS SHALL BE WATERTIGHT. SELECTED BACKFILL MATERIAL SHALL BE PLACED AROUND THE CONDUIT IN LAYERS AND EACH LAYER SHALL BE COMPACTED TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. ALL COMPACTION WITHIN 2 FT. OF THE PIPE SPILLWAY WILL BE ACCOMPLISHED WITH HAND-OPERATED TAMPING EQUIPMENT.

5. RISER PIPE BASE –THE RISER PIPE SHALL BE SET A MINIMUM OF 6 IN. IN THE CONCRETE BASE.

6. TRASH RACKS –THE TOP OF THE RISER SHALL BE FITTED WITH TRASH RACKS FIRMLY FASTENED TO THE RISER PIPE.

7. SEED AND MULCH –THE SEDIMENT BASIN SHALL BE STABILIZED IMMEDIATELY FOLLOWING ITS CONSTRUCTION. IN NO CASE SHALL THE EMBANKMENT OR EMERGENCY SPILLWAY REMAIN BARE FOR MORE THAN 7 DAYS.

8. SEDIMENT CLEANOUT –SEDIMENT SHALL BE REMOVED AND THE SEDIMENT BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT FILLS TO THE DESIGN DEPTH OF THE SEDIMENT STORAGE ZONE. THIS ELEVATION SHALL BE MARKED ON A CLEANOUT STAKE NEAR THE CENTER OF THE BASIN. SEDIMENT REMOVED FROM THE BASIN SHALL BE PLACED SO THAT IT WILL NOT ERODE.

9. FINAL REMOVAL – SEDIMENT BASINS SHALL BE REMOVED AFTER THE UPSTREAM DRAINAGE AREA IS STABILIZED OR AS INDICATED IN THE PLANS. DEWATERING AND REMOVAL SHALL NOT CAUSE SEDIMENT TO BE DISCHARGED. THE SEDIMENT BASIN SITE AND SEDIMENT REMOVED FROM THE BASIN SHALL BE STABILIZED.

OPERATIONS AND MAINTENANCE:
SEDIMENT BASINS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.
NECESSARY ACTIVITIES ARE SHOWN AS FOLLOWS:

1. ESTABLISH VEGETATIVE COVER AND FERTILIZE AS NECESSARY TO MAINTAIN A VIGOROUS COVER IN AND AROUND THE SEDIMENT BASIN.

2. REMOVE UNDESIRABLE VEGETATION PERIODICALLY TO PREVENT GROWTH OF TREES AND SHRUBS ON THE EMBANKMENT AND SPILLWAY AREAS.

3. PROMPTLY REPAIR ERODED AREAS. REESTABLISH VEGETATIVE COVER IMMEDIATELY WHERE SCOUR EROSION HAS REMOVED ESTABLISHED SEEDING.

4. PROMPTLY REMOVE ANY BURROWING RODENTS THAT MAY INVADE AREAS OF THE EMBANKMENT.

5. REMOVE TRASH AND DEBRIS THAT MAY BLOCK SPILLWAYS AND ACCUMULATE IN THE POND.

6. CHECK SPILLWAY OUTLETS AND POINTS OF INFLOW TO ENSURE DRAINAGE IS NOT CAUSING EROSION AND THAT OUTLETS ARE NOT CLOGGED. REPLACE DISPLACED RIPRAP IMMEDIATELY.

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA ARCHITECTURE. The reproduction, publication or use for any purpose other than the specific project for which they were prepared is prohibited. Visual contact with these drawings shall constitute prima facie evidence of the acceptance of these restrictions. Copyright © FILORAMO TALSMA LLC

Do not scale drawings. Written dimensions provide the location of walls, openings, and other features and shall take precedence over scale dimensions. Verify all dimensions and report any discrepancies to the Architect before proceeding with work.

FILORAMO TALSMA ARCHITECTURE
1306 N. CLIFTON AVE. #205
CLEVELAND, OHIO 44107
INFO@FTACOM

Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.726.5300
www.CHOICEONEENGINEERING.com

No.	Date	Issue Description
1	11/08/2017	Issued for Plan Commission Level B Review

CERTIFICATION:

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS

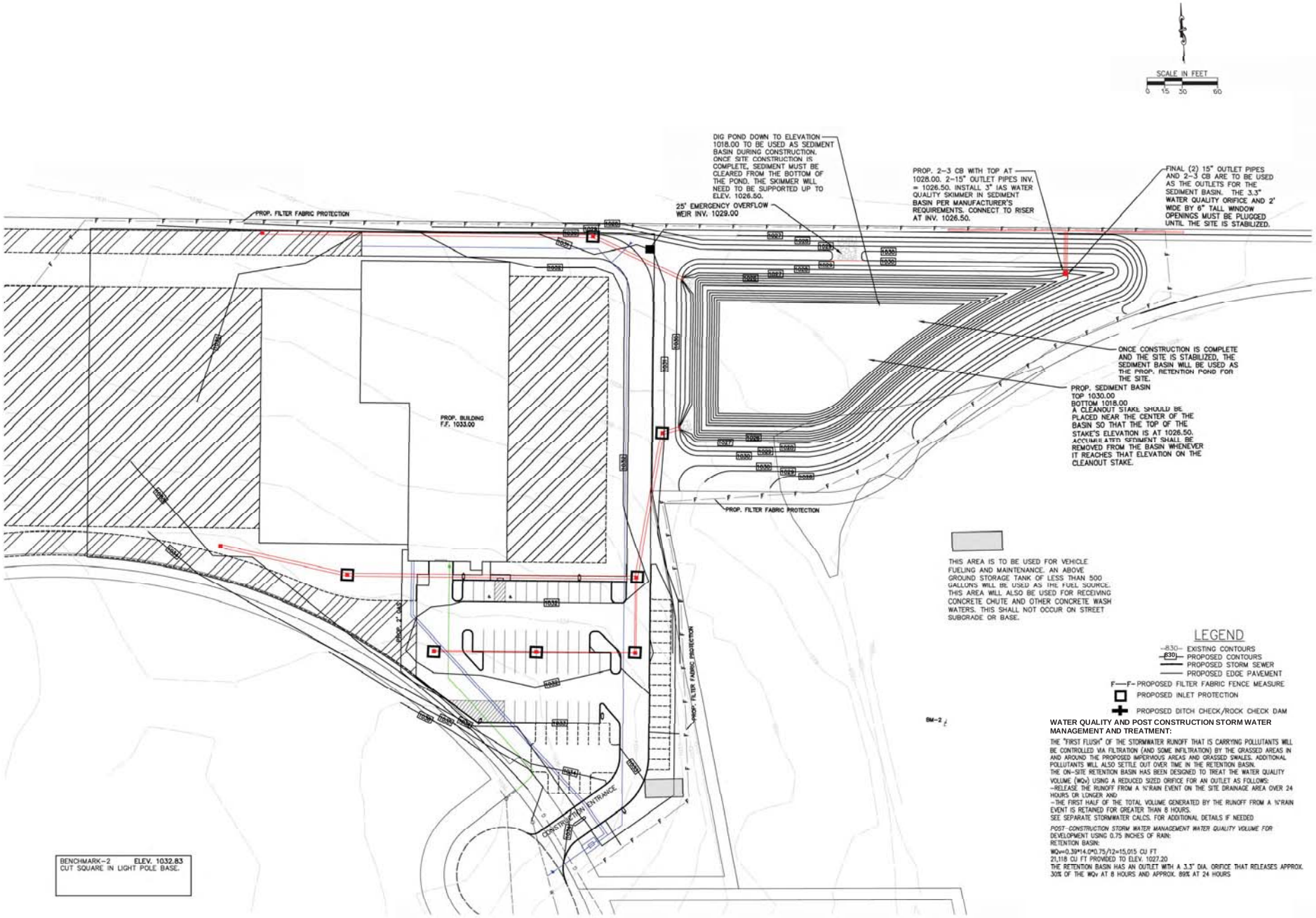
PROJECT ADDRESS: 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER: CRESCO LABS 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

SHEET NO. C303

PRINT DATE: 11/08/2017

SHEET NAME: SWPPP EROSION CONTROL NOTES AND DETAILS



WATER QUALITY AND POST CONSTRUCTION STORM WATER MANAGEMENT AND TREATMENT:

THE "FIRST FLUSH" OF THE STORMWATER RUNOFF THAT IS CARRYING POLLUTANTS WILL BE CONTROLLED VIA FILTRATION (AND SOME INFILTRATION) BY THE GRASSED AREAS IN AND AROUND THE PROPOSED IMPERVIOUS AREAS AND GRASSED SWALES. ADDITIONAL POLLUTANTS WILL ALSO SETTLE OUT OVER TIME IN THE RETENTION BASIN.
THE ON-SITE RETENTION BASIN HAS BEEN DESIGNED TO TREAT THE WATER QUALITY VOLUME (WQv) USING A REDUCED SIZED ORIFICE FOR AN OUTLET AS FOLLOWS:
-RELEASE THE RUNOFF FROM A ½"RAIN EVENT ON THE SITE DRAINAGE AREA OVER 24 HOURS OR LONGER AND
-THE FIRST HALF OF THE TOTAL VOLUME GENERATED BY THE RUNOFF FROM A ½"RAIN EVENT IS RETAINED FOR GREATER THAN 8 HOURS.
SEE SEPARATE STORMWATER CALCS. FOR ADDITIONAL DETAILS IF NEEDED

POST-CONSTRUCTION STORM WATER MANAGEMENT WATER QUALITY VOLUME FOR DEVELOPMENT USING 0.75 INCHES OF RAIN:
RETENTION BASIN:
WQv=0.39*14.0*0.75/12=15,015 CU FT
21,118 CU FT PROVIDED TO ELEV. 1027.20
THE RETENTION BASIN HAS AN OUTLET WITH A 3.3" DIA. ORIFICE THAT RELEASES APPROX. 30% OF THE WQv AT 8 HOURS AND APPROX. 89% AT 24 HOURS

FILORAMO TALSMA ARCHITECTURE
1300 N. CLINTON AVE. #200
CLINTON TOWNSHIP, MI 48004
586.741.0700 FTARCH.COM
Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.5500
www.CHOICEONEENGINEERING.com

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA ARCHITECTURE. Reproduction or publication in whole or in part, without written permission, is prohibited. The drawings are to be used only for the project specified herein. Any other use or reproduction of these drawings, in whole or in part, is prohibited without the written consent of FILORAMO TALSMA, LLC.
Do not scale drawings. Written dimensions govern. Contractor shall verify all dimensions, notify architect of any discrepancies and shall be responsible for the correct execution of the work.

No.	Date	Issue Description
1	11/08/2017	Issued for Plan Commission Level II Review

CERTIFICATION:

SHEET NO. C304
PROJECT NAME: CRESCO LABS - YELLOW SPRINGS
PRINT DATE: 11/08/2017
PROJECT ADDRESS: 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387
SHEET NAME: SWPPP EROSION CONTROL PLAN
OWNER: CRESCO LABS
3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.9 fc	2.3 fc	0.3 fc	7.7:1	3.0:1

Luminaire Locations

No.	Label	MH	Orientation
1	A	21.00	183.09
2	A	21.00	183.81
3	A	21.00	24.52
4	A	21.00	4.61
5	A	21.00	327.64

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	5	Lithonia Lighting	KAD LED 40C 530 40K R4 MVOLT	KAD LED, 40 LED, 530mA MVOLT DRIVER, 4000K, TYPE 4 OPTICS.	LED	1	KAD_LED_40C_530_40K_R4_MVOLT.ies	8731	0.85	71

DISCLAIMER:
These drawings are the property of FILORAMO TALSMA ARCHITECTURE. Any reproduction, publication or use by the owner/developer, or any other person or entity, for any purpose other than that specifically granted in writing by FILORAMO TALSMA ARCHITECTURE, is prohibited. Any unauthorized use of these drawings shall be at the sole risk of the user and shall be deemed a violation of the rights of FILORAMO TALSMA ARCHITECTURE, LLC.

Do not scale drawings. Written dimensions provide the intended design information. Contractor shall verify and be responsible for all dimensions and conditions. Notify architect of any discrepancies or conditions that may affect the design before proceeding with work. Do not proceed with work if in doubt.

FILORAMO TALSMA ARCHITECTURE
1306 N. CLINTON AVE. #270
DEFIANCE, OHIO 43512
419.347.1 FACSIMILE

Choice One Engineering
SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2080
www.CHOICEONEENGINEERING.com

CERTIFICATION:

No.	Date	Issue Description
1	11/06/2017	Issued for Plan Commission Level II Review

SHEET NO. E101

PROJECT NAME: CRESCO LABS - YELLOW SPRINGS

PROJECT ADDRESS: 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

OWNER: CRESCO LABS 3414 E. Dayton Yellow Springs Rd., Yellow Springs, OH 45387

PRINT DATE: 11/06/2017

SHEET NAME: PHOTOMETRIC PLAN

EXHIBIT 2

CRESCOlabs™

Office: 312.263.1655
www.crescolabs.com

November 10, 2017

VIA E-MAIL

Denise Swinger
Planning & Zoning Administrator
Village of Yellow Springs
(937) 767-1702

RE: FACILITY USE NARRATIVE

Dear Denise:

The proposed building located within an I-1 zoning district will be comprised of two (2) distinct areas of use, Manufacturing and Greenhouse. Manufacturing is a Permitted Use and Greenhouse/Nursery is a Conditional Use. We are seeking Conditional Use approval.

The Processing Head House is considered a manufacturing, compounding, processing and packaging use due to the following activities:

- Drying and processing of medical marijuana;
- Manufacture of infused products such as edibles, capsules, topicals and oils; and
- Final packaging of medical marijuana products.

The Greenhouse is considered an agricultural greenhouse/nursery use due to the following activities:

- Cultivation and harvesting of medical marijuana within a greenhouse structure.

The use of appropriate GxPs will allow Cresco Labs Ohio to distribute products that possess the safety, quality, identity, purity, and potency ("SQuIPP") that qualified patients deserve while maintaining compliance with the permitted land use.

520 W. Erie, Suite 220
Chicago, IL 60654

EXHIBIT 3

CRESCOlabs™

Office: 312.263.1655
www.crescolabs.com

November 9, 2017

VIA E-MAIL

Denise Swinger
Planning & Zoning Administrator
Village of Yellow Springs
(937) 767-1702

RE: FRONT YARD PARKING VARIANCE

Dear Denise:

Pursuant to the effective Yellow Springs zoning code, Cresco Labs Ohio is requesting an exception to spatial requirements, Section 1252.03(b) / Table 1252.03a, to permit parking and loading in the front yard due to a hardship. The hardship exists due to the lot configuration that results in a lack of sufficient parcel length and width along with storm water to place the parking lot in any other location, the front yard is the only suitable location remaining.

Cresco Labs Ohio is requesting approval to deviate from the Minimum Lot Size and Zoning Requirements enumerated in Section 1254.03(b). The process to modify minimum lot size and zoning requirements is defined within Section 1254.03(d) which allows zoning adjustments if the modification will result in a higher quality and more sustainable development consistent with the purposes of PUD expressed in Section 1254.01.

This hardship modification will satisfy four (4) of the following criteria:

- **1254.03(d)(1)** – Preserve the best natural features of the site;
- **1254.03(d)(2)** – Create, improve or maintain open space for the residents, employees and visitors beyond the minimum require by subsection (f) of this section;
- **1254.03(d)(5)** – Employ low impact design and/or other best practices to manage storm water and reduce the off-site impacts of runoff;
- **1254.03(d)(6)** – Employ practices in site layout, building construction and materials that will result in a measurable reduction in energy consumption;

520 W. Erie, Suite 220
Chicago, IL 60654

HEINTZ ENGINEERING, LLC

Michael L. Heintz, P.E.,P.S.
231 Sandpiper Place
Sidney, Ohio 45365
937-710-3310
mike@heintzengineering.com
www.heintzengineering.com

November 8, 2017

Village of Yellow Springs
100 Dayton Street
Yellow Springs, Ohio 45387

Attn: Denise Swinger
RE: Cresco Site Plan Review

Dear Ms. Swinger,

I have completed a preliminary site plan review of the proposed Cresco facility.

There is only one issue that I have found that needs to be addressed. The existing Cresco site currently drains into two watersheds, one to the northeast which drains to Yellow Springs Creek and the other drain to the northwest which drains to Jacoby Run. It appears that the current site design is changing that drainage pattern and releasing all of the runoff water into the Yellow Springs Creek watershed. Since all of the proposed development with the first phase of construction drains into the Yellow Springs Creek watershed, there is no problem, other than the retention basin and storm piping are probably oversized if the drainage is divided.

I would recommend the following revisions:

1. Show the entire site with existing contours which will delineate the two watersheds.
2. Add a second detention/retention basin near the northwest property corner for future construction that will receive approximately 40% of the site's stormwater and release into the Jacoby Run watershed. A similar release structure (pipe) as shown on the current plan should work well.
3. Storm piping sizes and the current retention basin size (approximately 60% of the runoff) can both be reduced since the drainage areas are being separated.

I will do a more exhaustive plan review when storm and detention calculations are provided. If you have any questions or concerns, please give me a call at 937-710-3310.

Sincerely,

Michael L. Heintz, P.E., P.S.
Heintz Engineering

Village of Yellow Springs, Greene County

Cresco Labs Site Plan
Storm Water Retention Calculations

Site Description:

Site is an existing open row crop field that currently has no onsite detention to control the storm water runoff. The proposed site will increase the impervious area and require a retention basin on site to control the runoff. Water Quality measures will be added to the proposed retention basin and the size of the basin will be increased to control the existing and additional runoff that will be produced by the increased impervious area.

Hydrologic Methodologies:

The hydrologic methodology used for this design was the Soil Conservation Service (SCS) TR-55 Method, which was computed via the Bentley PondPack program.

Existing Hydrologic Conditions:

The storm water on the existing site moves via overland flow through the row crop field to the north where it enters another open farm field.

Developed Hydrologic Conditions:

The proposed site will move the rain water through the site via proposed storm sewer. Once the storm water has entered the storm sewer it will then be carried to the proposed retention basin. The first ¾" of rain will be detained for the required 24 hours to treat that water for water quality. Once that volume of water has been reached, the retention basin outlet structure will increase its release rate for up to the critical storm (5-year), but will not exceed the pre-developed 1-year storm peak outflow rate.

Storm Water Management Plan:

The proposed site will move the runoff through the site by having the proposed pavement sloped towards proposed catch basins. Once the water enters the storm structures, it will then travel through proposed storm sewer to the retention basin.

Applicable Permits:

The Ohio Environmental Protection Agency, Notice of Intent.

Calculation Sheets:

Below is a summary of the storm water retention calculations. Please see the attached computer printouts for additional details.

Hydrologic Soil Groups C and D were used for these calculations based upon soil in the surrounding area. A soil map from the USDA's Web Soil Survey website was utilized to determine this Soil Group.

The retention basin will be constructed to accommodate the additional water that will need to be retained based upon additional impervious area and water quality volume requirements.

Proposed Retention Basin

- Time of Concentration (Tc)
  - Pre-developed drainage area = 32 minutes (0.541 hrs) - See page 7 of 24 of computer calcs
  - Post-developed drainage area = 23 minutes (0.387 hrs) - See page 5 of 24 of computer calcs
- CN Number
  - Pre-developed = 84 – see page 10 of 24 of computer calculations
  - Post-developed = 90 – see page 9 of 24 of computer calculations
- Total Acreage = 14.00 acres

Pre-developed Hydrograph Volume		Post-developed Hydrograph Volume	
Storm	Peak Volume	Storm	Peak Volume
1 year	1.124 ac-ft	1 year	1.579 ac-ft
2 year	1.485 ac-ft	2 year	1.996 ac-ft
5 year	2.061 ac-ft	5 year	2.638 ac-ft
10 year	2.562 ac-ft	10 year	3.185 ac-ft
25 year	3.286 ac-ft	25 year	3.961 ac-ft
50 year	3.816 ac-ft	50 year	4.522 ac-ft
100 year	4.353 ac-ft	100 year	5.086 ac-ft

- Critical Storm Calculation using hydrograph volumes. Volume provides a 5-year critical storm. On page 2 of the Pond Pack calculations it shows the hydrograph volumes. The calculation would be as follows: ((1.579-1.124)/1.124) = 0.40 = 40%. Therefore a 5-year critical storm shall be used.
- Storm Requirements = Control runoff from a 1, 2 and 5-year storm on the post developed site to the runoff from a 1-year storm on the pre-developed site. Then control the runoff from the 10, 25, 50 and 100-year storm on the post-developed site to the runoff from their respective storms for the pre-developed site.
- Retention Volume provided to an elevation of 1029.00= 1.887 acre-feet – see page 11 of 24
- Retention Outlet Structure consists of:
  - A 2-3 catch basin with a 3.3" dia. Orifice at Inv. 1026.50. This orifice will cover the WQv requirements. The next openings are two 2' wide by 6" tall window openings with inverts of 1027.20. The 2-3 catch basin has a top of 1028.00. The outlet for the pond will be two 15" pipes that will T-off and run along the property line 100' each direction. On the 15" pipes will be 150 – 2" holes, equally spaced, that will help to disperse the flow across the farm field. The below calculations support that the critical storm pre vs post release rates are acceptable. The emergency overflow will be the overflow weir which is depressed from the top of the pond, with an invert elevation of 1029.00. The overflow weir is at an elevation that provides 12 inches of free board. This allows water to overflow the top of the basin and discharges down the bank into the existing farm field.

Proposed Retention Basin Summary:

STORM	PEAK INFLOW	PEAK OUTFLOW	ALLOWABLE FLOW	STORAGE	PEAK BASIN ELEVATION
1 YEAR	18.46 cfs	4.06 cfs	10.56 cfs	0.779 ac-ft	1027.61
2 YEAR	23.29 cfs	5.75 cfs	10.56 cfs	0.956 ac-ft	1027.85
5 YEAR	30.64 cfs	9.13 cfs	10.56 cfs	1.232 ac-ft	1028.21
10 YEAR	36.79 cfs	12.88 cfs	24.79 cfs	1.435 ac-ft	1028.46
25 YEAR	45.40 cfs	15.69 cfs	31.80 cfs	1.745 ac-ft	1028.83
50 YEAR	51.54 cfs	19.91 cfs	36.86 cfs	1.952 ac-ft	1029.08
100 YEAR	57.66 cfs	26.71 cfs	41.96 cfs	2.090 ac-ft	1029.23

NOTE: The post developed release rates from the 1, 2, 5-year storms are less than the 1-year pre-developed release rate (per the required critical storm method) and the post-developed release rates from the 10, 25, 50 and 100 year storms are less than their respective pre-developed release rates.

Below is a summary of the storm water runoff quality calculations that would be needed to fully contain the water quality runoff for the site.

- OEPA Requirements
- Retention Pond:
  - Release the runoff from a ¾" rain event on the drainage area over 24 hours or longer.
  - The first half of the total volume generated by the runoff from a ¾" rain event must be retained for greater than 8 hours.

Water Quality Calculations

- Post-Construction storm water management water quality volume for development of both lots using 0.75 inches of rain:
  - WQ_v= 0.39*0.75*14.00/12=0.345 AC-FT
  - 0.485 AC-FT Provided to elev. 1027.20. Therefore 0.485>0.345 and water quality volume is detained.

Retention Basin

Retention Outlet Structure consists of:

- A 3.3" diameter hole at Inv. 1026.50 would be required to hold back the water quality runoff from the site.
- Per the draw down calculation we satisfy the requirement of not releasing more than 50% before 8 hours and not more than 100% by 24 hours. Per the calculations the pond releases about 30% at 8 hours and about 89% at 24 hours.

Cresco Labs Detention
Location: Retention Pond

Job No:
Date: 11-6-2017

OEPA REQUIREMENTS :
1) Release the runoff from a ¾" rain event on the drainage area over 24 hours or longer
2) The first half of the total volume generated by the runoff from a ¾" rain event must be detained for greater than 8 hours

WQv VOLUME CALCULATIONS USING 0.75" OF RAIN

Precipitation (Inches)	**0.75**
Area (Acres)	**14**
Impervious %	**58%**
Cq	**0.39**
WQv (CF)	**15014.80**

WQv = 0.39*14.00*0.75/12 = 0.345 AC-FT = 15,015 CF
RETENTION BASIN HOLDS 21,118 CF AT ELEV. OF 1027.20. 21,118 CF > 15,015 CF THEREFORE WQv SATISFIED. THEREFORE MUST RELEASE WQv THRU PROPERLY SIZED ORIFICE UNTIL 1027.20 (0.70' HIGH) TO ENSURE WQv IS PROPERLY DETAINED AND RELEASED.

WQv DRAW DOWN CALCULATIONS

INSTALL 3.3" ORIFICE IN FACE OF CATCH BASIN AT INV. 1026.50 TO RELEASE WQv AT REQUIRED RATE
SET NEXT ORIFICE AT OR ABOVE 1027.20

Per the draw down calculation below we satisfy the requirement of not releasing more than 50% before 8 hours and not more than 100% by 24 hours. Per the calculations the 3.3" dia. orifice releases about 30% at 8 hours and about 89% at 24 hours.

NORTH DETENTION BASIN

Basin Invert:.....	1026.50	Ft.
Orifice Opening…..	3.30	In.
Orifice Coefficient…	0.55	
Average Head…	0.35	
Average Discharge	0.155	In.
Average Discharge Volume	279.16	cfs

Time (hour)	Time (min)	Starting Volume (CF)	Total Discharged Volume (CF)	Percentage Volume Discharged (%)
0.0	0	15,014.80	0	0.00%
0.5	30		279.16	1.86%
1.0	60		558.32	3.72%
1.5	90		837.48	5.58%
2.0	120		1,116.64	7.44%
2.5	150		1,395.80	9.30%
3.0	180		1,674.97	11.16%
3.5	210		1,954.13	13.01%
4.0	240		2,233.29	14.87%
4.5	270		2,512.45	16.73%
5.0	300		2,791.61	18.59%
5.5	330		3,070.77	20.45%
6.0	360		3,349.93	22.31%
6.5	390		3,629.09	24.17%
7.0	420		3,908.25	26.03%
7.5	450		4,187.41	27.89%
8.0	480		4,466.57	29.75%
8.5	510		4,745.74	31.61%
9.0	540		5,024.90	33.47%
9.5	570		5,304.06	35.33%
10.0	600		5,583.22	37.18%
10.5	630		5,862.38	39.04%
11.0	660		6,141.54	40.90%
11.5	690		6,420.70	42.76%
12.0	720		6,699.86	44.62%
12.5	750		6,979.02	46.48%
13.0	780		7,258.18	48.34%
13.5	810		7,537.34	50.20%
14.0	840		7,816.51	52.06%
14.5	870		8,095.67	53.92%
15.0	900		8,374.83	55.78%
15.5	930		8,653.99	57.64%
16.0	960		8,933.15	59.50%
16.5	990		9,212.31	61.35%
17.0	1020		9,491.47	63.21%
17.5	1050		9,770.63	65.07%
18.0	1080		10,049.79	66.93%
18.5	1110		10,328.95	68.79%
19.0	1140		10,608.11	70.65%

19.5	1170	10,887.28	72.51%
20.0	1200	11,166.44	74.37%
20.5	1230	11,445.60	76.23%
21.0	1260	11,724.76	78.09%
21.5	1290	12,003.92	79.95%
22.0	1320	12,283.08	81.81%
22.5	1350	12,562.24	83.67%
23.0	1380	12,841.40	85.52%
23.5	1410	13,120.56	87.38%
24.0	1440	13,399.72	89.24%
24.5	1470	13,678.88	91.10%
25.0	1500	13,958.05	92.96%
25.5	1530	14,237.21	94.82%
26.0	1560	14,516.37	96.68%
26.5	1590	14,795.53	98.54%
27.0	1620	15,074.69	100.40%
27.5	1650	15,353.85	102.26%
28.0	1680	15,633.01	104.12%
28.5	1710	15,912.17	105.98%
29.0	1740	16,191.33	107.84%
29.5	1770	16,470.49	109.70%
30.0	1800	16,749.65	111.55%
30.5	1830	17,028.82	113.41%
31.0	1860	17,307.98	115.27%
31.5	1890	17,587.14	117.13%
32.0	1920	17,866.30	118.99%
32.5	1950	18,145.46	120.85%
33.0	1980	18,424.62	122.71%
33.5	2010	18,703.78	124.57%
34.0	2040	18,982.94	126.43%
34.5	2070	19,262.10	128.29%
35.0	2100	19,541.26	130.15%
35.5	2130	19,820.42	132.01%
36.0	2160	20,099.59	133.87%
36.5	2190	20,378.75	135.72%
37.0	2220	20,657.91	137.58%
37.5	2250	20,937.07	139.44%
38.0	2280	21,216.23	141.30%
38.5	2310	21,495.39	143.16%
39.0	2340	21,774.55	145.02%
39.5	2370	22,053.71	146.88%
40.0	2400	22,332.87	148.74%
40.5	2430	22,612.03	150.60%
41.0	2460	22,891.19	152.46%
41.5	2490	23,170.36	154.32%
42.0	2520	23,449.52	156.18%
42.5	2550	23,728.68	158.04%
43.0	2580	24,007.84	159.89%
43.5	2610	24,287.00	161.75%
44.0	2640	24,566.16	163.61%
44.5	2670	24,845.32	165.47%
45.0	2700	25,124.48	167.33%
45.5	2730	25,403.64	169.19%
46.0	2760	25,682.80	171.05%
46.5	2790	25,961.96	172.91%
47.0	2820	26,241.13	174.77%
47.5	2850	26,520.29	176.63%
48.0	2880	26,799.45	178.49%
48.5	2910	27,078.61	180.35%
49.0	2940	27,357.77	182.21%
49.5	2970	27,636.93	184.06%
50.0	3000	27,916.09	185.92%
50.5	3030	28,195.25	187.78%
51.0	3060	28,474.41	189.64%
51.5	3090	28,753.57	191.50%
52.0	3120	29,032.74	193.36%
52.5	3150	29,311.90	195.22%
53.0	3180	29,591.06	197.08%
53.5	3210	29,870.22	198.94%
54.0	3240	30,149.38	200.80%
54.5	3270	30,428.54	202.66%
55.0	3300	30,707.70	204.52%
55.5	3330	30,986.86	206.38%
56.0	3360	31,266.02	208.23%

Cresco Labs Retention Calculations

Project Summary	
Title	Cresco Labs Retention Calculations
Engineer	TJT
Company	COEC
Date	11/6/2017

Notes

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
Pre-Developed	Greene County - , 1 yrs	1	1.124	12.200	10.56
Pre-Developed	Greene County - , 2 yrs	2	1.485	12.200	14.18
Pre-Developed	Greene County - , 5 yrs	5	2.061	12.200	19.88
Pre-Developed	Greene County - , 10 yrs	10	2.562	12.200	24.79
Pre-Developed	Greene County - , 25 yrs	25	3.286	12.200	31.80
Pre-Developed	Greene County - , 50 yrs	50	3.816	12.200	36.86
Pre-Developed	Greene County - , 100 yrs	100	4.353	12.200	41.96
Post Developed	Greene County - , 1 yrs	1	1.579	12.100	18.46
Post Developed	Greene County - , 2 yrs	2	1.996	12.100	23.29
Post Developed	Greene County - , 5 yrs	5	2.638	12.100	30.64
Post Developed	Greene County - , 10 yrs	10	3.185	12.100	36.79
Post Developed	Greene County - , 25 yrs	25	3.961	12.100	45.40
Post Developed	Greene County - , 50 yrs	50	4.522	12.100	51.54
Post Developed	Greene County - , 100 yrs	100	5.086	12.100	57.66

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
Pre-Developed	Greene County - , 1 yrs	1	1.124	12.200	10.56
Pre-Developed	Greene County - , 2 yrs	2	1.485	12.200	14.18
Pre-Developed	Greene County - , 5 yrs	5	2.061	12.200	19.88
Pre-Developed	Greene County - , 10 yrs	10	2.562	12.200	24.79
Pre-Developed	Greene County - , 25 yrs	25	3.286	12.200	31.80
Pre-Developed	Greene County - , 50 yrs	50	3.816	12.200	36.86

Cresco Labs Retention Calculations

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Pre-Developed	Greene County - , 100 yrs	100	4.353	12.200	41.96
Outlet	Greene County - , 1 yrs	1	1.561	12.650	4.06
Outlet	Greene County - , 2 yrs	2	1.977	12.600	5.75
Outlet	Greene County - , 5 yrs	5	2.619	12.500	9.13
Outlet	Greene County - , 10 yrs	10	3.166	12.450	12.88
Outlet	Greene County - , 25 yrs	25	3.942	12.450	15.69
Outlet	Greene County - , 50 yrs	50	4.503	12.450	19.91
Outlet	Greene County - , 100 yrs	100	5.067	12.400	26.71

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Pond (IN)	Greene County - , 1 yrs	1	1.579	12.100	18.46	(N/A)	(N/A)
Pond (OUT)	Greene County - , 1 yrs	1	1.561	12.650	4.06	1,027.61	0.779
Pond (IN)	Greene County - , 2 yrs	2	1.996	12.100	23.29	(N/A)	(N/A)
Pond (OUT)	Greene County - , 2 yrs	2	1.977	12.600	5.75	1,027.85	0.956
Pond (IN)	Greene County - , 5 yrs	5	2.638	12.100	30.64	(N/A)	(N/A)
Pond (OUT)	Greene County - , 5 yrs	5	2.619	12.500	9.13	1,028.21	1.232
Pond (IN)	Greene County - , 10 yrs	10	3.185	12.100	36.79	(N/A)	(N/A)
Pond (OUT)	Greene County - , 10 yrs	10	3.166	12.450	12.88	1,028.46	1.435
Pond (IN)	Greene County - , 25 yrs	25	3.961	12.100	45.40	(N/A)	(N/A)
Pond (OUT)	Greene County - , 25 yrs	25	3.942	12.450	15.69	1,028.83	1.745
Pond (IN)	Greene County - , 50 yrs	50	4.522	12.100	51.54	(N/A)	(N/A)

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Pond (OUT)	Greene County - , 50 yrs	50	4.503	12.450	19.91	1,029.08	1.952
Pond (IN)	Greene County - , 100 yrs	100	5.086	12.100	57.66	(N/A)	(N/A)
Pond (OUT)	Greene County - , 100 yrs	100	5.067	12.400	26.71	1,029.23	2.090

Cresco Labs Retention Calculations

Subsection: Time of Concentration Calculations
Label: Post Developed

Return Event: 100 years
Storm Event: TypeII 24hr (2.3 in)

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	117.00 ft
Manning's n	0.240
Slope	0.010 ft/ft
2 Year 24 Hour Depth	2.7000 in
Average Velocity	0.08 ft/s
Segment Time of Concentration	0.387 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.387 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations
Label: Pre-Developed

Return Event: 100 years
Storm Event: TypeII 24hr (2.3 in)

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	300.00 ft
Manning's n	0.170
Slope	0.020 ft/ft
2 Year 24 Hour Depth	2.7000 in
Average Velocity	0.18 ft/s
Segment Time of Concentration	0.473 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	250.00 ft
Is Paved?	False
Slope	0.030 ft/ft
Average Velocity	2.79 ft/s
Segment Time of Concentration	0.025 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	250.00 ft
Is Paved?	False
Slope	0.010 ft/ft
Average Velocity	1.61 ft/s
Segment Time of Concentration	0.043 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.541 hours

==== SCS Channel Flow

Tc =

R = Qa / Wp
V = (1.49 * (R**(2/3)) * (Sf**-0.5)) / n

(Lf / V) / 3600

Where:

R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc =

Unpaved surface:
V = 16.1345 * (Sf**0.5)

Paved Surface:
V = 20.3282 * (Sf**0.5)

(Lf / V) / 3600

Where:

V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Cresco Labs Retention Calculations

Subsection: Runoff CN-Area
Label: Post Developed

Return Event: 100 years
Storm Event: TypeII 24hr (2.3 in)

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft²)	C (%)	UC (%)	Adjusted CN
GRASS (D SOIL)	80.000	255,960.000	0.0	0.0	80.000
IMPERVIOUS	98.000	353,888.000	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	609,848.000	(N/A)	(N/A)	90.445

Cresco Labs Retention Calculations

Subsection: Runoff CN-Area
Label: Pre-Developed

Return Event: 100 years
Storm Event: TypeII 24hr (2.3 in)

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft²)	C (%)	UC (%)	Adjusted CN
ROW CROP C	82.000	304,924.000	0.0	0.0	82.000
ROW CROP D	86.000	304,924.000	0.0	0.0	86.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	609,848.000	(N/A)	(N/A)	84.000

Cresco Labs Retention Calculations

Subsection: Elevation-Area Volume Curve | Return Event: 100 years
Label: Pond | Storm Event: TypeII 24hr (2.3 in)

Elevation (ft)	Planimeter (ft²)	Area (ft²)	A1+A2+sqr (A1*A2) (ft²)	Volume (ac-ft)	Volume (Total) (ac-ft)
1,026.50	0.0	28,585.000	0.000	0.000	0.000
1,027.00	0.0	30,238.000	88,222.885	0.338	0.338
1,028.00	0.0	33,708.000	95,871.891	0.734	1.071
1,029.00	0.0	37,369.000	106,568.326	0.815	1.887
1,030.00	0.0	41,135.000	117,710.808	0.901	2.787

Subsection: Outlet Input Data
Label: Outlet

Return Event: 100 years
Storm Event: TypeII 24hr (2.3 in)

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,026.50 ft
Increment (Headwater)	0.25 ft
Maximum (Headwater)	1,030.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Area	Orifice - 2	Forward	Culvert - 1	1,027.20	1,030.00
Inlet Box	Riser - 1	Forward	Culvert - 1	1,028.00	1,030.00
Orifice-Circular	Orifice	Forward	Culvert - 1	1,026.50	1,030.00
Culvert-Circular	Culvert - 1	Forward	TW	1,026.50	1,030.00
Rectangular Weir	Weir - 1	Forward	TW	1,029.00	1,030.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
Return Event: 100 years
Label: Outlet
Storm Event: TypeII 24hr (2.3 in)

Structure ID: Orifice Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	1,026.50 ft
Orifice Diameter	3.3 in
Orifice Coefficient	0.600

Structure ID: Riser - 1 Structure Type: Inlet Box	
Number of Openings	1
Elevation	1,028.00 ft
Orifice Area	3.3 ft²
Orifice Coefficient	0.600
Weir Length	12.00 ft
Weir Coefficient	2.70 (ft^0.5)/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

Subsection: Outlet Input Data
Label: Outlet

Return Event: 100 years
Storm Event: TypeII 24hr (2.3 in)

Structure ID: Culvert - 1 Structure Type: Culvert-Circular	
Number of Barrels	2
Diameter	15.0 in
Length	35.00 ft
Length (Computed Barrel)	35.00 ft
Slope (Computed)	0.004 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.093
T2 ratio (HW/D)	1.195
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	1,027.87 ft	T1 Flow	4.80 ft³/s
T2 Elevation	1,027.99 ft	T2 Flow	5.49 ft³/s

Subsection: Outlet Input Data | Return Event: 100 years
Label: Outlet | Storm Event: TypeII 24hr (2.3 in)

Structure ID: Weir - 1 Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	1,029.00 ft
Weir Length	25.00 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Orifice - 2 Structure Type: Orifice-Area	
Number of Openings	2
Elevation	1,027.20 ft
Orifice Area	1.0 ft²
Top Elevation	1,027.70 ft
Datum Elevation	1,027.45 ft
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	40
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Cresco Labs Retention Calculations

Subsection: Composite Rating Curve | Return Event: 100 years
Label: Outlet | Storm Event: TypeII 24hr (2.3 in)

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,026.50	0.00	(N/A)	0.00
1,026.75	0.09	(N/A)	0.00
1,027.00	0.17	(N/A)	0.00
1,027.20	0.21	(N/A)	0.00
1,027.25	0.67	(N/A)	0.00
1,027.50	3.03	(N/A)	0.00
1,027.75	5.30	(N/A)	0.00
1,028.00	6.42	(N/A)	0.00
1,028.25	9.72	(N/A)	0.00
1,028.50	13.51	(N/A)	0.00
1,028.75	15.20	(N/A)	0.00
1,029.00	16.68	(N/A)	0.00
1,029.25	27.39	(N/A)	0.00
1,029.50	45.76	(N/A)	0.00
1,029.75	69.16	(N/A)	0.00
1,030.00	96.58	(N/A)	0.00

Contributing Structures

(no Q: Orifice - 2,Riser - 1,Orifice,Culvert - 1,Weir - 1)
Orifice,Culvert - 1 (no Q: Orifice - 2,Riser - 1,Weir - 1)
Orifice,Culvert - 1 (no Q: Orifice - 2,Riser - 1,Weir - 1)
Orifice,Culvert - 1 (no Q: Orifice - 2,Riser - 1,Weir - 1)
Orifice - 2,Orifice,Culvert - 1 (no Q: Riser - 1,Weir - 1)
Orifice - 2,Orifice,Culvert - 1 (no Q: Riser - 1,Weir - 1)
Orifice - 2,Orifice,Culvert - 1 (no Q: Riser - 1,Weir - 1)
Orifice - 2,Orifice,Culvert - 1 (no Q: Riser - 1,Weir - 1)
Orifice - 2,Riser - 1,Orifice,Culvert - 1 (no Q: Weir - 1)
Orifice - 2,Riser - 1,Orifice,Culvert - 1 (no Q: Weir - 1)
Orifice - 2,Riser - 1,Orifice,Culvert - 1 (no Q: Weir - 1)
Orifice - 2,Riser - 1,Orifice,Culvert - 1 (no Q: Weir - 1)
Orifice - 2,Riser - 1,Orifice,Culvert - 1,Weir - 1

Subsection: Composite Rating Curve
Label: Outlet

Return Event: 100 years
Storm Event: TypeII 24hr (2.3 in)

Composite Outflow Summary

Contributing Structures
Riser - 1,Culvert - 1,Weir - 1 (no Q: Orifice - 2,Orifice)
Riser - 1,Culvert - 1,Weir - 1 (no Q: Orifice - 2,Orifice)
Riser - 1,Culvert - 1,Weir - 1 (no Q: Orifice - 2,Orifice)

Cresco Labs Retention Calculations

Subsection: Level Pool Pond Routing Summary
Label: Pond (IN)

Return Event: 1 years
Storm Event: TypeII 24hr (2.3 in)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,026.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	18.46 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	4.06 ft³/s	Time to Peak (Flow, Outlet)	12.650 hours

Elevation (Water Surface, Peak)	1,027.61 ft
Volume (Peak)	0.779 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.579 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.561 ac-ft
Volume (Retained)	0.018 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Cresco Labs Retention Calculations

Subsection: Level Pool Pond Routing Summary
Return Event: 2 years
Label: Pond (IN)
Storm Event: TypeII 24hr (2.7 in)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,026.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	23.29 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	5.75 ft³/s	Time to Peak (Flow, Outlet)	12.600 hours

Elevation (Water Surface, Peak)	1,027.85 ft
Volume (Peak)	0.956 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.996 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.977 ac-ft
Volume (Retained)	0.018 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Cresco Labs Retention Calculations

Subsection: Level Pool Pond Routing Summary
Return Event: 5 years
Label: Pond (IN)
Storm Event: TypeII 24hr (3.3 in)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,026.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	30.64 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	9.13 ft³/s	Time to Peak (Flow, Outlet)	12.500 hours

Elevation (Water Surface, Peak)	1,028.21 ft
Volume (Peak)	1.232 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	2.638 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	2.619 ac-ft
Volume (Retained)	0.018 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Cresco Labs Retention Calculations

Subsection: Level Pool Pond Routing Summary
Label: Pond (IN)

Return Event: 10 years
Storm Event: TypeII 24hr (3.8 in)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,026.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	36.79 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	12.88 ft³/s	Time to Peak (Flow, Outlet)	12.450 hours

Elevation (Water Surface, Peak)	1,028.46 ft
Volume (Peak)	1.435 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	3.185 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	3.166 ac-ft
Volume (Retained)	0.018 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Cresco Labs Retention Calculations

Subsection: Level Pool Pond Routing Summary
Label: Pond (IN)

Return Event: 25 years
Storm Event: TypeII 24hr (4.5 in)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,026.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	45.40 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	15.69 ft³/s	Time to Peak (Flow, Outlet)	12.450 hours

Elevation (Water Surface, Peak)	1,028.83 ft
Volume (Peak)	1.745 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	3.961 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	3.942 ac-ft
Volume (Retained)	0.019 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Cresco Labs Retention Calculations

Subsection: Level Pool Pond Routing Summary
Label: Pond (IN)

Return Event: 50 years
Storm Event: TypeII 24hr (5.0 in)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,026.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	51.54 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	19.91 ft³/s	Time to Peak (Flow, Outlet)	12.450 hours

Elevation (Water Surface, Peak)	1,029.08 ft
Volume (Peak)	1.952 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	4.522 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	4.503 ac-ft
Volume (Retained)	0.019 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Cresco Labs Retention Calculations

Subsection: Level Pool Pond Routing Summary
Label: Pond (IN)

Return Event: 100 years
Storm Event: TypeII 24hr (5.5 in)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,026.50 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	57.66 ft³/s	Time to Peak (Flow, In)	12.100 hours
Flow (Peak Outlet)	26.71 ft³/s	Time to Peak (Flow, Outlet)	12.400 hours

Elevation (Water Surface, Peak)	1,029.23 ft
Volume (Peak)	2.090 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	5.086 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	5.067 ac-ft
Volume (Retained)	0.019 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Hydrologic Soil Group—Greene County, Ohio

Map Scale: 1:2,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Greene County, Ohio
Survey Area Data: Version 13, Oct 5, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 14, 2015—Mar 28, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Greene County, Ohio (OH057)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Bs	Brookston silty clay loam, fine texture, 0 to 2 percent slopes	C/D	1.5	11.5%
CrA	Crosby silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	C/D	5.2	39.0%
MhB	Miamian silt loam, 2 to 6 percent slopes	C	6.6	49.5%
Totals for Area of Interest			**13.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

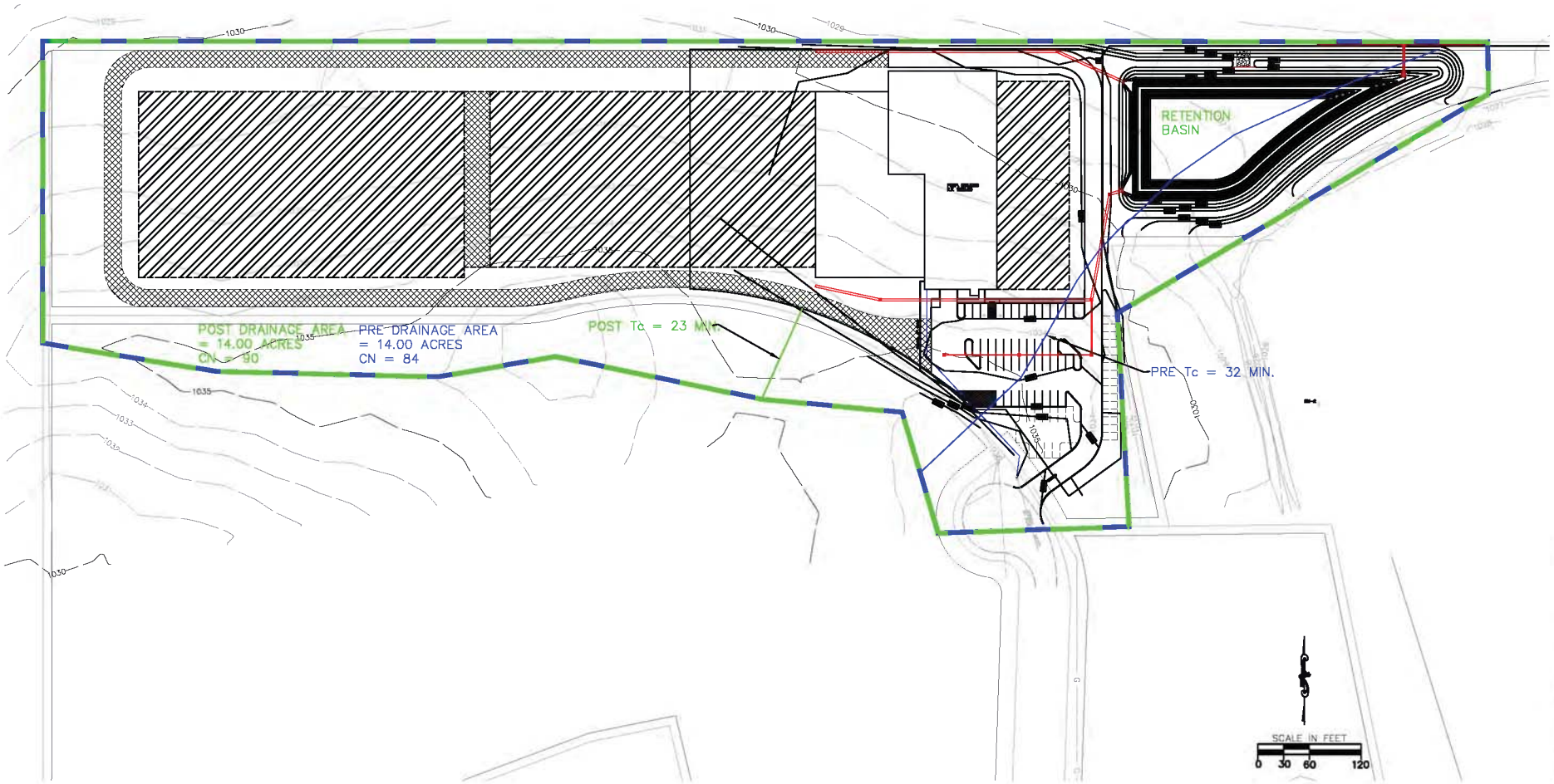
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



Choice One Engineering

SIDNEY, OHIO 937.497.0200
LOVELAND, OHIO 513.239.8554
PORTLAND, INDIANA 260.766.2500
www.CHOICEONEENGINEERING.com

CRESCO LABS SITE PLAN
VILLAGE OF YELLOW SPRINGS
PRE VS POST DRAINAGE EXHIBIT

REVISIONS:

FILE NAME	PRE VS POST
DRAWN BY	TJT
CHECKED BY	JSP
PROJECT No.	GREYSP1702
DATE	11-06-2017
SHEET NUMBER	1 OF 1

EXHIBIT 6

CRESCOlabs™

Office: 312.263.1655
www.crescolabs.com

November 10, 2017

VIA E-MAIL

Denise Swinger
Planning & Zoning Administrator
Village of Yellow Springs
(937) 767-1702

RE: PHASE 1 / 2 EMPLOYEE HEADCOUNT AND PARKING LOT DEVELOPMENT

Dear Denise:

As part of our operational launch a limited number of employees will be necessary during the initial cultivation cycle. Per our application operational timetable, we anticipate an employee headcount that will not exceed 10 - 15 resources until Phase 2 cultivation expansion. Phase 2 expansion is expected to kickoff once the registered patient population requires an increased production volume, necessitating a facility expansion beyond 25,000 square feet of cultivation canopy. Per the operational timeline below and expected Phase 2 start date, we will only require (15) employee parking spaces and (3) visitor parking spaces until 2020.

It is important to note that our application timetable was drafted for a September 2017 notification of license award. Based upon projected patient population growth rates, we do not expect Phase 2 launch to occur until sometime in mid to late 2020.

We are proposing the construction of 45 parking spaces for Phase 1 construction and areas to support up to 26 additional spaces as needed for future expansions. The number of parking spaces proposed is significantly more than the number of parking spaces the facility will need to support based on our current facility's headcounts.

520 W. Erie, Suite 220
Chicago, IL 60654

TO: Planning Commission

FROM: Denise Swinger, Village of Yellow Springs Architectural Review Committee Representative for the CBE/Commerce Park

DATE: November 9, 2017

RE: Review of Cresco Labs development of Lot #1

When the land for the commerce park was purchased by Education Village, Inc., a Declaration of Covenants and Restrictions for the CBE was filed with the Greene County Recorder's Office. This declaration includes a set of standards, rules and regulations for an Architectural Review Committee. The individual or individuals designated shall review and either approve, modify or reject all development, construction, landscaping and site plans involving improvements for the property. After the transfer of the land to the Village of Yellow Springs, I was appointed the designated representative by Council. Because this is new construction. In fulfillment of these covenants, please accept the following recommendations to be made part of the conditional use requirement for Cresco Labs site plan review.

We understand Cresco Labs requires high-security for their medical marijuana cultivation and processing plant. Because it is located in a mixed-use commerce park, it is important the aesthetics of the property be maintained. This can be accomplished with a few landscaping requirements:

- Use the Village of Yellow Springs Recommended Tree List (Appendix B) which is included with this report and is in revised form pending codification.
- The plan indicated an 8 foot chain link fence with barbed wire. We recommend black chain link fencing with NO barbed wire.

Black chain link fence has a softer appeal and easily blends into residential and commercial environments. When installed with shrubs and trees, it can become nearly invisible.

- Screening to be provided around the building to break up large areas of solid walls. This screening can be done with natural landscaping, such as evergreens or arborvitaes as pictured above, or an attached lattice with climbing ivy or other vine as pictured below. This does not have to be across the entire length of the building, but will be most important along the east side facing East Enon Road and along the south side of the building where the row of exterior ventilation fans, the shipping dock, and the parking lot are located, and which is visible to Dayton-Yellow Springs Road.

- Add a row of trees around the detention area of a size that is visible to the public
- Provide recommended exterior paint colors for approval by the Architectural Review Committee.

Upon completion of the building construction, Cresco will provide a plan for these requirements to Denise Swinger, Zoning Administrator – Village of Yellow Springs, for approval.

APPENDIX B
VILLAGE OF YELLOW SPRINGS
RECOMMENDED TREES

The following list of trees has been placed on file with the Village for use by developers, businesses and individuals seeking advice on the types of trees to use~~:~~

~~As a rule,~~ Some consider streets ~~are~~ more attractive when they contain only one kind of tree species. However, the pest risk is multiplied in that situation; therefore, such plantings should be made with caution.

Tree selection is extremely important in ensuring survivability and long-term health of trees. The most important thing to remember when selecting trees is to match the tree to the site, not the site to the tree. Where you have space for a large species always plant a large species. It is the large tree species that will give Yellow Springs the most benefits in the long run. In addition, they tend to be longer lived than smaller species when planted in the right location.

Tree species diversity is important to a healthy, resilient community tree population, as well as age diversity. A good rule to follow for the community urban forest as a whole is the 10-20-30 Rule. The breakdown to shoot for is no more than 30% of a single family, 20% of a single genus (maple, oak, etc.), and no more than 10% of a single species. This can be accomplished by street or by the community as a whole.

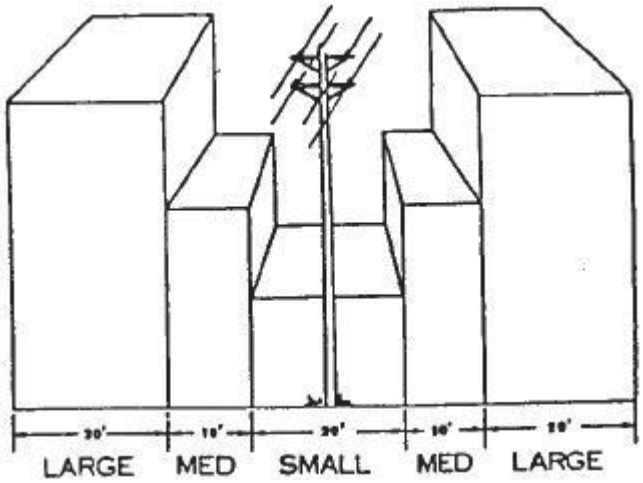
The trees suggested in this list were selected because their characteristics make them suitable for urban and home use. The criteria used include: deep roots, minimal fruit or leaf litter, regular and predictable form, stress tolerance, disease and insect resistance, transplanting facility, availability and ornamental value.

Due to the culture and goals set forth by the Yellow Springs community, native tree species should be given preference where a native species will thrive within the constraints of diversity goals**. All of the trees listed below are good for planting in both tree lawn areas and for landscape use in yards.**

Small Trees with single-stem forms (under 25 feet at maturity) - If planting in the tree lawn, the width should be at least 3 feet

Native
Serviceberry (*Amelachier canadensis*)
Pawpaw (*Asimina triloba*)
American hornbeam (*Carpinus caroliniana*)
Redbud (*Cercis canadensis*)
Washington Hawthorn (*Crataegus phaenopyrum*)
Sweet bay magnolia (*Magnolia virginiana*)

Non-Native
Amur Maple (*Acer ginnala*)
Paperbark Maple (*Acer griseum*)
Cornelian cherry (*Cornus mas*)
Flowering Crabapple (*Malus sp.*) Selected cultivars with small or minimal fruit and disease resistance
Japanese Tree Lilac (*Syringa reticulata*)



Medium Trees (under 40 feet at maturity) - If planting in the tree lawn, the width should be at least 5 feet

~~Flowering Pear (Pyrus calleryana) Selected cultivars~~
~~Lacebark Elm (Ulmus parvifolla)~~
~~Japanese Zelkova (Zelkova serrata) Selected cultivars~~

Native

Persimmon *(Diospyros virginiana)*
Eastern hornbeam (*Ostrya virginiana*)
Canada Red Chokecherry (*Prunus virginiana*)
Sassafras (*Sassafras albidium*)

Non-Native

State Street Maple (*Acer miyabi*)
Sargent Cherry (*Prunus sargentii*)
Japanese pagoda (*Sophora japonica*)
Littleleaf Linden (*Tilia cordata*)
Silver Linden (*Tilia tormentosa*)

Large Trees (no wires) - If planting in the tree lawn, the width should be at least 7 feet

Native

Red Maple (*Acer rubrum*)
Sugar Maple (*Acer saccharum*)
Hackberry (*Celtis occidentalis*)
~~White ash (Fraxinus Americana)**~~
~~Green Ash (Fraxinus pennsylvanica lanceolate)~~
Yellowwood (*Cladrastis lutea*)
Beech (*Fagus grandifolia*)
Thornless Honeylocust (*Gleditsia triacanthos* var. *inermis*) such as ‘Sunburst’ or ‘Imperial’
Kentucky Coffeetree (*Gymnocladus dioicus*)
Sweetgum (*Liquidambar ~~e~~styraciflua*) Seedless cultivars
Tuliptree (*Liriodendron tulipifera*)
Cucumbertree (*Magnolia acuminata*)

Blackgum (*Nyssa sylvatica*)
White Oak (*Quercus alba*)
Swamp White Oak (*Quercus bicolor*)
Scarlet Oak (*Quercus coccinea*)
Shingle Oak (*Quercus imbricar~~l~~ia*)
Bur Oak (*Quercus macrocarpa*)
Chinkapin Oak (*Quercus muehlenbergii*)
Chestnut Oak (*Quercus prinus*)
Red Oak (*Quercus rubra*)
Shumard Oak (*Quercus shumardii*)
Baldcypress (*Taxodium distichum*)
Basswood (*Tilia americana*)

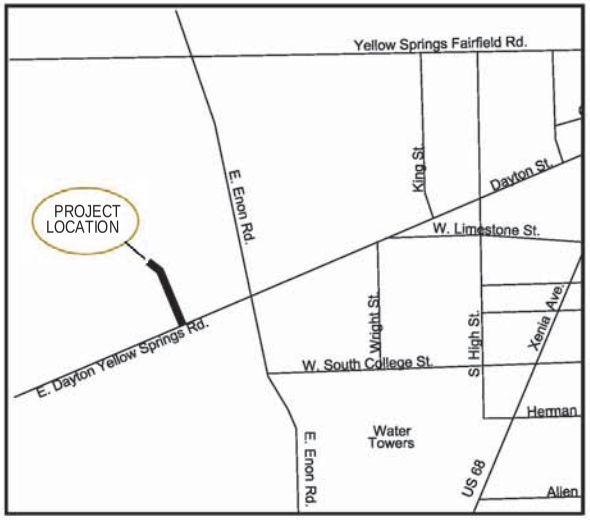
Non Native
Ginkgo (Ginkgo biloba) male Cultivar tree species only! Cultivars such as 'Magyar' or 'Autumn Gold'
London Planetree (Platanus x acerfolia)
Lacebark Elm (Ulmus parvifolla)
Japanese Zelkova (Zelkova serrata) such as 'Green Vase'
~~White Ash (Fraxinus americana)**~~
~~Green Ash (Fraxinus pennsylvanica lanceolata)~~

Trees Not Recommended for Tree Lawn Areas (can be planted for landscape use in yards)
Box Elder (Acer negundo)
Silver Maple (Acer saccharinum)
Buckeye or Horsechestnut (Aesculus species)
Birch (Betula specles)
Northern Catalpa (Catalpa)
Ginkgo-female (Ginkgo biloba)
Osage Orange (Maclura pomifera)
Common fruit trees
Mulberry (Morus)
Poplar (Populus species)
Willow (Salix species)
European Mountain Ash (Sorbus aucuparia)
Siberian Elm (Ulmus pumila)
Norway Maple
Black Walnut (Juglans nigra)
Flowering Pear (Pyrus calleryana) Selected cultivars
Ash (Fraxinus sp.)

Program to Remove Invasive Species to Protect the Health of your Mature Trees
Ailanthus (Ailanthus altissima)
Tree of Heaven (Ailanthus altissima)
Bush Honeysuckle
Autumn Olive
Buckthorn
Flowering Pear (Pyrus calleryana) Selected cultivars

Do Not Use Trees (for tree lawn areas or new developments)

Osage Orange (Maclura pomifera)
Siberian Elm (Ulmus pumila)
Flowering Pear (Pyrus calleryana) Selected cultivars
Ash (Fraxinus sp.)



Location Map - Yellow Springs, Ohio N

CBE / COMMERCE PARK

VILLAGE OF YELLOW SPRINGS

MIAMI TOWNSHIP GREENE COUNTY OHIO

SECTION 26 TOWN 4 RANGE 8

www.yso.com

PROJECT DESCRIPTION

This project consists of the construction of a new street approximately 650 feet in length and new water, sanitary sewer, and storm piping to serve approximately 35 acres of new development.

TABLE OF CONTENTS

Cover Sheet	1
Notes, Details, & Quantities	2-7
Plan & Profile Sheets	8-9
Grading Plan	10-12
Cross Sections	13-14
Pavement Elevation Details	15
Construction Standard Drawings	16-22

VILLAGE MANAGER
Patti Bates

VILLAGE WATER SUP'T
Johnnie Burns

VILLAGE SANITARY SUP'T
Jason Hamby

UNDERGROUND UTILITIES

TWO WORKING DAYS BEFORE YOU DIG
CALL 1-800-362-2764 or 8-1-1
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

STATE OF OHIO DEPARTMENT OF TRANSPORTATION 2016 SPECIFICATIONS

The Construction Standards and Drawings of Greene County and the Standard Specifications of the State of Ohio Department of Transportation, including changes and general notes listed in the plan, shall govern this improvement. The most restrictive shall apply.

STATE OF OHIO
MICHAEL LYNN HEINTZ
44945
REGISTERED
PROFESSIONAL ENGINEER

Approved: _____
Village Approval Date

Approved: _____
Design Engineer Date

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

COVER SHEET

yellowsprings/2017/commerceparkdesign/c.dwg

ISSUE DATE: Nov. 9, 2017

REVISION DATE: -----

REVISION DATE: -----

REVISION DATE: -----

ELEVATION DATUM
ALL ELEVATIONS ARE BASED ON BENCHMARK ELEVATIONS AS SHOWN ON SHEETS 13 AND 14 OF THE PLANS.

GENERAL NOTES AND DETAILS
ALL CONSTRUCTION METHODS, MATERIALS, AND SPECIFICATIONS SHALL COMPLY WITH THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARDS AND SPECIFICATIONS. ANY AREA OF CONSTRUCTION, INSTALLATION, MATERIALS, OR PROCEDURES IN QUESTION SHALL BE ADDRESSED BY THE CONTRACTOR TO THE VILLAGE PRIOR TO COMMENCING WORK.

UNDERGROUND UTILITIES
THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION ACCORDING TO THE BEST AVAILABLE DATA.THE INFORMATION SHOWN CONCERNING EXISTING UTILITIES IS NOT REPRESENTED, WARRANTED, OR GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THEM. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764 OR 8-1-1) 48 HOURS PRIOR TO CONSTRUCTION.

UTILITY OWNERSHIP
THE FOLLOWING UTILITIES AND OWNERS IS A PARTIAL LIST OF UTILITIES THAT MAY BE IN THE PROJECT AREA:

GAS: VECTREN GAS COMPANY 800-227-1376

CABLE: TIME WARNER CABLE 800-425-2225

TELEPHONE: AT&T 866-577-7726

ELECTRIC: VILLAGE OF YELLOW SPRINGS 937-767-1279

ALWAYS CALL OUPS AT 1-800-362-2764 OR 8-1-1 BEFORE YOU DIG.

EXISTING TILES
ANY DRAINAGE TILE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. ALL TILE REMOVED, REPLACED AND/OR RECONNECTED SHALL BE NOTED ON THE RECORD DRAWINGS AND SHALL BE INSPECTED BY THE VILLAGE BEFORE THEY ARE COVERED. ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS AS APPROVED AND DIRECTED BY THE VILLAGE. THE COST OF THESE CONNECTIONS SHALL BE INCLUDED IN THE ITEM 603 RCP STORM SEWER, AS PER PLAN ITEMS.

DEWATERING
ANY NECESSARY DEWATERING OR PUMPING OF GROUND WATER OR STORM RUNOFF NECESSARY FOR THE CONSTRUCTION OF ANY ITEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY AND ALL COSTS SHALL BE INCLUDED WITH THE APPROPRIATE BID ITEM BEING INSTALLED.

SAFETY
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

FUNDING LIMITATATIONS
DUE TO THE LIMITATIONS IN FUNDING OR OTHER UNFORESEEN REASONS, THE OWNER RESERVES THE RIGHT TO INCREASE, DECREASE, OR OMIT ANY ITEMS LISTED IN THE BID SCHEDULE.

UTILITY INTERFERENCE
IF, DURING THE CONSTRUCTION, INTERFERENCE ARISES WITH EXISTING UTILITIES IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE UTILITY COMPANY INVOLVED. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS. DELAY TO THE PROJECT WILL NOT WARRANT ADDITIONAL COMPENSATION TO THE CONTRACTOR. THE PROJECT SCHEDULE WILL BE ADJUSTED TO ALLOW THE UTILITY COMPANY TIME TO RELOCATE THE LINE IN CONFLICT. THE CONTRACTOR SHALL NOTIFY, AT LEAST 7 DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING WIRES, POLES, PIPES, CONDUITS, MANHOLES, OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS.

RECORD DRAWINGS
THE CONTRACTOR SHALL PROVIDE 2 COMPLETE SETS OF RECORD DRAWINGS TO THE VILLAGE WITHIN 30 DAYS OF PROJECT COMPLETION. THESE DRAWINGS SHALL SHOW ALL CHANGES TO THE ORIGINAL DRAWINGS, ALL WATER MAIN, SEWER MAIN, AND LATERAL LOCATIONS AND DEPTHS, ALL MANHOLE AND CATCH BASIN LOCATIONS AND INVERTS, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION AND ALL OTHER PERTINENT DATA TO THE IMPROVEMENTS. PAYMENT FOR THIS ITEM SHALL BE INCLUDED IN ITEM MISCELLANEOUS, AS PER PLAN. FINAL PROJECT PAYMENT WILL NOT BE PAID UNTIL RECORD DRAWINGS ARE RECEIVED BY THE VILLAGE OF YELLOW SPRINGS.

GENERAL PROCEDURE NOTES
THE CONTRACTOR SHALL CONFORM TO THE PLANS PROVIDED. ANY CHANGES MADE SHALL BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER AND THE VILLAGE, PRIOR TO DEVIATING FROM THE PLANS.

PRIOR TO THE START OF THE PROJECT OR ANY PORTION THEREOF, THE CONTRACTOR SHALL NOTIFY THE VILLAGE A MINIMUM OF FIVE (5) DAYS IN ADVANCE. IN NO CASE SHALL THE CONTRACTOR PERFORM ANY OF THE PROJECT CONSTRUCTION WITHOUT NOTIFICATION TO THE VILLAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OHIO UTILITIES PROTECTION SERVICE (OUPS) PRIOR TO ANY CONSTRUCTION PHASE.

THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO INSURE HIMSELF/HERSELF OF THE EXTENT AND INTENT OF THE PROJECT AND AREAS INVOLVED. ANY QUESTIONABLE AREAS, QUANTITIES, MATERIALS, TIME FRAMES, EXTENT/INTENT, OR OTHER QUESTIONS BY THE CONTRACTOR SHALL BE PRESENTED TO THE VILLAGE PRIOR TO THE BIDDING PROCESS.

ALL OPEN TRENCHES, HOLES, OR OTHER TYPES OF EXCAVATION SHALL BE PROPERLY PROTECTED WITH BARRICADES, TRAFFIC CONES, CONSTRUCTION RIBBON, ETC. TO PROTECT THE PUBLIC. THE CONTRACTOR SHALL PROVIDE ALL BARRICADES, CONES, ETC. FOR THE PROJECT SITE AND SHALL MAINTAIN SUCH DEVICES THROUGHOUT THE COURSE OF THE PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR NON-COMPLIANCE.

ALL EXCAVATION OF EXISTING ASPHALT OR CONCRETE PAVEMENT SHALL BE SAW CUT IN STRAIGHT LINES FOR A SMOOTH BUTT JOINT. IF THE EDGE OF THE EXISTING ASPHALT IS DAMAGED DURING CONSTRUCTION, A SECOND SAW-CUT WILL BE REQUIRED. PAYMENT FOR GRAVEL AND ASPHALT ITEMS IS BASED UPON A MAXIMUM TRENCH WIDTH OF 5 FEET. ANY PAVEMENT REMOVED BEYOND THESE LIMITS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. AC SEALER SHALL BE USED ON ALL JOINTS. SAW CUTTING, AC SEALER, AND OTHER RELATED COSTS SHALL BE INCLUDED IN THE ITEM 448 ASPHALT BID ITEMS.

THE TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON STREETS IS PROHIBITED. ANY SUCH OCCURANCE SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR RESTORING ALL SURFACES , STRUCTURES, AND PROPERTY TO ORIGINAL CONDITION. ALL ASSOCIATED COSTS ARE INCIDENTAL TO THE PROJECT.

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

GENERAL NOTES

yellowsprings/2017/CommercePark/Design2.dwg

ISSUE DATE:	REVISION DATE:	REVISION DATE:	REVISION DATE:
Nov. 9, 2017	------	------	------

GENERAL PROCEDURE NOTES, CONT.:

ALL UTILITY INSTALLATIONS, EXCAVATIONS, AND IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENTS ARE TO BE INSPECTED BY THE VILLAGE PRIOR TO CLOSURE. .

UTILITIES ENCOUNTERED DURING EXCAVATION SHALL BE DETERMINED AS TO SERVICABILITY AND DIRECTION OF FLOW. IF QUESTIONS ARISE AS TO ABANDONMENT, THE AUTHOR OF THE PLANS OR OWNER OF THE UTILITY SHALL BE CONTACTED. IF THE UTILITY IS TO BE ABANDONED, THE ENTIRE UTILITY SHALL BE REMOVED &/OR CRUSHED IN PLACE WITHIN THE ENTIRE RIGHT-OF-WAY OF THE STREET. AT THE TIME OF ABANDONMENT, THE PROCESS OF "SEALING-OFF" THE ENDS OF THE UTILITY SHALL BE MADE IN THE FIELD.

ALL REMOVAL ITEMS SHALL BE HAULED OFF-SITE TO A LOCATION APPROVED BY THE VILLAGE. WHEN A CASTING IS REMOVED, IT REMAINS VILLAGE PROPERTY AND TO BE DELIVERED TO THE VILLAGE SERVICE CENTER, UNLESS OTHERWISE APPROVED.

ANY DETAILS OR NOTES NOT DIRECTLY ADDRESSED IN THESE ENGINEERING STANDARDS SHALL BE COORDINATED WITH THE DESIGN ENGINEER AND VILLAGE.

ALL STORM SEWER AND SANITARY SEWER SHALL BE INSTALLED USING A PIPE LASER, INSIDE THE PIPE IF POSSIBLE, FOR GRADE AND ALIGNMENT.

ALL EXCAVATION AT EXISTING ASPHALT OR CONCRETE PAVEMENT SHALL BE SAW CUT IN STRAIGHT LINES AND AC SEALER SHALL BE USED ON ALL JOINTS. SAW CUTTING AND AC SEALER COSTS SHALL BE INCLUDED IN THE ITEM 448 ASPHALT CONCRETE BID ITEMS.

CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL COSTS FOR STAKING AND ALL ASSOCIATED ITEMS SHALL BE INCLUDED IN ITEM "SPECIAL, MISCELLANEOUS, AS PER PLAN."

THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS TO COMPLETE THE REQUIRED WORK AS DETAILED IN THESE PLANS TO THE SATISFACTION OF HEINTZ ENGINEERING AND THE VILLAGE.

THE CONTRACTOR IS TO PLACE A VISIBLE IDENTIFYING MARKER (PVC CONDUIT, 4X4 POST, OR SIMILAR) AT THE END OF EACH SANITARY LATERAL, WATER SERVICE, CONDUITS, ETC. AND ALSO WHERE THE EDGE OF PAVEMENT AND UTILITY INTERSECT. THE CONTRACTOR IS ALSO TO USE GIS TO LOCATE SAID POINTS, PROVIDE A COPY OF POINTS TO THE VILLAGE, AND SHOW ACCURATELY ON THE RECORD AS-BUILT DRAWINGS.

TOPSOIL STRIPED FROM PAVEMENT AND EXCAVATION AREAS IS TO USED TO CONSTRUCT THE DETENTION BASIN ALONG DAYTON YELLOW SPRINGS ROAD. ANY EXCESS TOPSOIL IS TO BE DISTRIBUTED IN LOW AREAS ON LOTS 2 AND 3. CARE IS TO BE TAKEN NOT TO BLOCK NATURAL SURFACE DRAINAGE IN THESE AREAS.

EROSION CONTROL & EPA PERMITS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT AND EROSION CONTROL TO STOP THE LOSS OF SILT AND SEDIMENT FROM THE CONSTRUCTION AREA. THESE CONTROL MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO ITEMS SUCH AS FILTER FABRIC FENCE, INLET PROTECTION, TEMPORARY SEEDING AND MULCHING, SLOPE PROTECTION, DITCH CHECK, SEDIMENT BASIN, ETC. ALL EPA PERMITS, IF REQUIRED, INCLUDING AN NOI PERMIT, IS TO BE OBTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A PLAN AT THE PRE-CONSTRUCTION MEETING EXPLAINING METHODS TO BE USED ON THIS PROJECT. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM SPECIAL MISCELLANEOUS, AS PER PLAN, AT THE LUMP SUM BID PRICE, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NEEDED TO COMPLETE THIS ITEM OF WORK TO THE SATISFACTION OF THE VILLAGE.

WATER MAIN HYDROSTATIC TEST

AFTER THE PIPE HAS BEEN LAID AND BACKFILLED. ALL NEWLY LAID PIPE OR VALVED SECTION, SHALL BE SUBJECTED TO HYDROSTATIC PRESSURE AND LEAKAGE TEST. ALL WATER MAINS MUST BE HYDROSTATICALLY TESTED (AWWA C-600). THE TESTS MUST BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE VILLAGE. THE LEAKAGE TEST PRESSURE SHALL BE NOT LESS THAN 150 PSI. THE DURATION OF THE LEAKAGE TEST SHALL NOT BE LESS THAN 1 HOUR. HYDROSTATIC PRESSURE SHALL BE APPLIED BY MEANS OF A PUMP TAKING WATER FROM AN AUXILIARY SUPPLY. ALL PIPING MUST BE PROPERLY FILLED AND FLUSHED TO DISPEL ALL AIR BEFORE THE TEST IS MADE USING POTABLE WATER. LEAKAGE IS DEFINED AS THE QUANTITY OF WATER TO BE SUPPLIED INTO THE NEWLY LAID PIPE, OR ANY VALVED SECTION THEREOF, NECESSARY TO MAINTAIN THE SPECIFIED LEAKAGE TEST PRESSURE AFTER THE PIPE HAS BEEN FILLED WITH WATER AND THE AIR EXPELLED. DURING THE HYDROSTATIC TEST, A THOROUGH EXAMINATION OF ALL PIPING, FITTINGS, VALVES, HYDRANTS, ETC. SHALL BE PERFORMED. LEAKING JOINTS SHALL BE TIGHTENED AND THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED. CRACKED OR OTHERWISE DEFECTIVE MATERIAL SHALL BE REMOVED AND REPLACED AND THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.

AVG. TEST PRESSURE BAR (PSI)	ALLOW ABLE LEAKAGE PER 1000 FT. (305M) OF PIPELINE (GPH+) NOMINAL PIPE DIAMETER- INCHES									
	6	8	10	12	14	16	18	20	24	30
250(17)	0.71	0.95	1.19	1.42	1.66	1.90	2.14	2.37	2.85	3.56
225(16)	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.25	2.70	3.38
200(14)	0.64	0.85	1.06	1.28	1.48	1.70	1.91	2.12	2.55	3.19
175(12)	0.59	0.80	0.99	1.19	1.39	1.59	1.79	1.98	2.38	2.98
150(10)	0.55	0.74	0.92	1.10	1.29	1.47	1.66	1.84	2.21	2.76
120(9)	0.50	0.67	0.84	1.01	1.18	1.34	1.51	1.68	2.01	2.52

DISINFECTION

AFTER SATISFACTORY HYDROSTATIC TESTING, THE COMPLETED WATER WORK SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C-651 BY THE CONTRACTOR. MAINTAIN PIPES FREE OF DIRT AND FOREIGN MATTER DURING CONSTRUCTION BY DEWATERING TRENCH AND SEALING OPEN PIPE BARRELS. THIS IS ALSO A REQUIREMENT IF REPAIRS OCCUR. BACTERIOLOGICAL TEST PER AWWA C-651 SHALL BE PERFORMED ON WATER SAMPLES TAKEN BY THE VILLAGE. TWO CONSECUTIVELY NEGATIVE RESULTS WILL CONSTITUTE A PASSABLE TEST. THE CONTRACTOR SHALL FURNISH ALL REQUIRED TESTING APPENDAGES OR EXCAVATION AS NEEDED BY THE VILLAGE.

WATER NOTES

ALL WATERLINE CONSTRUCTION INCLUDING EXTENSIONS ON PRIVATE PROPERTY SHALL FOLLOW ODOT ITEM 638, AND AWWA STANDARDS WHICHEVER IS MORE RESTRICTIVE AS DETERMINED BY THE VILLAGE. OPERATION OF FIRE HYDRANTS, VALVES, METERS, SERVICES, STOPS, AND ALL OTHER MECHANICAL INFRASTRUCTURE ITEMS IS STRICTLY PROHIBITED. ALL WATER MAINS SHALL HAVE A MINIMUM DEPTH OF 4-6'" AND A MAXIMUM DEPTH OF 6' FROM TOP OF PIPE TO SURFACE, UNLESS REQUIRED BY DESIGN. THE OPEN ENDS OF ALL PIPES SHALL BE CLOSED WITH A WATERTIGHT PLUG TO THE APPROVAL OF THE VILLAGE BEFORE LEAVING THE WORK FOR THE NIGHT AND AT OTHER PERIODS OF INTERRUPTION. FITTINGS OR SPECIALS IN SIZES 3" THROUGH 64" SHALL CONFORM TO ALL REQUIREMENTS OF AWWA C-153. FITTINGS AND SPECIALS 24" AND SMALLER SHALL BE CLASS 350. FITTINGS AND SPECIALS 30" THROUGH 48" SHALL BE CLASS 250 WHILE THOSE 54" AND UP SHALL BE CLASS 150. FITTINGS AND SPECIALS SHALL HAVE MECHANICAL JOINTS AND SHALL BE DUCTILE IRON. THE LABOR, MATERIAL, AND EQUIPMENT COSTS FOR ALL FITTINGS, ANCHORS, TEES, CROSSES, BENDS, ETC. AND THEIR INSTALLATION IS TO BE INCLUDED IN THE BID PRICE OF THE WATER MAIN. ALL NEW WATER MAINS ARE TYPICALLY TO BE INSTALLED UNDER THE EXISTING WATER LINES WHERE WATER LINES CROSS, BUT THE FINAL DEPTH AND LOCATION WILL BE DETERMINED AT THE TIME OF CONSTRUCTION AS APPROVED BY THE VILLAGE. THE OPEN ENDS OF ALL ABANDONED WATER MAINS SHALL BE CAPPED. WHERE POSSIBLE, ALL CROSSINGS OF EXISTING SANITARY OR STORM LINES SHALL MAINTAIN A MINIMUM OF 18" OF SEPARATION.

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

NOTES & DETAILS

yellowsprings/2017/CommercePark/Design/2.dwg
ISSUE DATE: Nov. 9, 2017
REVISION DATE: ------
REVISION DATE: ------
REVISION DATE: ------

SANITARY SEWER NOTES:
ALL TEMPORARY PAVEMENT AND SIDEWALK SHALL BE MAINTAINED BY THE CONTRACTOR OR DEVELOPER AT HIS OWN EXPENSE IN A SUITABLE AND SAFE CONDITION FOR TRAFFIC UNTIL PERMANENT REPLACEMENT IS MADE OR THE PROJECT IS FINALLY ACCEPTED BY THE VILLAGE.

ROOF DRAINS, FOUNDATION DRAINS, SUMP PUMPS, AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

WHEN A NEW CASTING OR OTHER PUBLIC PROPERTY IS ABANDONED IT REMAINS VILLAGE PROPERTY, UNLESS OTHERWISE DIRECTED.

NEW SEWERS OR ANY SEWER THAT IS RELOCATED OR RESIZED MUST HAVE EPA PLAN APPROVAL.

SANITARY SEWER PIPE
ALL MAINLINE PIPE AND SPECIALS SHALL BE PVC SDR-35 UNLESS OTHERWISE APPROVED BY THE CITY. MINIMUM DIAMETER OF PIPE SHALL BE 8".

DUCTILE IRON PIPE WILL BE USED IN STREAM CROSSINGS AND WHERE MAXIMUM SEPARATION CANNOT BE MAINTAINED OR WHEN DEPTH OF SEWER EXCEEDS 25 FEET.

ALL JOINTS SHALL BE OF THE BELL AND SPIGOT TYPE, THE BELLS BEING FORMED INTEGRALLY WITH THE PIPE. THE BELL SHALL CONTAIN A FACTORY INSTALLED ELASTOMETRIC GASKET WHICH IS POSITIVELY RETAINED. NO SOLVENT CEMENT JOINTS WILL BE PERMITTED IN FIELD CONSTRUCTION EXCEPT AS SPECIFICALLY AUTHORIZED BY THE VILLAGE.

FLEXIBLE PIPES	MATERIAL SPECIFICATIONS	JOINT SPECIFICATIONS
POLYVINYL CHLORIDE	ASTM D-3034 (SDR-35) PIPE STIFFNESS=46PSI	ELASTOMERIC GASKET ASTM D-3212
POLYVINYL CHLORIDE	ASTM D-3034 (SDR-26) PIPE STIFFNESS=115PSI	ELASTOMERIC GASKET ASTM F-477

SDR = OUTSIDE DIAMETER DIVIDED BY WALL THICKNESS.

THE SPECIFICATIONS ABOVE SHALL BE THOSE MOST RECENTLY ADOPTED BY THE APPROPRIATE STANDARDS SETTING ORGANIZATIONS.

SANITARY SEWER EXCAVATION AND PIPE LAYING
THE LAYING OF THE PIPE SHALL COMMENCE AT THE LOWEST POINT, WITH THE BELL END LAID UPGRADE. THE PIPE SHALL BE CENTERED IN THE TRENCH AND All PIPE SHALL BE LAID WITH ENDS ABUTTING AND TRUE TO LINE AND GRADE. LASER SHALL BE USED INSIDE THE PIPE UNLESS OTHERWISE APPROVED.

SANITARY SEWER UTILITY STAKING
LASER METHOD - OFFSET & GRADE AT EACH MANHOLE AND OFFSET & GRADE AT EVERY 50' INTERVAL OUT FROM OR BETWEEN EACH MANHOLE.

SANITARY SEWER MANHOLE VACUUM TEST
ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED BY THE CONTRACTOR USING THE FOLLOWING PROCEDURES FROM ASTM C-1244.

PREPARATION OF THE MANHOLE
ALL LIFT HOLES SHALL BE PLUGGED.

ALL PIPES ENTERING THE MANHOLE SHALL BE TEMPORARILY PLUGGED TAKING CARE TO SECURELY BRACE THE PIPES AND PLUGS TO PREVENT THEM FROM BEING DRAWN INTO THE MANHIOLE.

PROCEDURE
THE FIRST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN THE CASTING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

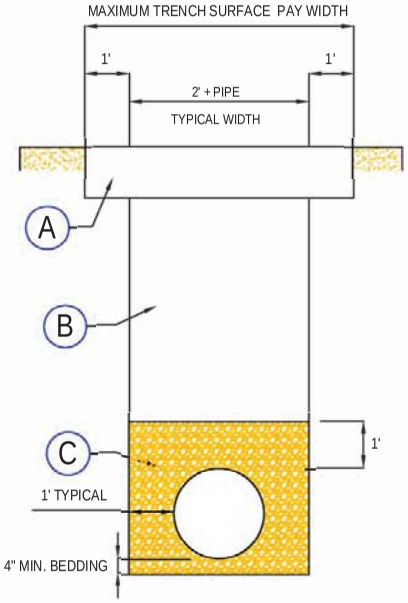
A VACUUM OF 10" OF MERCURY (4.9 PSI) SHALL BE DRAWN ON THE MANHOLE. THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9" OF MERCURY (4.4 PSI).

THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10" OF MERCURY (4.9 PSI) TO 9" OF MERCURY (4.4 PSI) MEETS OR EXCEEDS THE VALUES INDICATED ON THE TABLE.

IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE BY AN APPROVED METHOD. THE MANHOLE SHALL THEN BE RETESTED UNTIL A SATISFACTORY TEST IS OBTAINED.

DEPTH (FT.)	48" Dia. MH	60" Dia. MH	72" Dia. MH
8 OR LESS	20	26	33
10	25	33	41
12	30	39	49
14	35	46	57
16	40	52	67
18	45	59	73
20	50	65	81
22	55	72	89
24	59	78	97
26	64	85	105
28	69	91	113
30	74	98	121

MINIMUM TEST TIMES (Min.)



TRENCH DETAIL NOTES

A — TRENCH BACKFILL SHALL CONSIST OF 1-1/2" OF ODOT 448 SURFACE ASPHALT, TYPE 1, PG 64-22 ON 1-1/2" OF 448 INTERMEDIATE ASPHALT ON 4" OF 301 ASPHALT BASE ON 8" OF 304 CRUSHED AGGREGATE IN PAVEMENT AREAS, 12" OF 411 STABILIZED CRUSHED AGGREGATE IN GRAVEL AREAS, AND 6" OF TOPSOIL IN SEED AREAS.

B — ODOT 703 #8 WASHED GRAVEL TO WITHIN 15" OF SURFACE IN PAVEMENT AREAS, 12" OF SURFACE IN GRAVEL AREAS, AND NATIVE FILL WITHIN 6 " OF SURFACE IN SEED AREAS.ALL FILL IS TO BE COMPACTED TO 98% OF ASTM D698 STANDARD PROCTOR CURVE.

C — GRANULAR BEDDING SHALL BE ODOT 703 #8 WASHED GRAVEL IN PAVEMENT AND SEED AREAS.

NOTE #1: ITEMS LISTED IN "A" ABOVE ARE TO BE PAID SEPARATELY USING THE ODOT ITEM NUMBER. THE COST FOR ITEMS LISTED IN "B" AND "C" ABOVE ARE TO BE INCLUDED WITH THE COST OF THE APPROPRIATE UTILITY BEING INSTALLED.

NOTE #2: 204 SUBGRADE COMPACTION, 8" OF 304 CRUSHED AGGREGATE, AND 4" OF 301 BASE ASPHALT ARE TO BE INSTALLED WITH THE INITIAL CONSTRUCTION OF THE CRESCO LAB FACILITY. THE INTERMEDIATE AND SURFACE ASPHALT ARE TO INSTALLED WITHIN ONE YEAR OF THE BEGINNING OF OPERATION.

TRENCH DETAIL
NTS

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

NOTES & DETAILS

yellowsprings/2017/CommercePark/Design/2.dwg

ISSUE DATE:	REVISION DATE:	REVISION DATE:	REVISION DATE:
Nov. 9, 2017	------	------	------

STORM SEWERS AND APPURTENANCES:

ALL STORM SEWERS SHALL CONFORM TO THE REQUIREMENTS OF THE DETAIL PLANS AND SPECIFICATIONS. ALL MATERIALS SHALL CONFORM TO ODOT SPECIFICATIONS AND MANUFACTURERS SUGGESTED INSTALLATION INSTRUCTIONS. IN NO CASE SHALL INFERIOR OR PREVIOUSLY USED MATERIALS BE INSTALLED IN THIS PROJECT, EXCEPT FOR A TEMPORARY PURPOSE. ALL CONSTRUCTION, DETAILED HEREIN OR NOT, SHALL CONFORM TO ALL EPA RULES AND REGULATIONS CONCERNING STORM WATER RUNOFF, EROSION, AND PROTECTION OF DOWNSTREAM AND UPSTREAM PROPERTIES.

STORM SEWER, APPURTENANCES, INSTALLATION, AND TESTING SHALL INCLUDE ALL MATERIALS, BEDDING, TRANSPORTATION, GRADES, EXCAVATION, BACKFILL, DISPOSAL OF WASTE, EQUIPMENT, MANPOWER AND SUPERVISION TO PERFORM THE TASK AS INDICATED IN THE PROJECT SPECIFICATIONS AND PROJECT PLANS. THE COMPLETION OF THE ITEM SHALL ALSO INCLUDE ALL OTHER INCIDENTAL TASKS NOT HEREIN DIRECTLY MENTIONED.

STORM SEWER MANHOLE CASTINGS AND LIDS SHALL CONFORM TO NEENAH R-1668 OR EQUAL. CONNECTIONS SHALL BE COMPLETED USING NON-SHRINK GROUT, HAND PLACED, SMOOTHED AND BRUSHED, BOTH INSIDE AND OUTSIDE THE MANHOLE CONNECTION. A RUBBER SEAL OR MASTIC SEAL BETWEEN THE MANHOLE TOP AND CASTING IS REQUIRED. VACUUM TESTING IS NOT REQUIRED.

IN-CURB CATCH BASINS SHALL CONFORM TO THE TYPE OF CURB ADJACENT TO THE CASTINGS, UNLESS OTHERWISE DIRECTED. THE GRATE FOR IN-CURB CATCH BASINS SHALL BE A "V" OR VEIN TYPE TO DIRECT THE FLOW INTO THE INLET WITH THE FLOW OF THE STREET. THE CURB PLATES AND FRAMES FOR THE ODOT #3 CATCH BASINS SHALL BE NEENAH R-3288-E2 OR APPROVED EQUAL. THE FRAME AND GRATE FOR THE 2-2B CATCH BASIN SHALL BE NEENAH R-3405 OR EQUIVALENT EQUAL. ALL CASTING AND GRATES/LIDS NOT ALREADY PROTECTED WITH A PROTECTIVE PAINT FROM THE MANUFACTURER SHALL BE SO COATED WITH AN ASPHALTIC PAINT PRIOR TO INSTALLATION.

ALL STORM MANHOLES SHALL BE PRECAST REINFORCED CONCRETE TYPE CONFORMING TO ASTM REINFORCEMENT SPECIFICATIONS #C-478. MINIMUM WALL THICKNESS SHALL BE 5" AND MINIMUM INSIDE DIAMETER SHALL BE 48". ALL BASE SECTIONS, RISER SECTIONS, ECCENTRIC CONE SECTIONS, AND GRADE RING RISERS SHALL BE PRECAST CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.

ALL MANHOLE JOINT SECTIONS SHALL BE SUPPLIED WITH A COMPRESSION TYPE GASKET/SEAL WHICH SHALL CONFORM TO ASTM SPECIFICATIONS #C-443, SUCH AS "PRESS-WEDGE" MANUFACTURED BY PRESS-SEAL CORP., OR "COMPRESSION SEAL" MANUFACTURED BY BLUFFTON SEPTIC TANK CO., OR "DURASEAL III" MANUFACTURED BY DURA TECH, INC. OR OTHER EQUIVALENT TYPE SEAL WHICH IS ABLE TO SUCCESSFULLY PASS INFILTRATION STANDARDS OR PRESSURE TESTING OR VACUUM TESTING. ALL SUCH COMPRESSION JOINT SEALS SHALL BE CAST INTEGRALLY INTO THE MANHOLE SECTIONS AS REQUIRED.

ALL STORM MANHOLES SHALL BE PLACED AT GRADES, ELEVATIONS, AND LOCATIONS SHOWN ON THE CONSTRUCTION PLANS AND PROFILES. ALL MANHOLES SHALL BE SET LEVEL AND BACKFILLED WITH #57 GRAVEL TO A MINIMUM HEIGHT OF 8" OVER THE HIGHEST CONNECTION PIPE, UNLESS OTHERWISE DIRECTED BY THE CITY. THE REMAINDER OF THE BACKFILL SHALL BE AS CALLED FOR IN THE DETAIL PLANS OR AS DIRECTED BY THE CITY. THE INVERT OF ALL MANHOLES SHALL PROVIDE AT LEAST 1/2 PIPE SIZE U-SHAPED CHANNEL AND MAINTAINING A MINIMUM OF 0.05 FOOT OF DROP WITHIN THE MANHOLE BETWEEN THE INVERT OF THE INLET AND OUTLET. THE BOTTOM SIDE SLOPES SHALL BE SLOPED 4" DOWNWARD FROM THE INSIDE WALL OF THE BASE SECTION TO THE TOP OF THE U-SHAPED CHANNEL.

STORM SEWERS AND APPURTENANCES, CONT.:

ALL CONNECTIONS TO AN EXISTING STORM MANHOLE SHALL BE COMPRISED OF A MECHANICAL CORE BORED INTO THE EXISTING MANHOLE. THE CORE SHALL BE FITTED WITH A WATER TIGHT ELASTOMERIC O-RING SEAL TO ACCEPT THE STORM PIPE AND PREVENT INFILTRATION.

CROSSING EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO OR CROSSING AN EXISTING CONDUIT OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING CONDUITS OR UTILITIES FOR ALIGNM,ENT AND GRADE PRIOR TO LAYING THE PROPOSED CONDUIT. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR UTILITY DIFFERS FROM THE PLAN ELEVATION WHICH WILL RESULT IN A CHANGE OF SLOPE OR IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING CONDUIT OR UTILITY, THE VILLAGE SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT. PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE AS BID PRICE OF THE PERTINENT ITEM 611 CONDUIT.

GRAFFITI AND VANDALISM

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF ANY CONCRETE WORK OR OTHER PAY ITEM UNDER THIS CONTRACT WHICH IS DEEMED UNACCEPTABLE BY THE VILLAGE DUE TO GRAFFITI OR VANDALISM. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT SUCH WORK AGAINST BEING DAMAGED AND THEREFORE ALL SUCH ITEMS REMOVED AND REPLACED SHALL BE AT THE CONTRACTOR'S EXPENSE.

PROPERTY SURVEY MONUMENTS

THE CONTRACTOR SHALL TAKE CARE TO PROTECT ALL SURVEY MONUMENTS DURING CONSTRUCTION. IF SUCH MONUMENTS ARE DISTURBED OR REMOVED DURING CONSTRUCTION, THE CONTRACTOR SHALL HAVE A REGISTERED SURVEYOR REPLACE THEM AT THE CONTRACTOR'S EXPENSE.

PROTECTION OF PROPERTY

THE CONTRACTOR SHALL TAKE CARE TO PROTECT THE FRONT YARDS, DRIVEWAYS, TREES, BUSHES, WALLS, FENCES, EXISTING PAVEMENT TO REMAIN, EXISTING WALKS TO REMAIN, ETC. ON THIS PROJECT. IF DAMAGE IS DONE TO ANY OF THESE ITEMS, THE CONTRACTOR SHALL REPLACE ANY SUCH ITEM TO A CONDITION AS GOOD OR BETTER THAN THE ORIGINAL AT THE CONTRACTOR'S EXPENSE.

CONTRACTOR RESPONSE TO VILLAGE REQUESTS

THE CONTRACTOR SHALL RESPOND WITHIN ONE HOUR TO ANY REASONABLE REQUEST OF THE VILLAGE TO ANY ITEM POINTED OUT BY THE VILLAGE THAT NEEDS ATTENTION. ITEMS SHALL INCLUDE, BUT ARE NOT LIMITED TO, SAFETY ISSUES, MUD ON THE STREET, BARRICADES OR SIGNAGE, DANGEROUS OPEN TRENCHES, ETC. IF SUCH ITEMS ARE NOT CORRECTED WITHIN ONE HOUR, THE VILLAGE SHALL PERFORM THE ITEM WITH THE CONTRACTOR REIMBURSING THE VILLAGE AT THE RATE OF TWICE THE ACTUAL COST INCURRED BY THE VILLAGE.

CONSTRUCTION MEETINGS

BI-WEEKLY CONSTRUCTION MEETINGS SHALL BE HELD AT THE JOB SITE. THE CONTRACTOR'S SUPERINTENDENT, SUBCONTRACTORS, PROJECT INSPECTOR, AND A VILLAGE REPRESENTATIVE SHALL ATTEND. THIS IS A REQUIREMENT OF BEING SELECTED AS THE CONTRACTOR FOR THE PROJECT AND NO REIMBURSEMENT IS TO BE PAID FOR THIS SERVICE.

TESTING AND MATERIAL CERTIFICATION

THE CONTRACTOR SHALL PROVIDE CERTIFICATION AND SHOP DRAWINGS TO THE VILLAGE SHOWING THAT MATERIALS SUPPLIED TO THE PROJECT MEET THE PLAN SPECIFICATIONS. GRANULAR MATERIAL USED FOR BACKFILL UNDER PAVEMENT, WALKS, STRUCTURES, SLABS, ETC. SHALL BE COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR. ALL OTHER BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR, BOTH PER ASTM D-698. ANY COMPACTION TESTING REQUESTED BY THE VILLAGE SHALL BE PAID TO AN INDEPENDENT TESTING COMPANY BY THE VILLAGE.

EXISTING UTILITIES

OFTEN UTILITY COMPANIES WILL NOT LOCATE SERVICES FOR DESIGN PURPOSES. THE UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND NOT GUARANTEED TO BE ACCURATE OR COMPLETE. THE CONTRACTOR IS TO HAVE LOCATIONS AND DEPTHS OF ALL TELEPHONE, GAS, CABLE, ETC. FROM THE RESPECTIVE UTILITY COMPANIES WHEN LOCATES ARE COMPLETED THROUGH "OUPS" PRIOR TO CONSTRUCTION. HAND DIGGING OF UTILITIES IS REQUIRED TO AVOID DAMAGE.

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

GENERAL NOTES

yellowsprings/2017/CommercePark/Design2.dwg

ISSUE DATE:	REVISION DATE:	REVISION DATE:	REVISION DATE:
Nov. 9, 2017	-----	-----	-----

ITEM 203 ROADWAY, MISC. ROCK REMOVED FOR CONDUIT INSTALLATION, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE ALL ROCK REMOVAL REQUIRED FOR THE CONSTRUCTION OF THE PROJECT. SEE SOIL BORINGS FOR ANTICIPATED ROCK DEPTHS. THE EXISTING ROCK, IF ENCOUNTERED, IS TO BE REMOVED A MINIMUM OF 4" BELOW THE BOTTOM OF THE NEW WATER MAIN TO ALLOW FOR PROPER BEDDING. ALL REMOVED MATERIALS SHALL BE HAULED OFF SITE TO A LOCATION APPROVED BY THE VILLAGE. PAYMENT FOR THIS WORK SHALL BE AT THE FOOT CONTRACT BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 204, SUBGRADE COMPACTION, AS PER PLAN

ALL SUBGRADE COMPACTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 OF THE ODOT SPECIFICATIONS EXCEPT AS HEREIN MODIFIED. SUBGRADE COMPACTION IS TO BE ACHIEVED USING A VIBRATORY ROLLER HAVING AN 8 TO 10 TON STATIC WEIGHT. ROUTINE SUBGRADE COMPACTION SHALL CONSIST OF A LOADED TANDUM AXLE DUMP TRUCK TO TRAVEL UPON THE COMPACTED SUBGRADE. THE SUBGRADE WILL BE ACCEPTED WHEN THE LOADED DUMP TRUCK LEAVES A MAXIMUM INDENTATION IN THE SUBGRADE OF 3/4" WHEN DRIVEN ACROSS THE SUBGRADE. THE CONTRACTOR MAY NEED TO DISK WET AREAS, ALLOW THEM TO DRY, RECOMPACT, AND REGRADE AS A PART OF THIS BID ITEM, AS DIRECTED BY THE VILLAGE. IF SOILS ARE DEEMED UNACCEPTABLE BY THE VILLAGE, THOSE AREAS SHALL BE EXCAVATED AND REPLACED WITH COMPACTED GRANULAR MATERIALS. AN ESTIMATED QUANTITY OF 500 CY OF ITEM 204 EXCAVATION OF SUBGRADE AND GRANULAR FILL HAS BEEN INCLUDED IN THESE PLANS TO BE USED IF UNSUITABLE SOILS ARE ENCOUNTERED. PAYMENT FOR PROOF ROLLING OF SUBGRADE SHALL BE INCLUDED IN THIS BID ITEM.

ITEM 611, 8" CONDUIT, PVC, SDR-35, TYPE B, SANITARY, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 611 PIPE CULVERTS, SEWERS, AND DRAINS, EXCEPT AS HEREIN MODIFIED. THIS WORK SHALL CONSIST OF EXCAVATION, BEDDING AND INSTALLING THE NEW SANITARY SEWER, INCLUDING ALL BACKFILL GRANULAR OR NATIVE, ALL TESTING PER ODOT STANDARDS, AND COMPACTION OF GRANULAR OR NATIVE BACKFILL. THIS ITEM SHALL ALSO INCLUDE CONNECTION TO EXISTING SANITARY. PAYMENT OF ITEM 611, SDR-35 CONDUIT, TYPE B, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT FOOT BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN

THROUGH TRAFFIC IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT WITH TRAFFIC BEING INCONVENIENCED AS LITTLE AS POSSIBLE. THE CONTRACTOR SHALL COMPLY WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, PLACING, AND SUBSEQUENTLY REMOVING ALL NECESSARY TRAFFIC CONTROL MEASURES FOR MAINTAINING SAFE AND EFFECTIVE VEHICULAR TRAFFIC CONTROL 24 HOURS A DAY FOR THE DURATION OF THE PROJECT. BEFORE ANY WORK BEGINS, THE CONTRACTOR SHALL PROVIDE THE VILLAGE WITH THE NAME AND PHONE NUMBER OF THE PERSON RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL DEVICES. THIS PERSON MUST BE ABLE TO BE REACHED 24 HOURS A DAY BY THE VILLAGE OR OTHER INTERESTED POLICE AGENCY. ANY DAMAGE TO TRAFFIC CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. PAYMENT SHALL BE AT THE CONTRACT LUMP SUM BID PRICE AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE, AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING, AND REMOVING ALL DEVICES.

ITEM 638 8" WATER MAIN, DIP, INCLUDING APPURTENANCES, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 638 WATER MAINS AND SERVICE BRANCHES, EXCEPT AS HEREIN MODIFIED. ALL MATERIALS, PROCEDURES, AND TESTING SHALL BE COMPLETED AS DESCRIBED IN THESE PLANS. EXISTING WATER MAINS SHALL REMAIN IN SERVICE UNTIL NEW LINES HAVE BEEN PRESSURE TESTED, DISINFECTED, AND WATER SERVICES HAVE BEEN CONNECTED TO THE NEW WATER MAIN. PAYMENT FOR ITEM 638 8" WATER MAIN INCLUDING APPURTENANCES, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT FOOT BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK. WATER MAIN SHALL BE AWWA C-151 DUCTILE IRON PIPE CLASS 53, CEMENT MORTAR LINED PER AWWA C-104, WITH SLIP-ON JOINTS AND RUBBER GASKETS. BELL JOINT RESTRAINTS - USE FIELD LOCK BY U.S. PIPE OR APPROVED EQUIVALENT. MECHANICAL JOINT RESTRAINTS - EBAA IRON MEGALUG RETAINER GLAND OR EQUIVALENT. GATE VALVES - AWWA C-509, RESILIENT WEDGE, NON-RISING STEM, MECHANICAL JOINT, 150 PSI WORKING PRESSURE, CCW TO OPEN, OPEN LEFT WITH ARROW INDICATING OPEN DIRECTION. VALVE BOXES: 3-PIECE CAST IRON 6" DIAMETER NOMINAL, ADJUSTABLE SCREW TYPE, COVER MARKED "WATER", DOMESTIC MADE ONLY.

ITEM 638 6-INCH FIRE HYDRANT ASSEMBLY, AS PER PLAN

THIS ITEM OF WORK CONSISTS OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM WATER MAINS AND SERVICE BRANCHES EXCEPT AS HEREIN MODIFIED. THE ASSEMBLY WILL CONSIST OF THE FIRE HYDRANT, PIPE BRANCH, A GATE VALVE WITH VALVE BOX, THRUST BLOCKING AND RESTRAINING GLANDS. FIRE HYDRANTS SHALL BE AS MANUFACTURED BY AMERICAN DARLING 5-1/4" B-84-B, MECHANICAL JOINT WITH TWO 2-1/2" HOSE NOZZLES AND ONE 4" I.D. AND 4-1/2" O.D. PUMPER NOZZLE WITH NATIONAL STANDARD THREAD CONNECTIONS. HYDRANTS SHALL CONFORM TO AWWA, OPEN CCW, BE NON-DRAINING WITH BREAK FLANGES 3" ABOVE GRADE. PAYMENT FOR ITEM 638 6-INCH FIRE HYDRANT ASSEMBLY, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT EACH BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 659 SEEDING AND MULCHING, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 659 SEEDING AND MULCHING EXCEPT AS HEREIN MODIFIED. ALL AREAS DESIGNATED FOR SEEDING SHALL HAVE A MINIMUM OF 6 INCHES OF TOPSOIL OVER THE ENTIRE AREA. THE AREA SHALL BE RAKED, ROLLED AND DRESSED READY FOR SEEDING. NO STONE OVER 1 INCH IN SIZE PERMITTED. COMMERCIAL FERTILIZER 12-12-12 SHALL BE INCLUDED IN ITEM 659 SEEDING AND MULCHING AS PER PLAN AND SHALL BE APPLIED AT THE RATE OF 20 POUNDS PER 1000 SQUARE FEET. SEEDING APPLICATION SHALL BE AT THE RATE OF 4 POUNDS PER 1000 SQUARE FEET. SEEDING AND MULCHING IS TO BE COMPLETED ON ALL AREAS AS SHOWN ON SHEETS 10, 11, AND 12. PAYMENT FOR ITEM 659 SEEDING AND MULCHING, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT SQUARE YARD BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM SPECIAL MISCELLANEOUS, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF, BUT NOT BE LIMITED TO, MISCELLANEOUS PROJECT COSTS SUCH AS MOBILIZATION, PERFORMANCE BOND, MAINTENANCE BOND, AS-BUILT DRAWINGS, FIELD OFFICE, CONSTRUCTION STAKING, ETC. THE CONTRACTOR IS TO USE ODOT SPECIFICATIONS AS GUIDELINES FOR WORK INCLUDED IN THIS PAY ITEM. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND/OR OTHER COSTS REQUIRED TO COMPLETE EACH ITEM OF WORK. PAYMENT FOR THIS ITEM SHALL BE AT THE LUMP SUM AS BID CONTRACT PRICE.

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

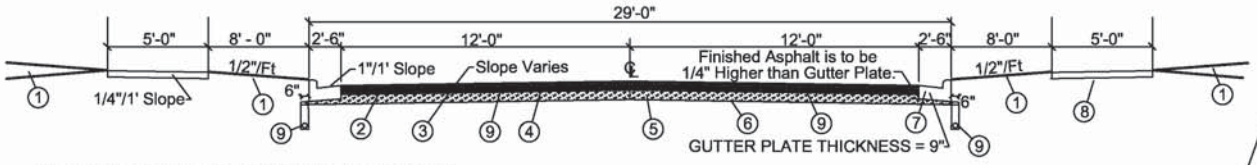
HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

GENERAL NOTES

yellowsprings/2017/CommerceParkDesign2.dwg

ISSUE DATE:	REVISION DATE:	REVISION DATE:
Nov. 9, 2017	-----	-----



1. ITEM 659 SEEDING & MULCHING, AS PER PLAN
2. ITEM 441 1-1/2" ASPHALT CONC. SURFACE COURSE, TYPE 1, PG 64-22
3. ITEM 441 1-1/2" ASPHALT CONC. INTER. COURSE, TYPE 2, PG 64-28
4. ITEM 301 4" ASPHALT BASE
5. ITEM 304 8" AGGREGATE BASE
6. ITEM 204 SUBGRADE COMPACTION
7. ITEM 609 COMBINATION BARRIER CURB & GUTTER (FUTURE)
8. ITEM 608 4" CONCRETE WALK (FUTURE)
9. ITEM 605 UNCLASSIFIED PIPE UNDERDRAINS (FUTURE)

Pavement Slope = 1/4"/Ft In 24' Pavement Sections

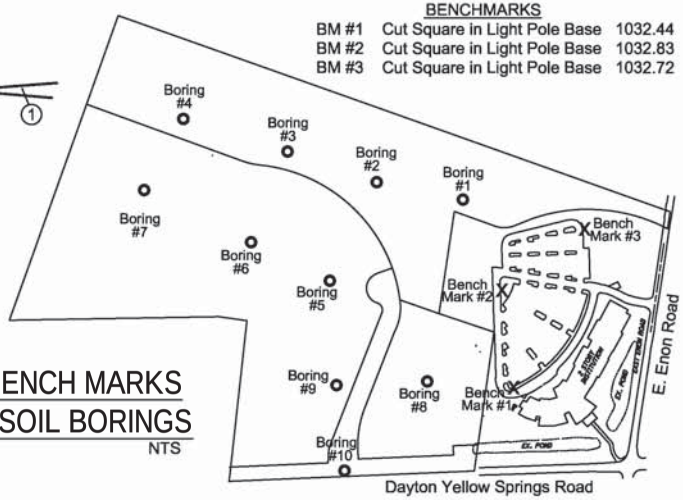
NOTE: 204 SUBGRADE COMPACTION, 8" OF 304 CRUSHED AGGREGATE, AND 4" OF 301 BASE ASPHALT ARE TO BE INSTALLED WITH THE INITIAL CONSTRUCTION OF THE CRESCO LAB FACILITY. THE INTERMEDIATE AND SURFACE ASPHALT ARE TO INSTALLED WITHIN ONE YEAR OF THE BEGINNING OF OPERATION.

STREET SECTION TYPICAL

NTS

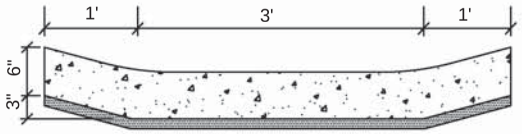
BENCHMARKS

BM #1	Cut Square in Light Pole Base	1032.44
BM #2	Cut Square in Light Pole Base	1032.83
BM #3	Cut Square in Light Pole Base	1032.72



BENCH MARKS & SOIL BORINGS

NTS



1" Average 304 Compacted Aggregate on Compacted Subgrade

CONCRETE CHANNEL DETAIL

NTS

PROJECT ESTIMATED QUANTITIES:

ITEM #	DESCRIPTION	TOTALS	UNITS
203	Excavation, Including Embankment Estimated	8,000	CY
203	Roadway, Misc. Rock Excavation for Conduit Installation, As Per Plan	778	Feet
204	Subgrade Compaction, As Per Plan	2,350	SY
204	Excavation of Subgrade and Granular Embankment	400	CY
301	Base Asphalt	252	CY
304	Aggregate Base	522	CY
411	Asphalt Concrete, Intermediate Course, Type 2, PG 64-28	95	CY
411	Asphalt Concrete, Surface Course, Type 1, PG 64-22	95	CY
602	Concrete Masonry	1	CY
608	6" Concrete Channel, As Per Plan	1,570	SF
611	4" Conduit, PVC, SDR-35 Type B, Capped for Future Electric	720	Feet
611	6" Conduit, PVC, SDR-35 Type B, Sanitary	136	Feet
611	8" Conduit, PVC, SDR-35 Type B, Sanitary, As Per Plan	642	Feet
611	Sanitary Manhole	2	Each
611	15" CPSLP Storm Sewer, 707.33	34	Feet
611	18" CPSLP Storm Sewer, 707.33	86	Feet
614	Maintaining Traffic, As Per Plan	1	Lump
638	8" Gate Valve	6	Each
638	Fire Hydrant Assembly, As Per Plan	1	Each
638	Fire Hydrant	1	Each
638	8" Water Main, DIP, Including Appurtenances, As Per Plan	750	Feet
659	Seeding and Mulching, As Per Plan	18,640	SY
Special	Miscellaneous, As Per Plan	1	Lump

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

ESTIMATED QUANTITIES

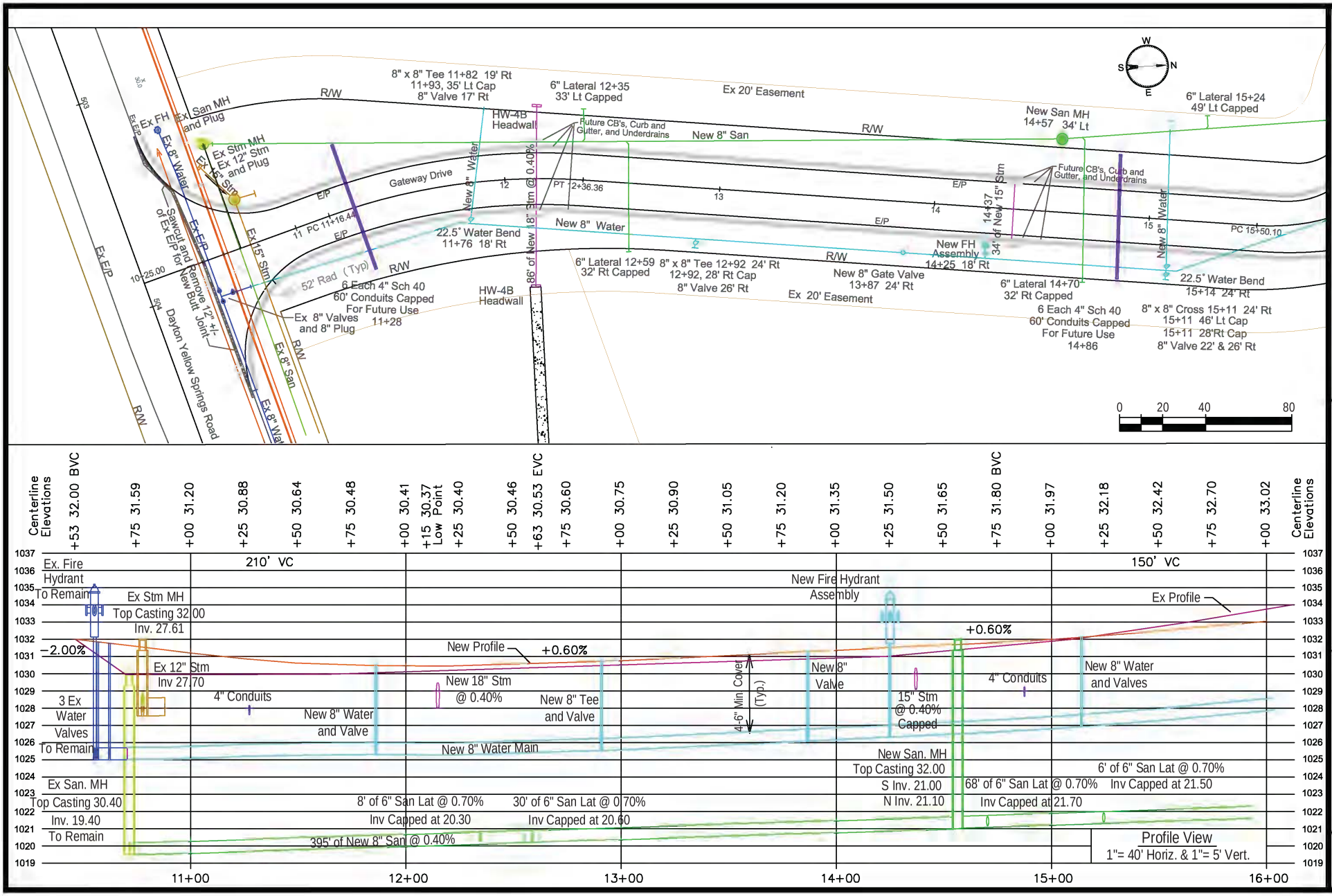
yellowsprings2017/CommerceParkDesign2.dwg

ISSUE DATE: Nov. 9, 2017

REVISION DATE: ------

REVISION DATE: ------

REVISION DATE: ------



Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

PLAN & PROFILE SHEET

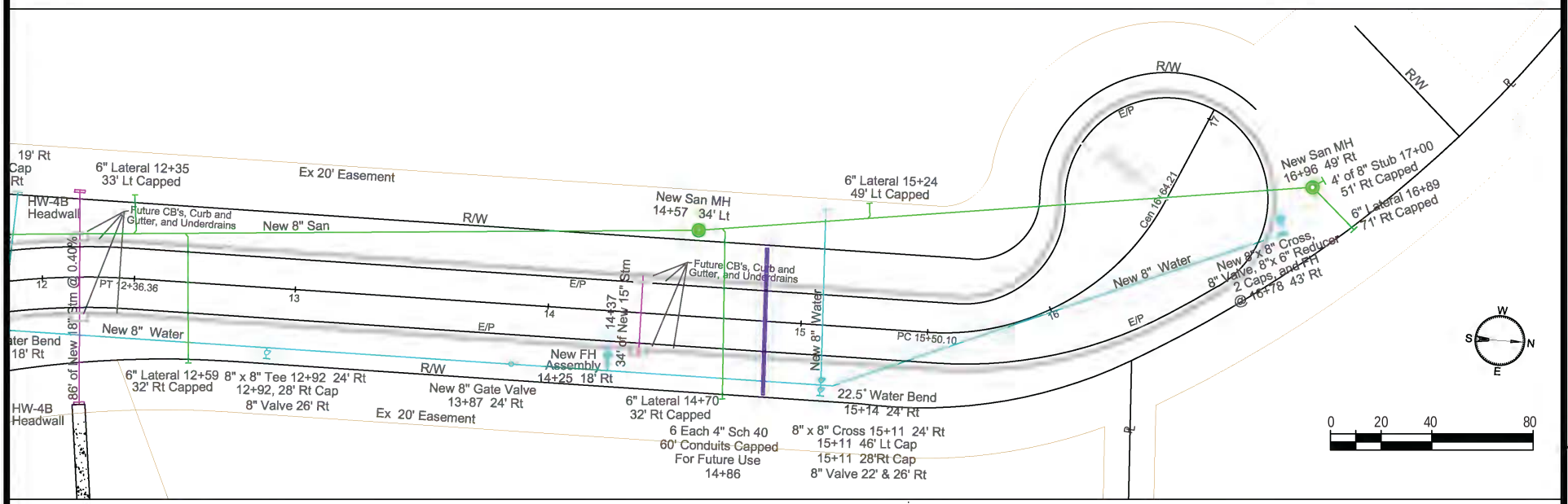
yellowsprings2017CommercePark\Design2.dwg

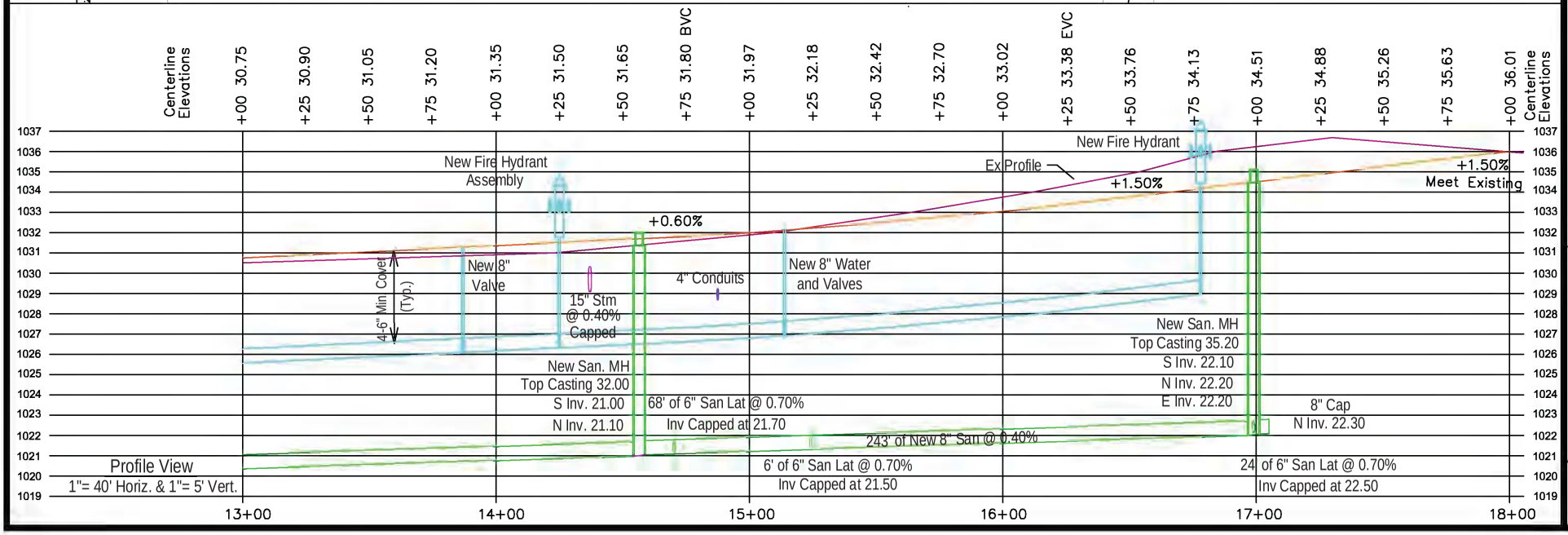
ISSUE DATE: Nov. 9, 2017

REVISION DATE: -----

REVISION DATE: -----

REVISION DATE: -----





Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

PLAN & PROFILE SHEET

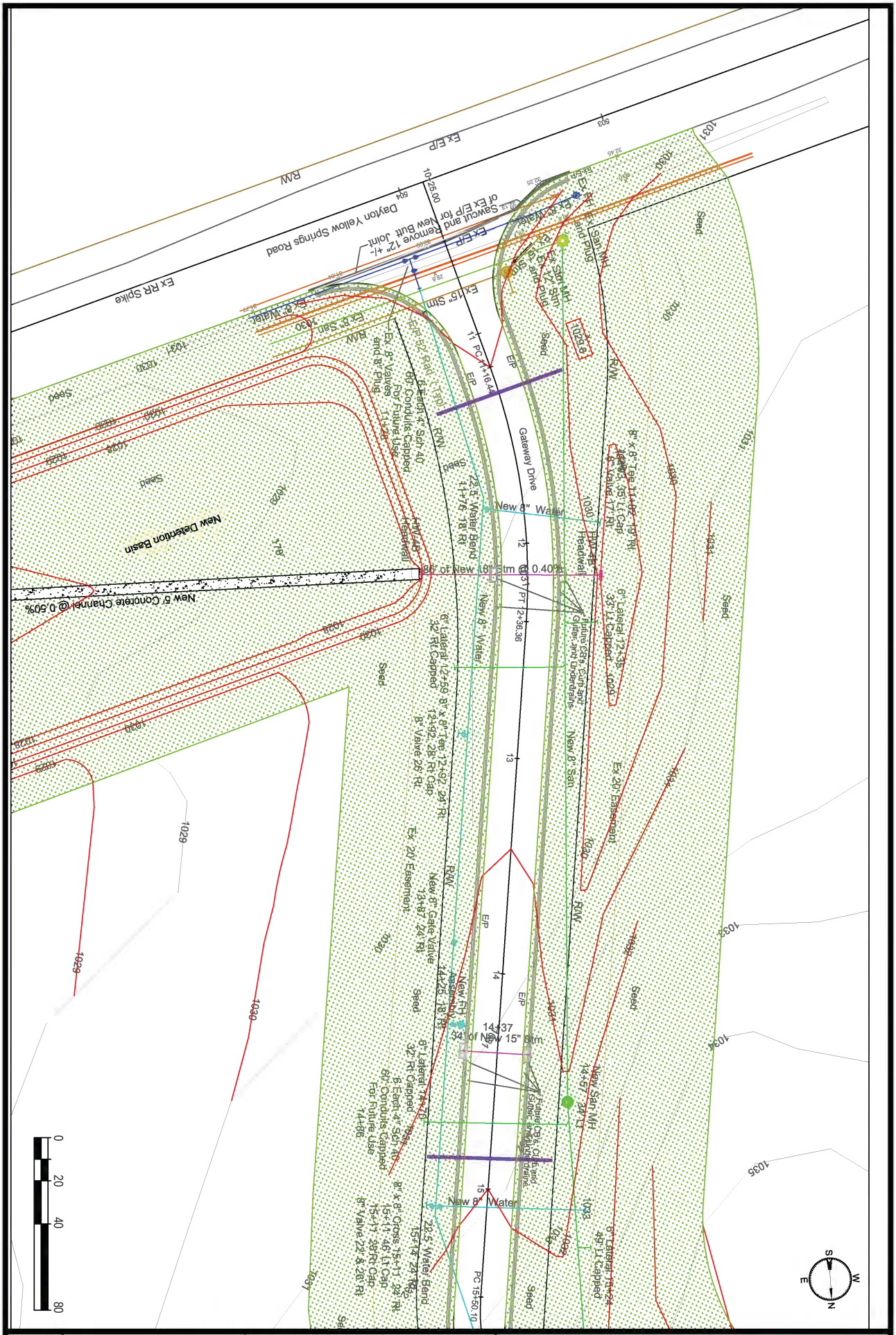
yellowsprings2017CommerceParkDesign2.dwg

ISSUE DATE: Nov. 9, 2017

REVISION DATE: -----

REVISION DATE: -----

REVISION DATE: -----



GRADING SHEET	CBE / COMMERCE PARK VILLAGE OF YELLOW SPRINGS			
yellowsprings/2017CommerceParkDesign2.dwg				
ISSUE DATE: Nov. 9, 2017	REVISION DATE: ------	REVISION DATE: ------	REVISION DATE: ------	

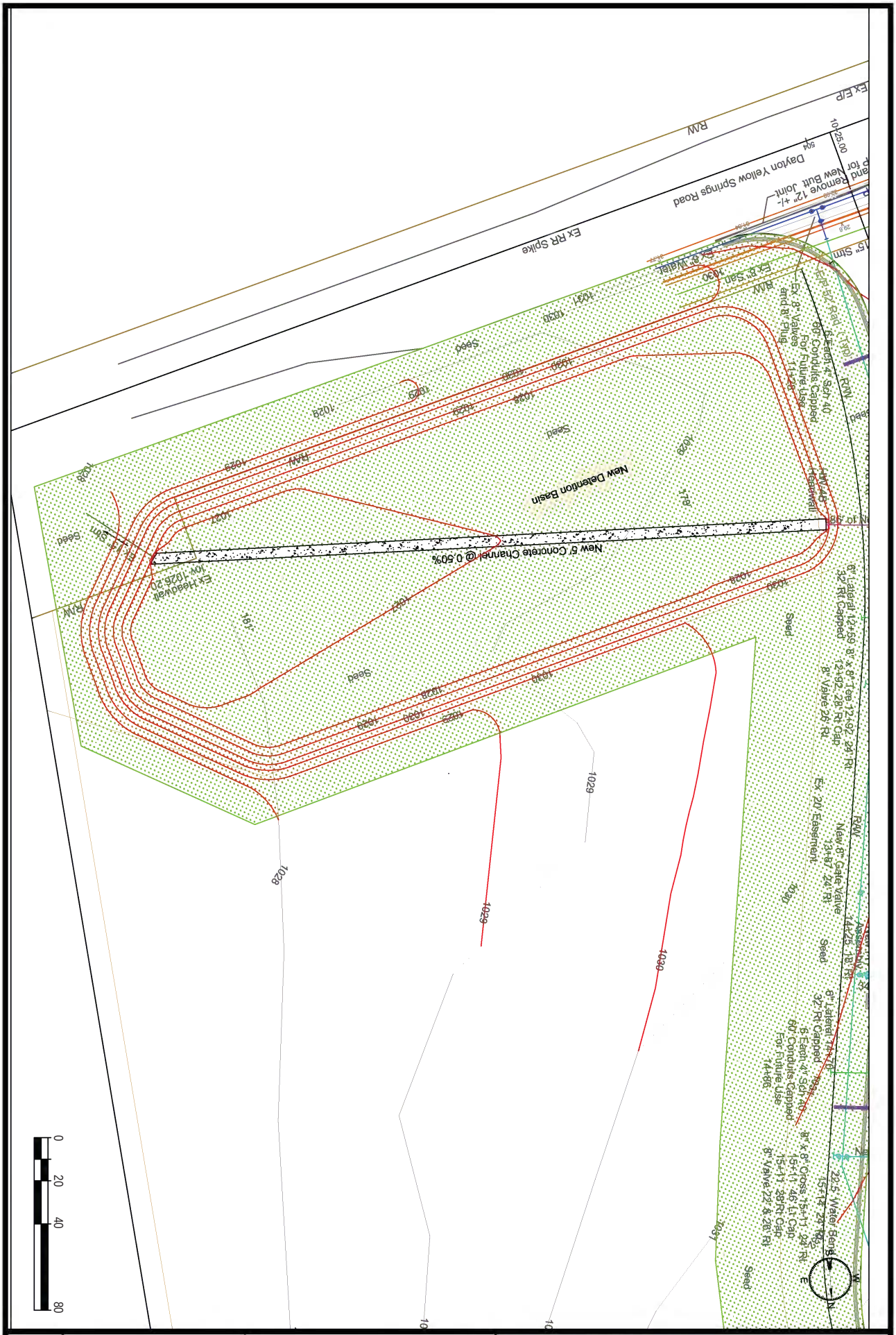
HEINTZ ENGINEERING, LLC

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

GRADING SHEET	CBE / COMMERCE PARK VILLAGE OF YELLOW SPRINGS		11 of 22
yellowsprings/2017CommercePARKDesign2.dwg			
ISSUE DATE: Nov. 9, 2017	REVISION DATE: ------	REVISION DATE: ------	REVISION DATE: ------

HEINTZ ENGINEERING, LLC

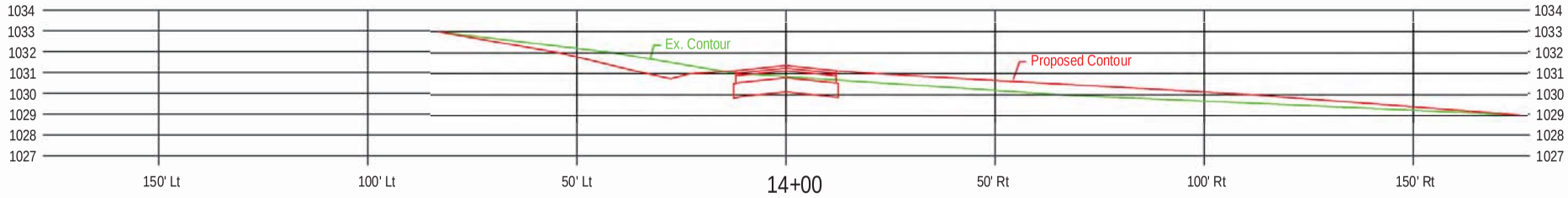
Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

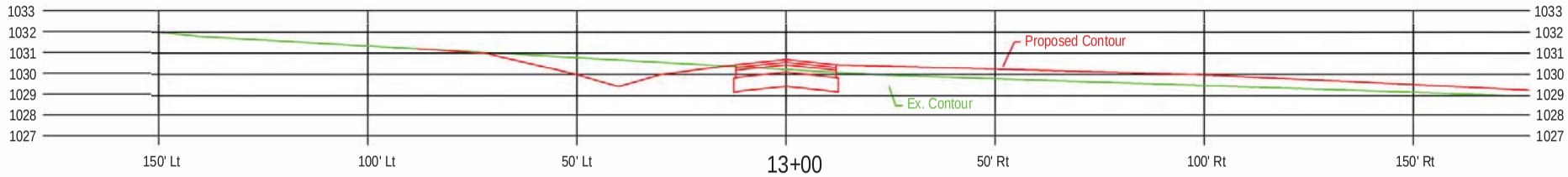


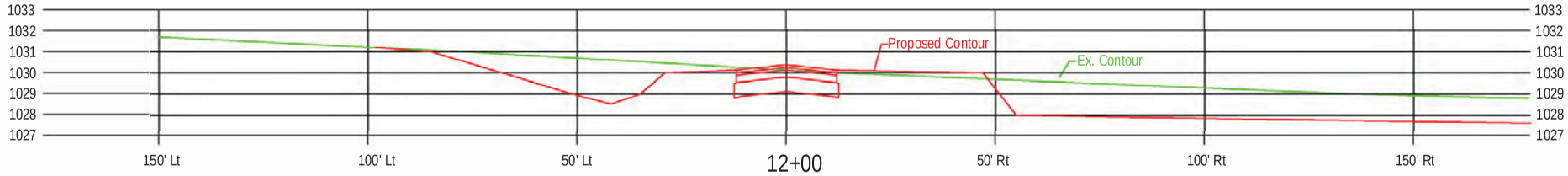
GRADING SHEET	CBE / COMMERCE PARK VILLAGE OF YELLOW SPRINGS			
yellowsprings/2017CommerceParkDesign2.dwg				
ISSUE DATE: Nov. 9, 2017	REVISION DATE: ------	REVISION DATE: ------	REVISION DATE: ------	

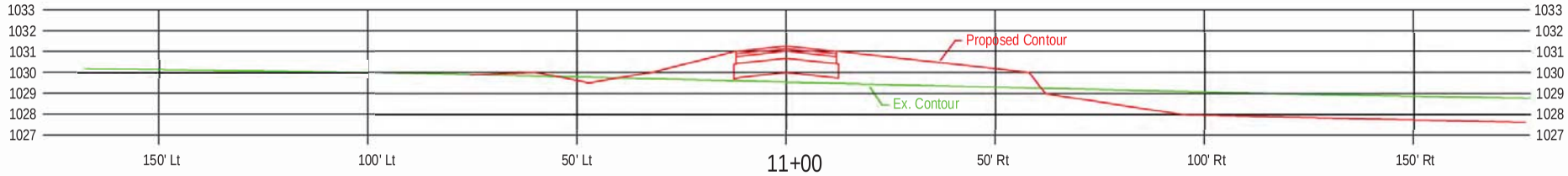
HEINTZ ENGINEERING, LLC

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com









Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

CROSS SECTIONS

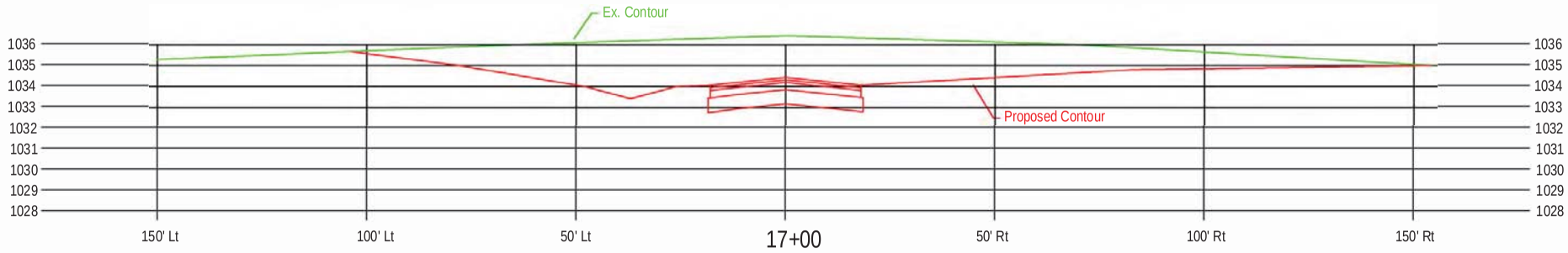
yellowsprings2017/CommercePark/Design/2.dwg

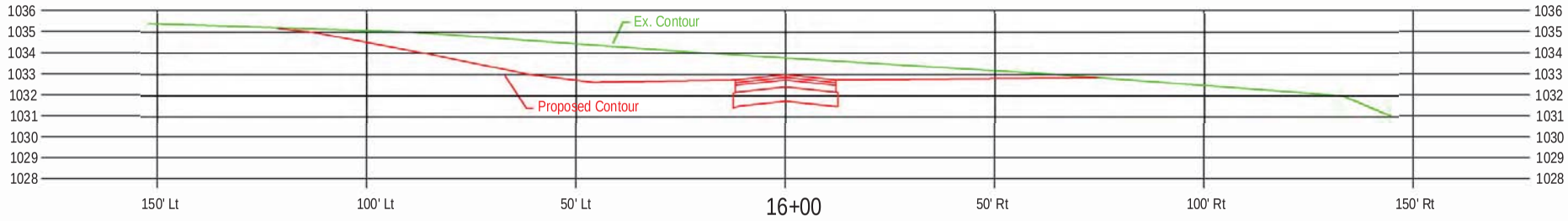
ISSUE DATE: Nov. 9, 2017

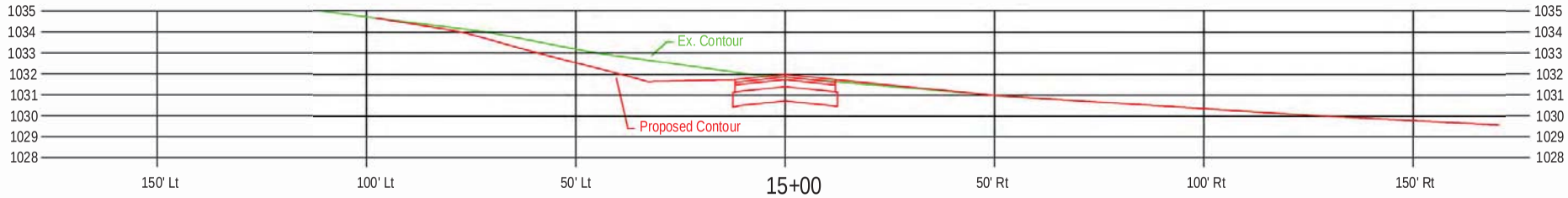
REVISION DATE: ------

REVISION DATE: ------

REVISION DATE: ------







Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

REVISION DATE: -----

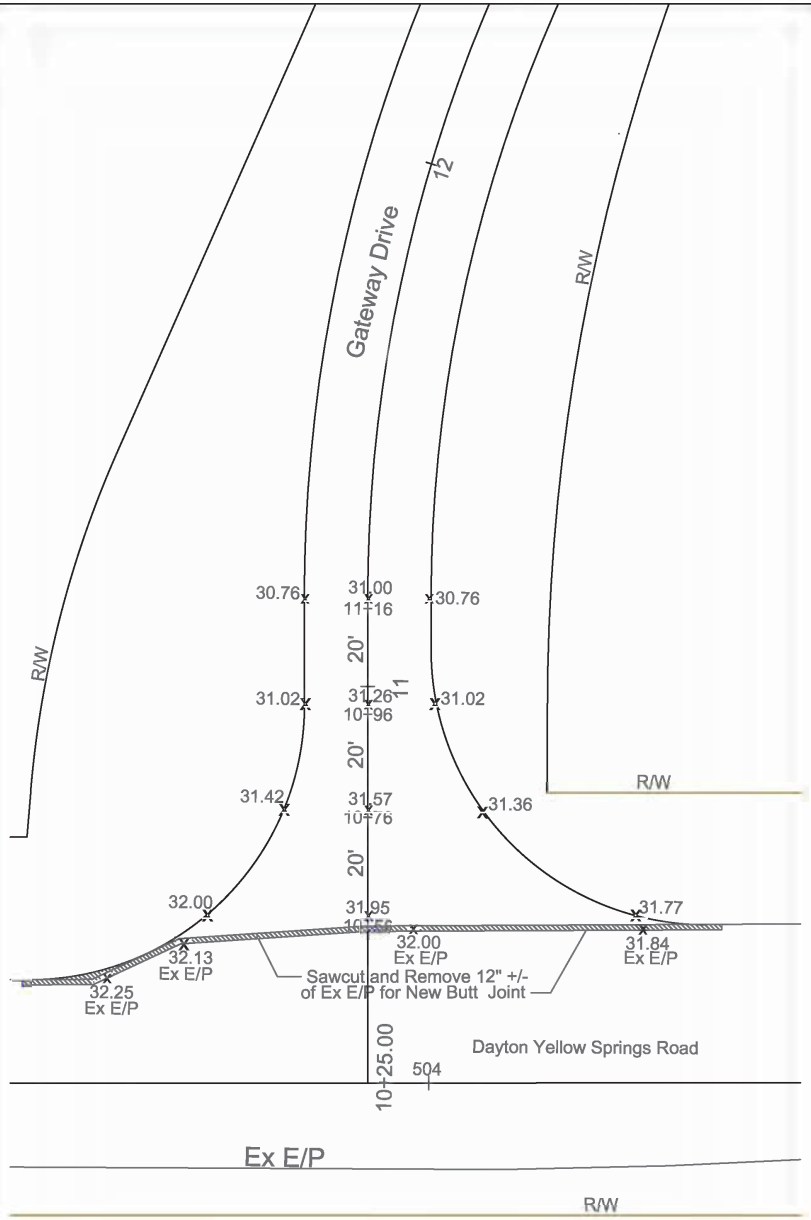
REVISION DATE: -----

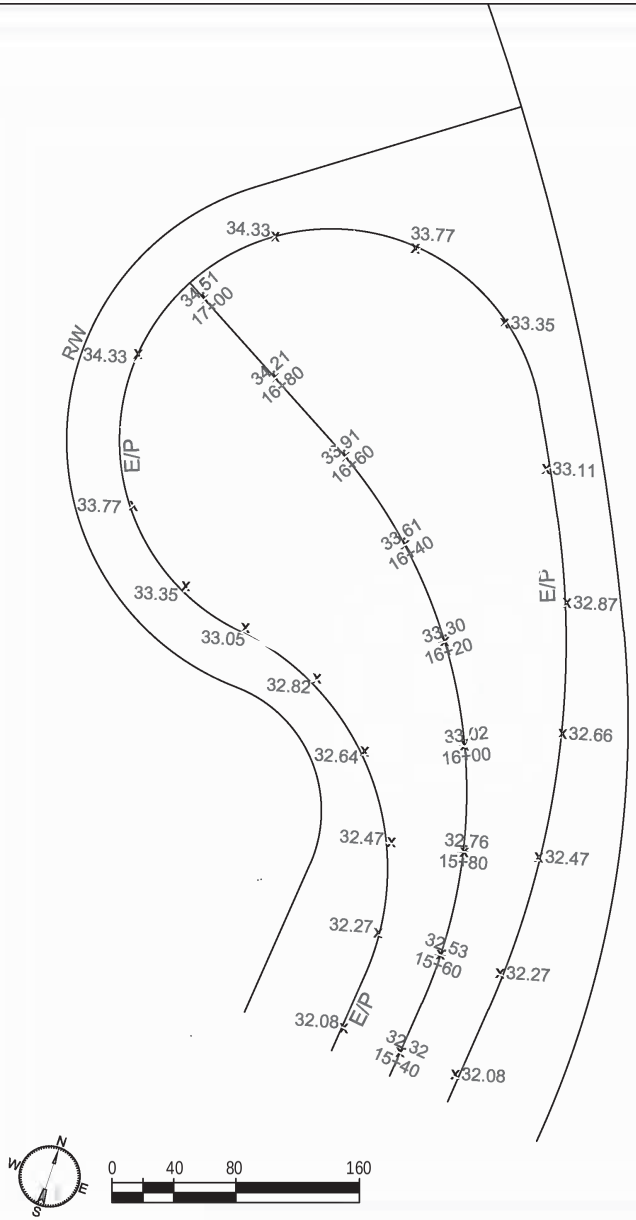
CROSS SECTIONS

yellowsprings/2017/CommercePark/Design/2.dwg

REVISION DATE:

ISSUE DATE: Nov. 9, 2017





Michael L. Heintz, P.E., P.S.
231 Sandpipper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

PAVEMENT ELEVATIONS

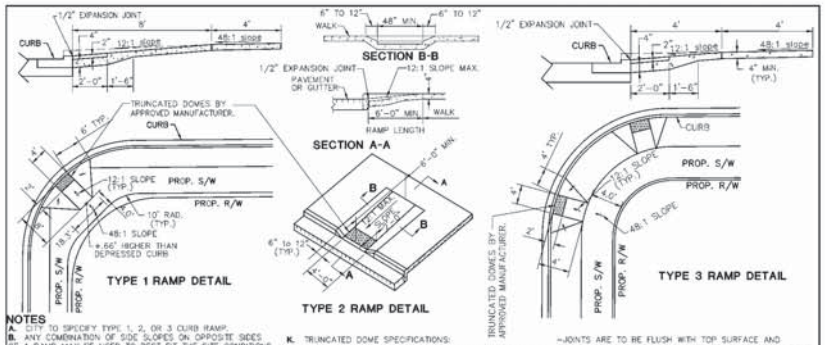
yellowsprings2017/CommercePark/Design2.dwg

ISSUE DATE: Nov. 9, 2017

REVISION DATE: -----

REVISION DATE: -----

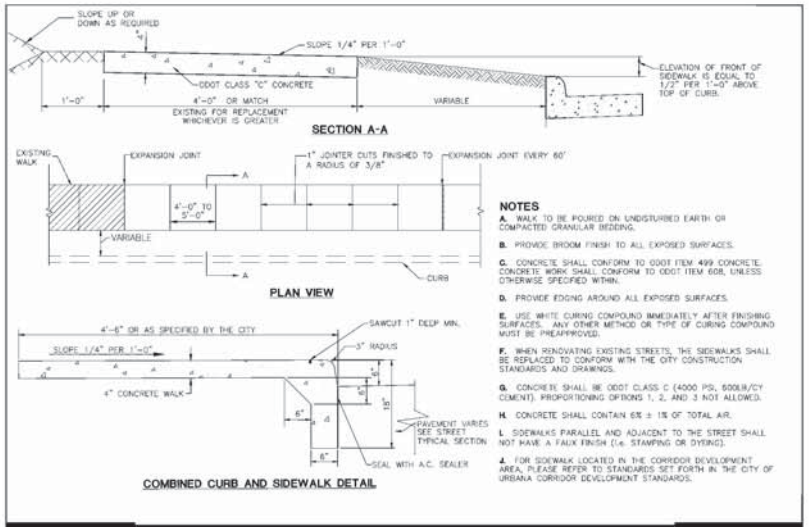
REVISION DATE: -----



NOTES

A. CITY TO SPECIFY TYPE 1, 2, OR 3 CURB RAMP.
B. ANY COMBINATION OF SIDE SLOPES ON OPPOSITE SIDES OF A RAMP MAY BE USED TO BEST FIT THE SITE CONDITIONS.
C. THE MINIMUM RAMP LENGTH IS 6' FROM BACK OF A 6" CURB AND MAY BE INCREASED WHERE FEASIBLE TO OBTAIN A FLATTER RAMP SLOPE OR TO BETTER BLEND WITH THE WALK CONFIGURATION.
D. WALK THICKNESS IN THE RAMP SLOPES SHALL BE 4" MINIMUM OR THICKER AS NECESSARY TO MATCH ADJACENT WALK THICKNESS.
E. CURB RAMPS SHALL MEET AND BE FINISHED TO AMERICANS WITH DISABILITIES ACT (A.D.A.) STANDARDS.
F. TEXTURE OF CONCRETE SURFACE SHALL BE OBTAINED BY COURSE BROOMING TRAVERSE TO THE RAMP SLOPES AND SHALL BE ROUGHER THAN ADJACENT WALK.
G. CURB RAMPS SHALL MEET THE REQUIREMENTS OF ODOT ITEM 608 UNLESS OTHERWISE SPECIFIED WITHIN.
H. CONCRETE SHALL BE ODOT CLASS C (4000 PSI, 600 LB/CY CEMENT). PROPORTIONING OPTIONS 1, 2, AND 3 NOT ALLOWED.
I. CONCRETE SHALL CONTAIN 6% ± 1% OF TOTAL AIR.
J. FOR RECONSTRUCTION JOBS, THE CURB RAMPS WILL HAVE TO BE ADDRESSED BASED ON THE EXISTING CONDITIONS.
K. TRUNCATED DOME SPECIFICATIONS:
INSTALL DETECTABLE WARNINGS (TRUNCATED DOMES) FOR A DISTANCE OF 24" FROM THE BACK OF CURB FOR THE ENTIRE WIDTH OF THE RAMP OPENING WHERE IT IS FLUSH WITH THE PAVEMENT.
-DOMES SHALL MEET A.D.A. REQUIREMENTS FOR DETECTABLE WARNINGS
-CAST-IN PLACE, ENGINEERED PLASTIC/POLYMER COMPOSITE DETECTABLE WARNING DEVICES WILL BE LAID ON TOP OF A 4" UNREINFORCED CONCRETE BASE. SETTING THE PLASTIC/POLYMER PANELS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
-JOINTS ARE TO BE FLUSH WITH TOP SURFACE AND STRUCK SO AS TO GIVE A SMOOTH TRANSITION FROM DOME TO CONRETE SURFACE. PANEL SHOULD NOT DIFFER FROM THE SURROUNDING CONCRETE BY MORE THAN 1/8" IN HEIGHT. TRUNCATED DOMES THAT DO NOT CONFORM TO THE SMOOTHNESS REQUIREMENT SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR AS DETERMINED BY THE CITY. FACE OF ALL TRUNCATED DOMES SHALL BE CLEAN OF CEMENT.
-ACCEPTABLE MANUFACTURES AND PRODUCTS ARE AVAILABLE ON OHIO DEPARTMENT OF TRANSPORTATION'S APPROVED DETECTABLE WARNING PRODUCT LIST. AN APPROVED EQUAL WILL BE CONSIDERED FOR CITY PROJECTS. PANELS SHALL BE (BRICK RED IN COLOR). NO CAST IRON TRUNCATED DOMES WILL BE ACCEPTED.
-FOR ADDITIONAL CURB RAMPS TYPES SEE ODOT STANDARD DRAWINGS BF-7.1.

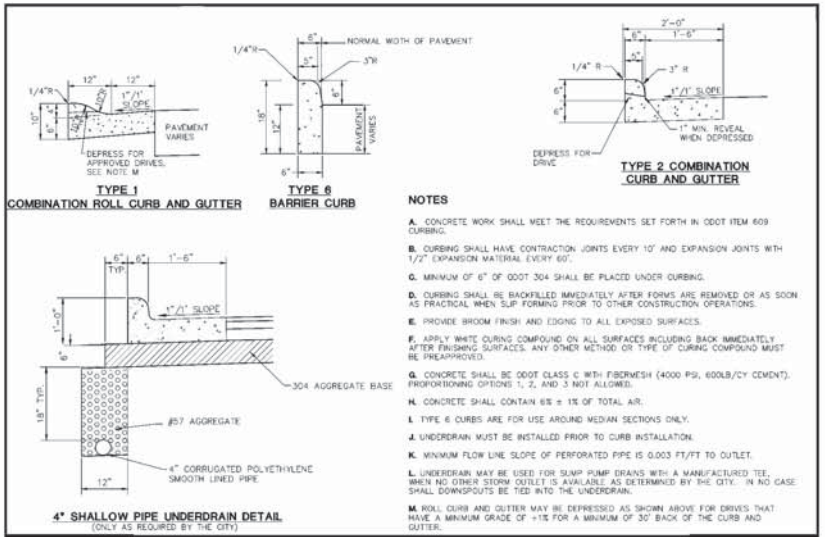
CURB RAMPS



NOTES

A. WALK TO BE POURED ON UNDISTURBED EARTH OR COMPACTED GRANULAR BEDDING.
B. PROVIDE BROOM FINISH TO ALL EXPOSED SURFACES.
C. CONCRETE SHALL CONFORM TO ODOT ITEM 499 CONCRETE. CONCRETE WORK SHALL CONFORM TO ODOT ITEM 608, UNLESS OTHERWISE SPECIFIED WITHIN.
D. PROVIDE EDGING AROUND ALL EXPOSED SURFACES.
E. USE WHITE CURING COMPOUND IMMEDIATELY AFTER FINISHING SURFACES. ANY OTHER METHOD OR TYPE OF CURING COMPOUND MUST BE PREAPPROVED.
F. WHEN RENOVATING EXISTING STREETS, THE SIDEWALKS SHALL BE REPLACED TO CONFORM WITH THE CITY CONSTRUCTION STANDARDS AND DRAWINGS.
G. CONCRETE SHALL BE ODOT CLASS C (4000 PSI, 600LB/CY CEMENT). PROPORTIONING OPTIONS 1, 2, AND 3 NOT ALLOWED.
H. CONCRETE SHALL CONTAIN 6% ± 1% OF TOTAL AIR.
I. SIDEWALKS PARALLEL AND ADJACENT TO THE STREET SHALL NOT HAVE A FAUX FINISH (I.e. STAMPING OR DYEING).
J. FOR SIDEWALK LOCATED IN THE CORRIDOR DEVELOPMENT AREA, PLEASE REFER TO STANDARDS SET FORTH IN THE CITY OF URBANA CORRIDOR DEVELOPMENT STANDARDS.

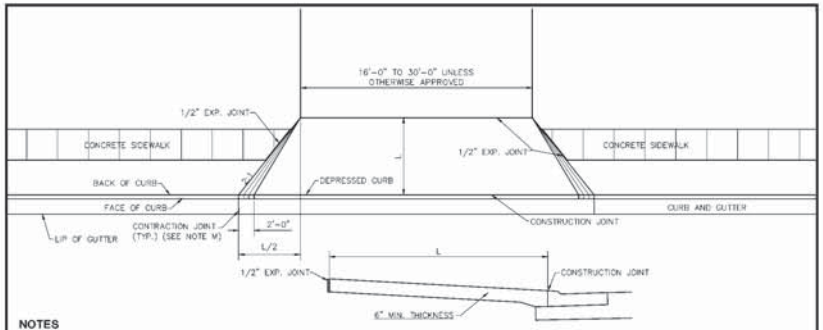
CONCRETE SIDEWALK DETAIL



NOTES

A. CONCRETE WORK SHALL MEET THE REQUIREMENTS SET FORTH IN ODOT ITEM 609 CURBING.
B. CURBING SHALL HAVE CONTRACTION JOINTS EVERY 10' AND EXPANSION JOINTS WITH 1/2" EXPANSION MATERIAL EVERY 60'.
C. MINIMUM OF 6" OF ODOT 304 SHALL BE PLACED UNDER CURBING.
D. CURBING SHALL BE BACKFILLED IMMEDIATELY AFTER FORMS ARE REMOVED OR AS SOON AS PRACTICAL WHEN SLIP FORMING PRIOR TO OTHER CONSTRUCTION OPERATIONS.
E. PROVIDE BROOM FINISH AND EDGING TO ALL EXPOSED SURFACES.
F. APPLY WHITE CURING COMPOUND ON ALL SURFACES INCLUDING BACK IMMEDIATELY AFTER FINISHING SURFACES. ANY OTHER METHOD OR TYPE OF CURING COMPOUND MUST BE PREAPPROVED.
G. CONCRETE SHALL BE ODOT CLASS C WITH FIBERMESH (4000 PSI, 600LB/CY CEMENT). PROPORTIONING OPTIONS 1, 2, AND 3 NOT ALLOWED.
H. CONCRETE SHALL CONTAIN 6% ± 1% OF TOTAL AIR.
I. TYPE 6 CURBS ARE FOR USE AROUND MEDIAN SECTIONS ONLY.
J. UNDERDRAIN MUST BE INSTALLED PRIOR TO CURB INSTALLATION.
K. MINIMUM FLOW LINE SLOPE OF PERFORATED PIPE IS 0.003 FT/FT TO OUTLET.
L. UNDERDRAIN MAY BE USED FOR SUMP PUMP DRAINS WITH A MANUFACTURED TEE, WHEN NO OTHER STORM OUTLET IS AVAILABLE AS DETERMINED BY THE CITY. IN NO CASE SHALL DOWNSPOUTS BE TIED INTO THE UNDERDRAIN.
M. ROLL CURB AND GUTTER MAY BE DEPRESSED AS SHOWN ABOVE FOR DRIVES THAT HAVE A MINIMUM GRADE OF +1% FOR A MINIMUM OF 30' BACK OF THE CURB AND GUTTER.

CONCRETE CURB DETAILS



NOTES

A. DRIVE APPROACHES SHALL MEET THE REQUIREMENTS OF ODOT ITEM 452 AND 499 CAST IN PLACE CONCRETE.
B. DRIVE APPROACHES SHALL NOT BE POURED MONOLITHICALLY WITH CURB.
C. MAXIMUM JOINT SPACING SHALL BE 10' LONGITUDINALLY AND TRANSVERSELY WITH JOINTS AT TAPERS.
D. EXPANSION MATERIAL SHALL BE 1/2" PREMOLDED.
E. COMPACTED AGGREGATE SHALL BE PLACED UNDER DRIVE APPROACHES IF DETERMINED NECESSARY BY THE CITY.
F. PROVIDE BROOM FINISH AND EDGING TO ALL EXPOSED SURFACES.
G. WHERE CURB HAS NOT BEEN PROPERLY DROPPED AT DRIVE APPROACHES, THE CURB AND GUTTER SHALL BE ENTIRELY REMOVED AND REPLACED BY THE CONTRACTOR/OWNER.
H. WHERE ASPHALTIC CONCRETE PAVEMENT IS DISTURBED, THE PAVEMENT SHALL BE REPLACED AS DIRECTED BY THE CITY.
I. JOINTS SHALL BE CLEANED AND EDGED BY A 1/4" RADIUS EDGER. LONGITUDINAL JOINTS SHALL BE AS DIRECTED BY THE CITY. EXPANSION JOINTS SHALL BE OF SUCH DIMENSIONS AS SHOWN ON STANDARD DRAWINGS FOR CONSTRUCTION JOINTS.
J. MINIMUM WIDTH FOR ONE-WAY TRAFFIC IS 16'-0". MINIMUM WIDTH FOR TWO-WAY TRAFFIC IS 25'-0". MAXIMUM WIDTH IS 30'-0" UNLESS OTHERWISE APPROVED BY THE CITY.
K. CONCRETE SHALL BE ODOT CLASS C (4000 PSI, 600 LB/CY CEMENT.) PROPORTIONING OPTIONS 1, 2, AND 3 NOT ALLOWED.
L. CONCRETE SHALL CONTAIN 6% ± 1% OF TOTAL AIR.
M. IF CURB AND GUTTER ARE REMOVED AND REPLACED DURING DRIVEWAY CONSTRUCTION, JOINTS BETWEEN EXISTING AND NEW CURB AND GUTTER ARE TO CONTAIN 1/2" EXPANSION MATERIAL.

COMMERCIAL AND INDUSTRIAL DRIVE APPROACH

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

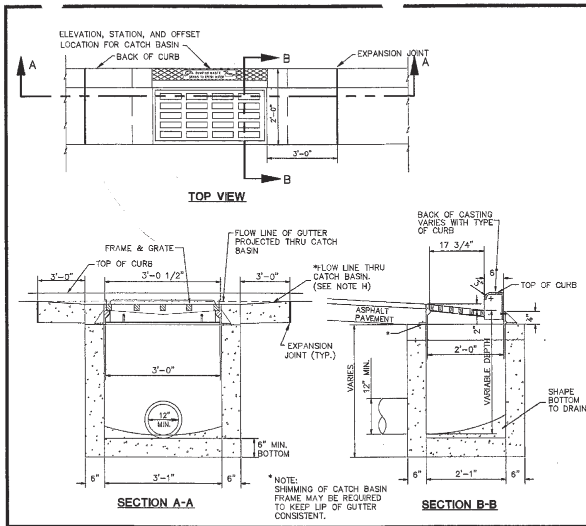
HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

CONSTRUCTION STANDARDS

yellowsprings2017commerceparkdesign2.dwg

ISSUE DATE:	REVISION DATE:	REVISION DATE:	REVISION DATE:
Nov. 9, 2017	------	------	------



NOTES

A. CASTING SHALL BE EAST JORDAN 7030 OR NEENAH R-3246 OR EQUIVALENT.

B. FOR TYPE 2 COMBINATION CURB AND GUTTER THE BACK SHALL BE EAST JORDAN TYPE T4 OR NEENAH (3" RADIUS) (R-3246-178).

C. FOR TYPE 1 COMBINATION ROLL CURB AND GUTTER THE BACK SHALL BE EAST JORDAN TYPE T2 OR NEENAH (MOUNTABLE CURB) (R-3246-E).

D. CATCH BASIN IN DRIVE APPROACHES TO BE AVOIDED, IF POSSIBLE. THE BACKS SHALL BE EAST JORDAN TYPE T3 OR NEENAH (R-3246-1 WITH CURB PLATE).

E. STANDARD GRATE SHALL BE EAST JORDAN TYPE M2, NEENAH TYPE C, OR EQUIVALENT. ALL BAR EDGES TO BE ROUNDED 1/8" RADIUS.

F. CONCRETE, CAST-IN-PLACE, TO BE CLASS C. PRECAST CONSTRUCTION PERMITTED AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13 WITH 5±+2% AIR VOID CONTENT IN THE HARDENED CONCRETE. KNOCKOUTS ARE REQUIRED IN PRECAST CONSTRUCTION. PRECAST WALLS SHALL HAVE A SUFFICIENT AMOUNT OF REINFORCEMENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE.

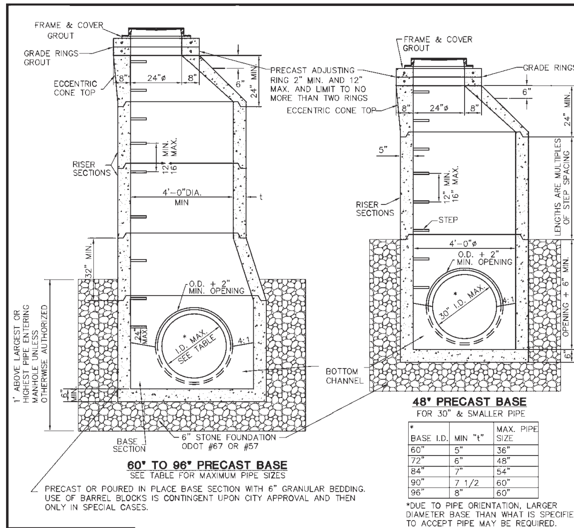
G. CARE SHALL BE TAKEN WHEN CONNECTING TO AN EXISTING CATCH BASIN TO KEEP OPENING AS MINIMAL AS POSSIBLE. IF POSSIBLE, SAW CUT OR USE ROTARY HAMMER FOR OPENING TO MINIMIZE DAMAGE TO CATCH BASIN. PIPE TO INTRUDE INTO CATCH BASIN 1" ONLY AND PIPE MUST BE CUT PARALLEL TO CATCH BASIN. USE NONSHRINK GROUT AROUND PIPE TO SEAL BETWEEN PIPE AND CATCH BASIN.

H. DROP FLOW LINE 1/2" WITHIN BLOCK OUT OF COMBINED CURB AND GUTTER WHILE KEEPING LIP OF GUTTER CONSISTENT WITH TOP OF CURB.

I. ALL GRATES SHALL BE CONSIDERED "BICYCLE SAFE".

J. CAST TOP OF CASTING WITH FISH, DUCK, AND THE WORDING "DUMP NO WASTE DRAINS TO FRESH WATER" OR APPROVED EQUIVALENT.

TYPE 1 CATCH BASIN



* BASE I.D.	MIN "t"	MAX. PIPE SIZE
60"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7 1/2	60"
96"	8"	60"

*DUE TO PIPE ORIENTATION, LARGER DIAMETER BASE THAN WHAT IS SPECIFIED TO ACCEPT PIPE MAY BE REQUIRED.

NOTES

A. STORM MANHOLE FRAME AND APPROVED VENTED LID SHALL BE EQUAL OF NEENAH NO. R-1767 OR EAST JORDON IRON WORKS NO. 1600.

B. TOP AND TRANSITION (OR REDUCER) SECTIONS MAY BE EITHER ECCENTRIC CONE OR FLAT SLAB.

C. OPENINGS IN RISER SECTIONS FOR 18" AND SMALLER INLET PIPES MAY BE PREFABRICATED OR CUT IN THE FIELD PROVIDED THE SIDES OF THE PIPE AT THE SPRING LINE DO NOT PROJECT INTO THE MANHOLE.

D. MATERIALS FOR BASES AND OTHER PRECAST SECTIONS, INCLUDING REINFORCEMENT SHALL COMPLY WITH ODOT REQUIREMENT OF 706.13 (ASTM C-478).

E. LOCATE THE CENTERLINE OF MANHOLE CONES OVER THE CENTERLINE OF THE MAIN SEWER WHENEVER POSSIBLE.

F. FOR PIPE SIZES LARGER THAN 60", REFER TO ODOT TYPE 4 TO 5 MANHOLE.

G. NO LATERALS MAY PROTRUDE INTO THE INTERNAL MANHOLE.

H. MAXIMUM SPACING SHALL BE 400'.

I. WHEN CONNECTING TO AN EXISTING STORM MANHOLE CARE SHALL BE TAKEN TO KEEP OPENING AS MINIMAL AS POSSIBLE. IF POSSIBLE, SAW CUT OR USE ROTARY HAMMER FOR OPENING TO MINIMIZE DAMAGE TO STORM MANHOLE AND PIPE MUST BE CUT PARALLEL TO STORM MANHOLE. USE NONSHRINK GROUT AROUND PIPE TO SEAL BETWEEN PIPE AND STORM MANHOLE.

J. JOINTS BETWEEN SECTIONS TO BE EITHER MORTAR OR BITUMINOUS PIPE JOINT FILLER (ODOT 706.10)

TYPE 3 STORM MANHOLE

GENERAL

A. FAILURE TO COMPLY WITH THE CONSTRUCTION STANDARDS AND DRAWINGS AND DESIGN CRITERIA WILL REQUIRE REMOVAL AND REPLACEMENT IN ACCORDANCE WITH THESE STANDARDS.

B. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH ODOT SPECIFICATIONS, LATEST REVISION.

C. CONSTRUCTION IMPROVEMENTS AFFECTING THE EXISTING CONDITION, PERFORMANCE AND LIFE CYCLE OF CITY STREETS, ALLEYS, OR RIGHTS-OF-WAY SHALL BE RESTORED TO THE REQUIREMENTS AND SATISFACTION OF THE CITY [redacted] ENGINEERING DEPARTMENT. ALL CITY INFRASTRUCTURE SHALL BE ADEQUATELY RESTORED ACCORDING TO APPLICABLE STANDARDS AND DETAILS.

D. ALL NEW SUBDIVISIONS AND DEVELOPMENTS SHALL BE PROVIDED WITH PUBLIC SIDEWALK AND CURB AND GUTTER ON BOTH SIDES OF STREETS IN ACCORDANCE WITH CITY STANDARDS.

E. CURB CUTS FOR ALL NEW AND RECONSTRUCTED DRIVEWAYS SHALL CONFORM TO CITY STANDARDS. ALL NEW DRIVEWAY APPROACHES SHALL BE CONSTRUCTED OF CONCRETE AND SUBJECT TO ALL CITY REQUIREMENTS.

F. NO CITY STREET OR ALLEY SHALL BE CLOSED UNLESS THE CITY IS NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF A NON-EMERGENCY SITUATION. ADVANCED PUBLIC NOTIFICATION AND PUBLISHING SHALL BE A MINIMUM OF 24 HOURS.

PAVEMENT REPLACEMENT

A. IMMEDIATELY AFTER PLACEMENT OF BACKFILL IN EXISTING STREETS, A TEMPORARY PAVEMENT SHALL BE INSTALLED AND THE STREET OPENED. TEMPORARY PAVEMENT SHALL CONSIST OF 8" OF COMPACTED ODOT SPECIFICATION 411 OR 304. THE SURFACE SHALL BE MAINTAINED FLUSH WITH THE EXISTING STREET. COLD PATCH SHALL BE PLACED ON 411 OR 304 IN HIGH TRAFFIC AREAS AS DETERMINED BY THE CITY ENGINEER.

B. ANY SETTLEMENT OF A TRENCH CAUSING A DEPRESSION SHALL BE REFILLED AS REQUIRED BY THE CITY AT THE CONTRACTOR'S EXPENSE. THIS PROVISION IS APPLIED FOR A TWO YEAR PERIOD AFTER WORK IS ACCEPTED BY THE CITY.

C. ALL TEMPORARY PAVEMENT AND SIDEWALK SHALL BE MAINTAINED BY THE CONTRACTOR OR DEVELOPER AT HIS OWN EXPENSE IN A SUITABLE AND SAFE CONDITION FOR TRAFFIC UNTIL PERMANENT REPLACEMENT IS MADE OR THE PROJECT IS FINALLY ACCEPTED BY THE CITY.

TRAFFIC CONTROL

A. THE CONTRACTOR SHALL MAINTAIN TRAFFIC CONTROL AT ALL TIMES WITH THE PROPER DEVICES AS PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THESE CONTROL DEVICES SHALL BE IN PLACE PRIOR TO ANY WORK COMMENCING. CONTRACTOR WILL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL ITEMS.

B. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE CITY.

CURB STAKING AND ROADWAY

A. LINE AND GRADE EVERY 25' ON A CONVENIENT OFFSET WITH TACKED HUBS.

PAVEMENT (ASPHALT)

A. THE CONTRACTOR SHALL PROVIDE THE CITY WITH A COPY OF THE NORMAL (MEDIUM TRAFFIC) ODOT 448 JOB MIX FORMULA FOR EACH PLANT THAT PROVIDES HOT MIXED ASPHALT TO THE PROJECT. ALL MIXES SHALL FOLLOW ODOT JOB MIX FORMULA. RECYCLED ASPHALT SHALL NOT EXCEED 20% OF ANY 448 MIX PRODUCED. NO RECYCLED ASPHALT MAY BE USED IN THE ITEM 448 SURFACE COURSE.

B. THREE-WHEEL STEEL ROLLER OR EQUIVALENT SHALL BE USED FOR INITIAL BREAKDOWN ON ALL PROJECTS. THIS PROVISION SHALL BE FOR PLACING ASPHALT GREATER THAN 1-1/2" THICKNESS.

C. ALL WORK SHALL ADHERE TO ODOT'S LATEST REVISIONS AND TO THE CITY SPECIFICATIONS. THE MORE STRINGENT SHALL PREVAIL UNLESS OTHERWISE APPROVED.

D. PATCHED AREAS SHALL BE SEALED ON THE PERIMETER OF THE PATCH WITH ASPHALT CEMENT.

E. ALL UTILITY ADJUSTMENTS -- MANHOLES, WATER VALVES, ETC., -- SHALL BE RAISED TO FINISHED GRADE AFTER THE FINAL ASPHALT COURSE IS LAID, BUT WITHIN TWO WEEKS, UNLESS OTHERWISE APPROVED. PAVEMENT AROUND ADJUSTED UTILITIES SHALL BE REPLACED WITH SURFACE COURSE MATERIAL. NO CONCRETE TO SURFACE, UNLESS OTHERWISE APPROVED.

F. ASPHALT CEMENT SHALL BE USED NEXT TO THE LIP OF GUTTER PRIOR TO THE FINAL ASPHALT LIFT BEING PLACED. (SS-1 TACK OR PG64-22 SEAL.)

G. TACK COAT SHALL BE APPLIED PRIOR TO THE PLACEMENT OF THE FINAL LIFT OF ASPHALT IF THE EXISTING ASPHALT LIFT IS DIRTY OR AFTER TEN DAYS UNLESS OTHERWISE APPROVED. TEMPERATURE MUST BE 50°F OR HIGHER.

H. NO ASPHALT SHALL BE PLACED OVER EXCAVATED TRENCHES UNLESS OTHERWISE APPROVED. CONCRETE SHALL BE USED AS PER CITY CONSTRUCTION STANDARDS & DRAWINGS PAGE 1167.20.

I. NO ASPHALT SHALL BE LAID UNLESS THE CITY IS GIVEN PRIOR NOTICE AND THE AMBIENT TEMPERATURE IS 50°F OR GREATER UNLESS OTHERWISE APPROVED.

J. FINAL LIFT OF ASPHALT SHALL BE FINISHED TO 1/4" ABOVE THE LIP OF GUTTER.

K. TEMPERATURES FOR BREAKDOWN ROLLING SHALL BE 260°F TO 275°F AND FOR FINAL ROLLING 175°F TO 190°F.

L. ASPHALT CEMENT SHALL BE USED ON ALL JOINTS AND FEATHERED SURFACES PRIOR TO PLACEMENT OF THE NEXT COURSE OF ASPHALT TO THE ABUTTING JOINT, UNLESS OTHERWISE APPROVED.

M. 325°F IS THE MAXIMUM TEMPERATURE ASPHALT MATERIAL IS TO BE MIXED.

N. ALL EDGES TO BE TRIMMED BACK AND SAW CUT TO SOLID MATERIAL AND BE STRAIGHT AND NEAT AS PER THE CITY'S INSTRUCTIONS.

O. AREAS TO BE PAVED, OVERLAID OR PATCHED SHALL BE CLEAN AND FREE OF DEBRIS.

MISCELLANEOUS ROADWAY NOTES

SEEDING

A. ALL AREAS DESIGNATED FOR SEEDING SHALL HAVE A MINIMUM OF 6" OF TOPSOIL OVER THE ENTIRE AREA. THE AREA SHALL BE RAKED, ROLLED, AND DRESSED READY FOR SEEDING. NO STONE OVER 1" IN SIZE PERMITTED.

[redacted]

DRAINS

A. ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE REPAIRED AND PROVIDED WITH UNOBSTRUCTED OUTLETS AS APPROVED AND DIRECTED BY THE CITY AND MARKED ON THE RECORD DRAWINGS.

CONNECTIONS TO EXISTING PIPE

A. WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

UTILITY SEPARATION

A. ANY UNDERGROUND UTILITIES SUCH AS GAS, ELECTRIC, CABLE TV, TELEPHONE, ETC., SHALL HAVE 10' SEPARATION FROM ANY CITY UTILITY UNLESS OTHERWISE APPROVED.

UTILITIES

A. THE MAXIMUM LENGTH OF ANY UTILITY TRENCH TO BE OPEN AT ANY TIME SHALL BE 100' UNLESS OTHERWISE APPROVED.

COMPACTION METHODS

A. FLOODING SHALL NOT BE PERMITTED.

B. MECHANICAL DEVICES, HAND DEVICES, VIBRATING PLATES OR OTHER EQUIPMENT APPROVED BY THE CITY ARE ACCEPTABLE 1' ABOVE PIPE IN UNIFORM LIFTS OF 12" (LOOSE DEPTH) OF EXISTING NATIVE MATERIAL AND 6" OF GRANULAR BACKFILL. THE HEIGHT OF LIFTS WILL DEPEND UPON THE TYPE OF MECHANICAL EQUIPMENT BEING USED. THE HEIGHT WILL BE 6" FOR HAND OPERATED TOOLS AND UP TO 12" ON EQUIPMENT MOUNTED TOOLS. THE COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE MATERIAL UNDER THE HAUNCH OF THE PIPE.

C. DENSITY FOR THE ABOVE METHODS SHALL BE NO LESS THAN THAT OF THE SURROUNDING GROUND UNLESS OTHERWISE SPECIFIED.

DISPOSAL OF SURPLUS MATERIAL

A. THE CITY MAY AT ITS DISCRETION REQUIRE THAT SURPLUS MATERIAL BE DEPOSITED AT A LOCATION DESIGNATED WITHIN A THREE-MILE RADIUS OF THE WORK SITE.

TYPICAL NOTES - ALL SUBDIVISION CONSTRUCTION DRAWINGS

A. ALL CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY WITH THE CITY ENGINEERING STANDARDS OR ODOT, WHICHEVER IS MORE RESTRICTIVE.

B. ALL COMPACTION SHALL MEET THE CITY REQUIREMENTS. IF TESTING OF COMPACTED AREAS IS REQUESTED BY THE CITY, SAID TESTING SHALL BE PERFORMED AT THE EXPENSE OF THE DEVELOPER.

C. THE CITY WILL LOCATE AREAS UTILIZING PROOFROLLING TECHNIQUES TO DETERMINE NEED OF UNDERCUTTING UNLESS THE DEVELOPER CHOOSES TO HAVE, AT HIS EXPENSE, AN INDEPENDENTLY APPROVED TESTING COMPANY TO DETERMINE UNSUITABLE MATERIAL AREAS THAT NEED UNDERCUTTING. IN PROOFROLLING, IF ANY DEFLECTION IS OBSERVED BY THE CITY INSPECTOR, THE SUBGRADE SHALL BE STABILIZED BY EITHER UNDERCUTTING OR THE USE OF TENSAR OR OTHER APPROVED SOIL STABILIZATION.

D. ALL EMBANKMENT AND SUBGRADE AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF ASTM D698 STANDARD PROCTOR CURVE AND TESTED TO REPRESENT A DEPTH OF 12" UNLESS OTHERWISE SPECIFIED BY THE CITY.

E. ALL UNPAVED AREAS WITHIN THE STREET RIGHT-OF-WAY SHALL BE SEEDED WITHIN 48 HOURS AFTER THE CURB IS BACKFILLED. STAKED STRAW BALES MAY BE REQUIRED IN ADDITION TO SEEDING TO CONTROL EROSION IF REQUESTED BY THE CITY.

F. STORM WATER POLLUTION PREVENTION SHOULD BE A HIGH PRIORITY ON ALL CONSTRUCTION PROJECTS. ON ALL PROJECTS WHICH DISTURB AT LEAST 1 ACRES OF SOIL, A NPDES PERMIT IS REQUIRED FROM OEPA AND A COPY OF THE PERMIT MUST BE ON FILE AT THE CITY OFFICE BEFORE CONSTRUCTION BEGINS.

G. THE FINAL LIFT OF ASPHALT CONCRETE SURFACE COURSE IN RESIDENTIAL SUBDIVISIONS IS TO BE PLACED THE FOLLOWING CONSTRUCTION SEASON AFTER THE BASE COURSE IS PLACED, BUT AT LEAST TWO MONTHS PRIOR TO THE EXPIRATION OF THE MAINTENANCE SURETY. THIS MAY NEED TO BE EXTENDED TO ALLOW FOR A TWO MONTH PERIOD.

H. A PUNCH LIST MUST BE REQUESTED WITHIN 30 DAYS AFTER SUBSTANTIAL COMPLETION.

GENERAL NOTES

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

CONSTRUCTION STANDARDS
yellowsprings/2017CommerceParkDesign2.dwg

ISSUE DATE: Nov. 9, 2017
REVISION DATE: ------
REVISION DATE: ------
REVISION DATE: ------

NOTES

A. NO WORK SHALL BE APPROVED OR ACCEPTED BY THE CITY UNLESS 2 WORKING DAYS NOTICE OF COMMENCING WORK IS GIVEN TO THE CITY.

B. ALL TEMPORARY PAVEMENT AND SIDEWALK SHALL BE MAINTAINED BY THE CONTRACTOR OR THE DEVELOPER AT HIS OWN EXPENSE IN A SUITABLE AND SAFE CONDITION FOR TRAFFIC UNTIL PERMANENT REPLACEMENT IS MADE OR THE PROJECT IS FINALLY ACCEPTED BY THE CITY.

C. ALL STORM SEWER CONSTRUCTION SHALL ADHERE TO ODOT SPECIFICATIONS LATEST REVISION OR WITH THE CITY STORM SEWER SPECIFICATIONS, WHICHEVER IS APPLICABLE AND MORE RESTRICTIVE.

D. MASTIC MATERIAL IS REQUIRED ON ALL NON O-RING STORM SEWER AND MANHOLES, UNLESS OTHERWISE APPROVED.

E. WHEN A CASTING IS REMOVED IT REMAINS CITY PROPERTY AND TO BE DELIVERED TO THE CITY SERVICE CENTER, UNLESS OTHERWISE APPROVED.

F. ANY DETAILS OR NOTES NOT DIRECTLY ADDRESSED IN THESE ENGINEERING STANDARDS SHALL BE COORDINATED WITH THE CITY ENGINEERING DEPARTMENT.

G. ALL STORM SEWER SHALL BE INSTALLED USING A PIPE LASER, INSIDE THE PIPE IF POSSIBLE, FOR GRADE AND ALIGNMENT.

UTILITY STAKING

A. OFFSET AND GRADE AT EACH MANHOLE, CATCH BASIN, AND OTHER STRUCTURES. OFFSET AND GRADE 50' AND 100' OUT FROM EACH MANHOLE UNLESS OTHERWISE APPROVED.

PIPE

A. ALL STORM SEWER PIPE SHALL HAVE A MINIMUM DIAMETER OF 12", UNLESS OTHERWISE APPROVED.

B. TYPES OF PIPE PERMITTED

	ODOT MATERIALS NUMBER
REINFORCED CONCRETE PIPE	706.02
REINFORCED CONCRETE ELLIPTICAL PIPE	706.04
CORRUGATED POLYETHYLENE SMOOTH-LINED PIPE	707.33
POLYVINYL CHLORIDE CORRUGATED SMOOTH-INTERIOR PIPE	707.42
POLYVINYL CHLORIDE PROFILE WALL PIPE	707.43
POLYVINYL CHLORIDE SOLID WALL PIPE	707.45

EXISTING TILE HOOKUPS

A. THE DRAINAGE TILE CURRENTLY CONNECTED TO THE EXISTING STORM SEWER SHALL BE CONNECTED TO THE PROPOSED STORM SEWER. ANY DRAINAGE TILE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. ANYTHING REMOVED, REPLACED, AND/OR CONNECTED TO THE STORM SEWER SHALL BE NOTED ON THE AS-BUILT DRAWINGS AND SHALL BE INSPECTED BY THE INSPECTOR BEFORE THEY ARE COVERED.

B. ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS OR PLUGGED AS APPROVED AND DIRECTED BY THE CITY.

MISCELLANEOUS STORM NOTES

NOTES

A. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED FOR ALL CONSTRUCTION PROJECTS HAVING SIGNIFICANT GRADING. THE CONTROLS ARE PROVIDED DURING CONSTRUCTION TO PREVENT SOIL ERODED FROM THE CONSTRUCTION AREA FROM ENTERING ADJACENT WATERWAYS AND PROPERTIES.

B. CONSTRUCTION ITEMS INCLUDE SEDIMENT BASINS, SEDIMENT DAMS, DIVERSION DIKES AND/OR DITCHES AND STRAW BALES OR OTHER FILTER DIKES SHOWN ON ODOT STANDARD DRAWING MC-11. OTHER MISCELLANEOUS EROSION CONTROL MEASURES INCLUDE REPAIR, SEEDING AND MULCHING, COMMERCIAL FERTILIZER, WATER AND MOWING AND ROCK CHANNEL PROTECTION, COVERED IN ODOT SPECIFICATION ITEMS 659 AND 601.

C. THE SIZE OF THE ENTIRE DRAINAGE AREA CONTRIBUTING FLOW IS USED TO DETERMINE THE MOST EFFECTIVE EROSION CONTROL METHOD. IN MANY CASES, THE MAJOR PORTION OF THE CONTRIBUTING AREA WILL BE BEYOND THE PROJECT LIMITS, AND FOR THOSE CASES IT WILL BE NECESSARY TO CONTROL THE FLOW FROM OUTSIDE BEFORE IT REACHES THE AREA DISTURBED BY PROJECT CONSTRUCTION. FLOW FROM THE AREA DISTURBED BY CONSTRUCTION SHALL BE TREATED PRIOR TO COMBINING IT WITH OFF-PAVEMENT DRAINAGE.

D. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED FOR ALL SUBDIVISIONS AND INDIVIDUAL SITES UNLESS OTHERWISE APPROVED. THE CONTROL MEASURES ARE TO BE PROVIDED DURING CONSTRUCTION TO PREVENT EROSION FROM ENTERING ADJACENT WATERWAYS AND PROPERTIES.

E. THERE SHALL BE ONLY ONE CONSTRUCTION ENTRANCE OFF THE SITE, ENTRANCE TO BE CONSTRUCTED OF 8" OF #2 STONE, 75' LONG BY 20' WIDE. CONTRACTOR TO KEEP MUD OFF EXISTING STREETS, NO EQUIPMENT TO BE PARKED ON EXISTING STREETS. MORE THAN ONE ENTRANCE MUST BE APPROVED BY THE CITY.

PLAN SUBMITTAL

A. ALL SITE PLANS SHALL INCLUDE APPROPRIATE EROSION AND SEDIMENT CONTROL DEVICES AND SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY WORK UNLESS OTHERWISE APPROVED. ALL PROJECTS WHICH DISTURB 5 ACRES OR MORE MUST HAVE OEPA EROSION CONTROL APPROVALS.

CONSTRUCTION

A. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSPECTED AND APPROVED BY THE CITY UNLESS OTHERWISE APPROVED.

STORM WATER PERMITS

A. ON ALL PROJECTS WHICH DISTURB AT LEAST 1 ACRE OF SOIL, A NPDES PERMIT IS REQUIRED FROM OEPA AND A COPY OF THE PERMIT MUST BE ON FILE AT THE CITY BEFORE CONSTRUCTION BEGINS.

B. EROSION CONTROL SUBMITTALS SHALL BE AS PER THE CURRENT STORM WATER MANAGEMENT ORDINANCE.

CONTROL MEASURES

A. DISTURB ONLY THE AREAS NEEDED FOR CONSTRUCTION.

B. REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION; PROTECT THE REST TO PRESERVE THEIR AESTHETIC AND EROSION-CONTROL VALUES.

C. INSTALL SEDIMENT BASINS AND DIVERSION DIKES BEFORE DISTURBING THE LAND THAT DRAINS INTO THEM.

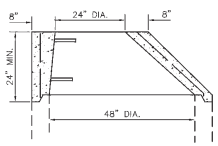
D. INSTALL EROSION AND SEDIMENT CONTROL PRACTICES AS INDICATED IN THE PLAN. THE PRACTICES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL THE DRAINAGE AREAS HAVE BEEN PERMANENTLY STABILIZED.

E. TEMPORARILY STABILIZE EACH SEGMENT, GRADED OR OTHERWISE DISTURBED LAND, INCLUDING THE SEDIMENT-CONTROL DEVICES NOT OTHERWISE STABILIZED, BY SEEDING AND MULCHING OR BY MULCHING ALONE. AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH SEGMENT WITH PERENNIAL VEGETATION AND STRUCTURAL MEASURES.

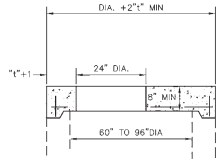
F. LEVEL DIVERSION DIKES, SEDIMENT BASINS, AND SILT TRAPS AFTER AREAS THAT DRAIN INTO THEM ARE STABILIZED. ESTABLISH PERMANENT VEGETATION ON THESE AREAS. SEDIMENT BASINS THAT ARE TO BE RETAINED FOR STORM WATER DETENTION MAY BE SEEDED TO PERMANENT VEGETATION AFTER THEY ARE BUILT.

G. DISCHARGE WATER FROM OUTLET STRUCTURES AT NON-EROSIVE VELOCITIES.

EROSION CONTROL NOTES

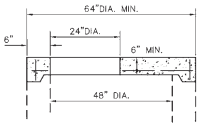


ECCENTRIC CONE TOP

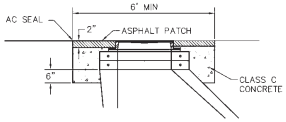


FLAT SLAB TOP

BASE I.D.	MIN "t"	MAX. PIPE SIZE
60"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7 1/2	60"
96"	8"	60"



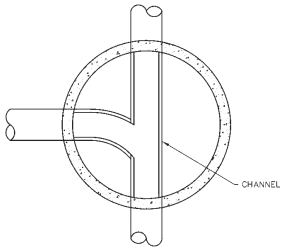
FLAT SLAB TOP



MANHOLE REPAIR CASTING CONSTRUCTION

NOTES:

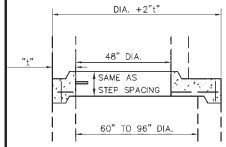
1. PRECAST CONCRETE ADJUSTING RINGS- ENCASE WITH CONCRETE 6" DOWN FROM BARREL TOP AND UP TO WITHIN 2" OF SURFACE AND EXTENSIONS.
2. SET MANHOLE, PRECAST CONCRETE ADJUSTING RINGS AND CASTING THEN PAVE OVER MANHOLE. THEN DIG OUT, ENCASE COLLARS AND CASTING AS PER DETAIL WITH CONCRETE TO WITHIN 2" OF SURFACE. THE MANHOLE WILL HAVE A PATCHED RADIUS OF (2") ASPHALT.



SECTIONAL PLAN

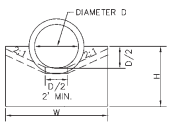
NOTE

ALL INVERTS TO BE CHANNELED FOR OPTIMUM FLOW.

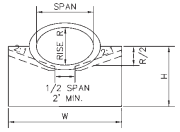


FLAT SLAB TRANSITION

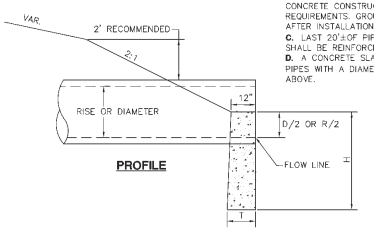
TYPE 3 STORM MANHOLE DETAILS



CIRCULAR



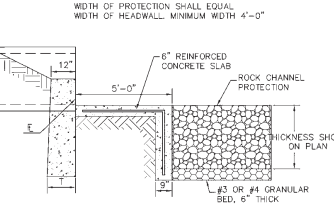
ELLIPTICAL



PROFILE

NOTES

A. CONCRETE FOR HEADWALLS SHALL BE ODOT CLASS C. CONCRETE QUANTITIES ARE BASED ON HEADWALLS ONLY.
B. HEADWALLS MAY BE PRECAST CONCRETE CONSTRUCTED TO THE ABOVE REQUIREMENTS. GROUT AROUND PIPE AFTER INSTALLATION.
C. LAST 20'± OF PIPE BEFORE HEADWALL SHALL BE REINFORCED CONCRETE PIPE.
D. A CONCRETE SLAB IS REQUIRED FOR PIPES WITH A DIAMETER OF 18" AND ABOVE.



OUTLET CHANNEL PROTECTION DETAIL

(CUTOFF WALL DEPTH 2'-6" MINIMUM IS VARIABLE TO MATCH REQUIRED THICKNESS OF ROCK.)

HEADWALL FOR CONCRETE PIPE

CIRCULAR				CONC. C.Y.	ELLIPTICAL						CONC. C.Y.
D	W	H	T		SPAN	RISE	W	H	T		
12"	2'-0"	3'-0"	12"	.20	23"	14"	3'-0"	3'-2"	12"		.29
15"	2'-6"	3'-2"	12"	.25	30"	19"	3'-7"	3'-4"	12"		.35
18"	3'-0"	3'-3"	12"	.31	34"	22"	3'-11"	3'-5"	12"		.38
21"	3'-6"	3'-4"	12"	.37	38"	24"	4'-6"	3'-6"	12"		.44
24"	4'-0"	3'-6"	12"	.43	42"	27"	4'-8"	3'-7"	12"		.45
27"	4'-6"	3'-8"	12"	.49	45"	29"	5'-2"	3'-8"	12"		.49
30"	5'-0"	3'-9"	12"	.56	49"	32"	5'-5"	3'-10"	12"		.52
33"	5'-6"	3'-10"	12"	.62	53"	34"	5'-11"	4'-0"	14"		.66
36"	6'-0"	4'-0"	12"	.69	60"	38"	6'-10"	4'-2"	14"		.82
39"	6'-6"	4'-2"	12"	.77	68"	43"	8'-0"	4'-4"	16"		1.01
42"	7'-0"	4'-3"	12"	.84	76"	48"	9'-2"	5'-0"	16"		1.34
48"	8'-0"	4'-6"	14"	1.09	83"	53"	10'-4"	5'-2"	18"		1.65
54"	9'-3"	4'-9"	14"	1.32	91"	58"	11'-6"	5'-5"	18"		1.97
60"	10'-6"	5'-6"	16"	1.93	98"	63"	12'-7"	5'-7"	20"		2.38
66"	11'-9"	5'-9"	16"	2.42	106"	68"	13'-9"	5'-10"	20"		2.69
72"	13'-0"	6'-0"	18"	2.77	113"	72"	14'-9"	6'-0"	22"		3.14
78"	14'-3"	6'-3"	20"	3.37	121"	77"	15'-11"	6'-3"	22"		3.49
84"	15'-6"	6'-6"	22"	4.05	128"	82"	17'-0"	6'-5"	24"		4.04

HALF-HEIGHT HEADWALL

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

CONSTRUCTION STANDARDS

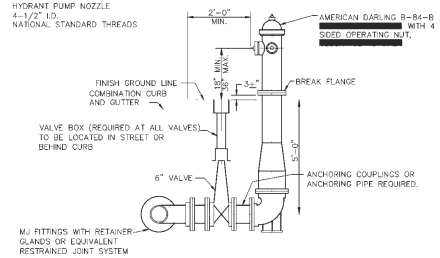
yellowsprings2017/CommerceParkDesign12.dwg

ISSUE DATE: Nov. 9, 2017

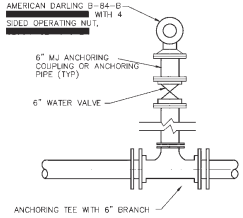
REVISION DATE: -----

REVISION DATE: -----

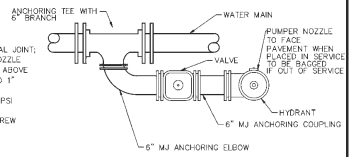
REVISION DATE: -----



SECTION VIEW



BASIC TEE DETAIL PLAN

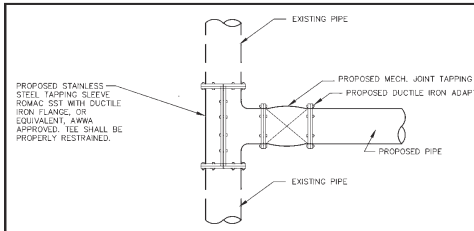


SPECIAL MECHANICAL JOINT HYDRANT TEE DETAIL PLAN

NOTES

A. FIRE HYDRANTS – AMERICAN DARLING B-84-B, [redacted] MECHANICAL JOINT; TWO 2-1/2" HOSE NOZZLE WITH NATIONAL STANDARD THREAD CONNECTIONS; ONE 4"-1/2" PUMPER NOZZLE WITH NATIONAL STANDARD THREADS; CONFORMING TO AWWA C-502;CCW TO OPEN; BREAK FLANGES 3" ABOVE GRADE. HYDRANT SHALL BE YELLOW IN COLOR WITH 4-SIDED, SQUARE OPERATING NUT (7/8" TOP AND 1" BOTTOM DIMENSION). HYDRANT MUST BE SELF DRAINING.
B. GATE VALVES SHALL BE AWWA C-509, RESILIENT WEDGE, NONRISING STEM, MECHANICAL JOINT, 150 PSI WORKING PRESSURE,CCW TO OPEN WITH ARROW INDICATING OPEN DIRECTION, MUELLER OR EQUIVALENT.
C. VALVE BOXES SHALL BE 2-PIECE, ADJUSTABLE 36" TO 48", 6" DIAMETER NOMINAL, ADJUSTABLE SCREW TYPE, COVER MARKED "WATER", DOMESTIC MADE ONLY.
D. ALL FITTINGS TO BE RESTRAINED.
E. ALL FITTINGS TO BE AWWA C-153 DUCTILE IRON, COMPACT. **COUNTER-**
F. ALL VALVES AND HYDRANTS SHALL OPEN [redacted] IN A CLOCKWISE DIRECTION.
G. CONTRACTOR TO FACE HYDRANT AS REQUIRED BY THE CITY.
H. THE LAYING OF PIPE ON EXISTING DIRT WITH THE BELLS CUT OUT SHALL NOT BE PERMITTED.
I. THE OPEN ENDS OF ALL PIPES AND SPECIAL CASTINGS SHALL BE PLUGGED OR OTHERWISE CLOSED WITH A WATERTIGHT PLUG TO THE APPROVAL OF THE CITY BEFORE LEAVING THE WORK FOR THE NIGHT.
J. A MINIMUM OF 4" WASHED STONE BACKFILL SHALL BE PLACED AS HYDRANT IS INSTALLED.

FIRE HYDRANT



TAPPING SLEEVE AND VALVE DETAIL

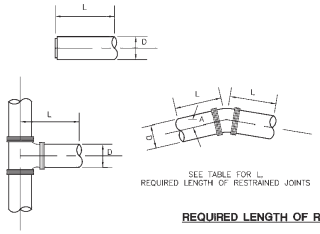
ALL JOINTS TO BE RESTRAINED. MECHANICAL RESTRAINT DEVICES SHALL BE AWWA ACCEPTED.

NOTES

A. BELL JOINT RESTRAINTS – USE FIELD LOCK BY U.S. PIPE OR APPROVED EQUIVALENT.

B. MECHANICAL JOINT RESTRAINTS – EBAA IRON MEGALUG RETAINER GLAND OR EQUIVALENT.

C. CONTRACTOR TO USE RESTRAINED JOINTS UNLESS THRUST BLOCKING IS PREAPPROVED FOR SPECIAL CONDITIONS BY THE CITY PRIOR TO THE BEGINNING OF CONSTRUCTION.



SEE TABLE FOR L, REQUIRED LENGTH OF RESTRAINED JOINTS

REQUIRED LENGTH OF RESTRAINED JOINTS FOR WATER MAINS

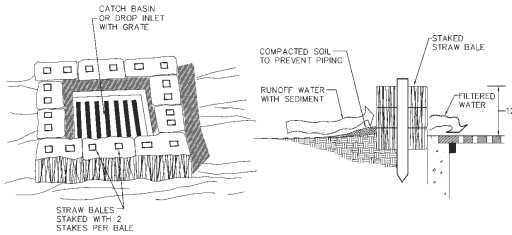
REQUIRED LENGTH OF RESTRAINED JOINTS IN FEET									
		D-DIAMETER OF PIPE							
		4"	6"	8"	10"	12"	16"	20"	24"
A ~ DEGREE OF DEFLECTION	11 1/4°	*	*	*	*	*	2	3	3
	22 1/2°	*	2	3	3	4	5	6	6
	45°	3	4	5	6	8	10	12	13
	90°	18	25	33	40	47	60	72	85
	TEE	18	25	33	40	47	60	72	85
	END	18	25	33	40	47	60	72	85

DESIGN PARAMETERS

LAYING CONDITIONS – TYPE 5
SOIL DESIGNATION – SILT
DEPTH OF COVER – 4'
DESIGN PRESSURE – 80 PSI
SAFETY FACTOR – 1.50
BARE PIPE.
THIS CHART AND PARAMETERS WILL BE UTILIZED UNLESS APPROVED BY THE UTILITY DIRECTOR.

* REQUIRED RESTRAINED JOINT AT FITTING.

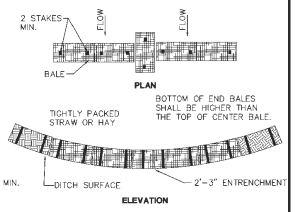
RESTRAINING JOINTS AND TAPPING SLEEVE FOR WATER MAINS



BALE INLET FILTER

NOTES

A. THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL.



BALE DITCH CHECK

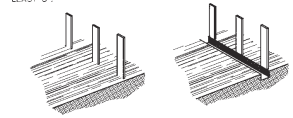
NOTES

A. PLACEMENT OF BALES SHALL BE TIGHTLY PLACED, ADJACENTLY, AND ENTRENCHED 2" AND 3" BEFORE STAKING AND A SMALL AMOUNT OF LOOSE SOIL SHALL BE LIGHTLY COMPACTED ALONG THE UPSTREAM EDGE OF THE BALES OR SEE ODOT STANDARD CONSTRUCTION DRAWING MC-11.

B. EACH BALE SHALL BE FIRMLY STAKED WITH A MINIMUM OF 2 STAKES AT LEAST 3" IN LENGTH. STAKE SHALL BE WOODEN 2" X 2". REINFORCING BARS OR FENCE POST, AS APPROVED BY THE CITY.

C. LOOSE STRAW OR HAY SHALL BE SCATTERED FOR A DISTANCE OF 10' ON THE UPSTREAM SIDE OF EACH DITCH CHECK, AND SHALL BE WEDGED BETWEEN AND UNDER STAKED BALES.

STRAW OR HAY BALES TEMPORARY EROSION CONTROL

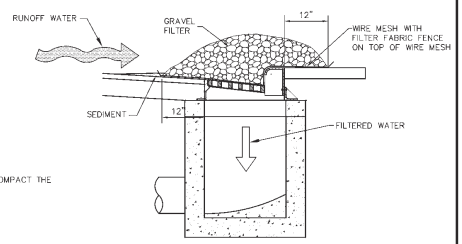


A. SET STAKES NO MORE THAN 3' APART AND DRIVE THEM INTO THE GROUND AT LEAST 8".

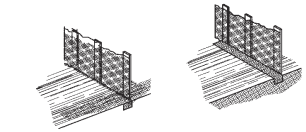
B. EXCAVATE A 4" x 4" TRENCH UP SLOPE ALONG THE LINE OF STAKES.

C. STAPLE FILTER MATERIAL ON UP SLOPE SIDE OF STAKES AND EXTEND IT INTO THE TRENCH. WHEN JOINTS ARE NECESSARY, OVERLAP MATERIAL BETWEEN 2 STAKES AND FASTEN SECURELY.

D. BACKFILL AND COMPACT THE EXCAVATED SOIL.



GRAVEL CURB INLET SEDIMENT FILTER
(AS REQUIRED BY THE CITY)



SILT FENCE

GRAVEL CURB INLET SEDIMENT FILTER NOTES

A. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE PLACED OVER THE CURB INLET OPENING SO THAT AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE INLET COVER AND AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE CONCRETE GUTTER FROM THE INLET OPENING, AS ILLUSTRATED.

B. STONE SHALL BE PILED AGAINST THE WIRE SO AS TO ANCHOR IT AGAINST THE GUTTER AND INLET COVER AND TO COVER THE INLET OPENING COMPLETELY. ODOT NO. 1 COARSE AGGREGATE SHALL BE USED.

C. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE CATCH BASIN, CLEANED AND REPLACED.

TEMPORARY EROSION CONTROL

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

CONSTRUCTION STANDARDS

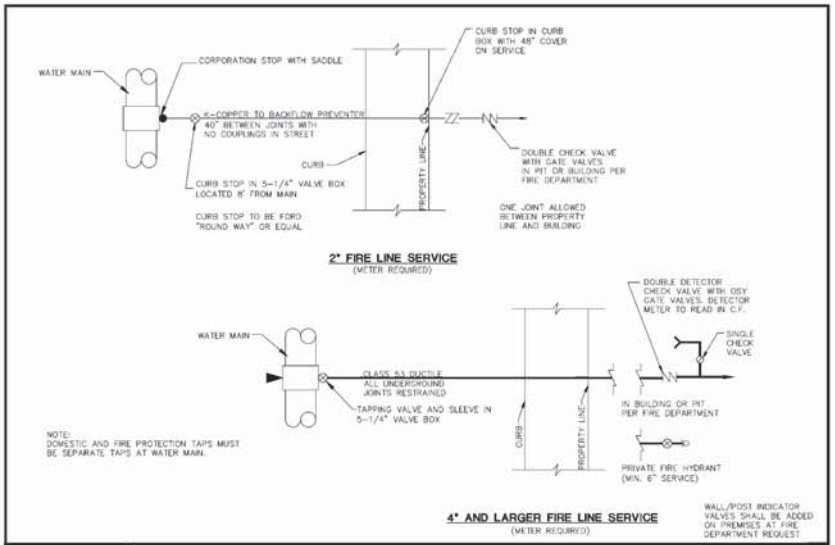
yellowsprings2017/CommercePARKDesign12.dwg

ISSUE DATE: Nov. 9, 2017

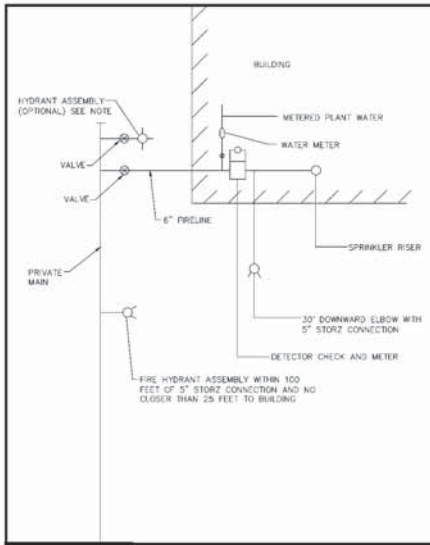
REVISION DATE: -----

REVISION DATE: -----

REVISION DATE: -----



2" FIRE LINE AND 4" AND LARGER FIRE LINE



REVIEW AND FEES

A. FIRE SETS OF SITE PLANS SHALL BE SUBMITTED TO THE CITY ZONING INSPECTOR TO BE REVIEWED BY THE ZONING INSPECTOR, FIRE DEPT. OFFICIAL, UTILITY DIRECTOR, CITY ENGINEER AND THE PLANNING COORDINATOR.

TESTING

A. THE CITY FIRE DEPARTMENT PERSONNEL WILL CONDUCT SELECTIVE FIRE HYDRANT TESTING FOR RESIDUAL PRESSURE. THE TESTING IS DONE ANNUALLY OR WHENEVER NEEDED. PROCEDURES OF THE HYDRANT FLOW TEST ARE FOLLOWED FROM THE FOURTH EDITION OF THE IFSTA MANUAL "WATER SUPPLIES FOR FIRE PROTECTION". TESTING PROCEDURES ARE ON FILE AT THE MAIN FIRE STATION AND AT THE CITY ENGINEERING OFFICE.

GENERAL NOTES

A. FIRE LINE AND HYDRANT INSTALLATION, TESTING AND MATERIALS SHALL BE THE SAME SPECIFICATIONS AS STATED IN THE CONSTRUCTION STANDARDS AND DRAWINGS. THESE CONSTRUCTION STANDARDS AND DRAWINGS SHALL ALSO BE FOLLOWED FOR WATERLINE EXTENSIONS ON PRIVATE PROPERTY THAT WILL PROVIDE FIRE LINE OR DOMESTIC WATER SERVICE.
B. CITY [redacted] FIRE LINE REVIEW FORMS SHALL BE COMPLETED WITH TWO SETS OF PLANS FURNISHED TO THE CITY FIRE CHIEF.
C. CITY [redacted] CERTIFIED I.S.O. TEST SHALL NOT BE CERTIFIED TO THE STATE OF OHIO UNTIL THE FOLLOWING ITEMS HAVE BEEN COMPLETED.
1.) ONE SET OF DRAWINGS FURNISHED TO THE CITY ENGINEERING DEPARTMENT AND
2.) FIRE LINE INSTALLATION FORM SHALL BE COMPLETE.
D. NO ADDITIONAL BOOSTER PUMPS SHALL BE INSTALLED FOR THE DOMESTIC LINE.
E. A CONTRACTOR REGISTERED THROUGH THE CITY [redacted] SHALL PERFORM MAINTENANCE OF PRIVATE SERVICE LINES AND HYDRANTS. COORDINATION OF YEARLY HYDRANT FLUSHINGS WILL BE HANDLED THROUGH THE CITY FIRE DEPARTMENT.
F. FIRE LINE MAINTENANCE SHALL BE PERFORMED BY A CERTIFIED FIRE LINE CONTRACTOR THROUGH THE OFFICE OF THE STATE FIRE MARSHALL.
G. TESTING OF FIRE LINES SHALL BE PERFORMED BY A STATE-APPROVED FIRE LINE INSTALLER.
H. A CERTIFIED FIRE LINE CONTRACTOR LICENSED THROUGH THE OFFICE OF THE STATE FIRE MARSHALL SHALL PERFORM THE WORK.
I. THERE SHALL BE AN EXISTING OR NEW HYDRANT INSTALLED WITHIN 100 FEET OF THE 5" STORZ CONNECTION AND NO CLOSER THAN 25 FEET TO A BUILDING. EXCEPTIONS MUST BE SUBMITTED TO THE CITY FIRE PROTECTION OFFICIALS.

SPRINKLER NOTES

A. HYDRAULIC CALCULATIONS FROM THE SPRINKLER SYSTEM DESIGNER SHALL BE SUBMITTED TO THE [redacted] FIRE DEPT. WITH THE SITE PLAN FOR REVIEW.
B. INSTALLATION OF A FLOW SENSOR MONITOR WILL BE REQUIRED TO REPORT TO AN APPROVED MONITORING SYSTEM. (I.E. POLICE, PRIVATE STATION, ETC.)

FIRE LINE DETAIL AND NOTES

MATERIAL SPECIFICATIONS

A. WATER MAIN SHALL BE AWWA C-151 DUCTILE IRON PIPE CLASS 53, WITH SLIP-ON JOINTS AND RUBBER GASKETS OR C900.

B. BELL JOINT RESTRAINTS – USE FIELD LOCK BY U.S. PIPE OR APPROVED EQUIVALENT.

C. MECHANICAL JOINT RESTRAINTS – EBAA IRON MEGALUG RETAINER GLAND OR EQUIVALENT.

D. FIRE HYDRANTS – AMERICAN DARLING B-84-B, CLOW MEDALLION, OR APPROVED EQUAL; MECHANICAL JOINT; TWO 2-1/2" HOSE NOZZLES, WITH NATIONAL STANDARD THREAD CONNECTIONS; ONE 4" I.D. AND 4-1/2" O.D., 4 THREADS PER INCH PUMPER NOZZLE NATIONAL STANDARD THREADS; CONFORMING TO AWWA C-502; CW TO OPEN; BREAK FLANGES 3" ABOVE GRADE.

E. GATE VALVES (THRU 12") – AWWA C-509, RESILIENT WEDGE, NON-RISING STEM, MECHANICAL JOINT, 200 PSI WORKING PRESSURE, CW TO OPEN, OPEN RIGHT WITH ARROW INDICATING OPEN DIRECTION.

F. VALVE BOXES – 3-PIECE CAST IRON 6" DIAMETER NOMINAL, ADJUSTABLE SCREW TYPE, COVER MARKED "WATER", DOMESTIC MADE ONLY.

G. SERVICE LINE – TYPE "K" COPPER TUBE WITH COMPRESSION TYPE FITTINGS OR CTS PLASTIC TUBING.

H. CURB STOP – BRASS CONFORMING TO AWWA C-800.

I. CURB BOXES – 2-1/2" SCREW TYPE, BUFFALO STYLE CAST IRON LID WITH PENTAGON HEAD PLUG EM2-45-67.

J. ALL SERVICE CONNECTIONS REQUIRE A METER.

K. VALVE SIZING
•6" TO AND INCLUDING 12" TO BE A GATE VALVE

HYDROSTATIC TEST

A. AFTER THE PIPE HAS BEEN LAID AND BACKFILLED, ALL NEWLY LAID PIPE OR VALVED SECTION, SHALL BE SUBJECTED TO HYDROSTATIC PRESSURE AND LEAKAGE TEST. ALL WATER MAINS MUST BE HYDROSTATICALLY TESTED (AWWA C-600). THE TESTS MUST BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY [redacted]. THE LEAKAGE TEST PRESSURE SHALL BE NOT LESS THAN 150 PSI. THE DURATION OF THE LEAKAGE TEST SHALL NOT BE LESS THAN 1 HOUR. HYDROSTATIC PRESSURE SHALL BE APPLIED BY MEANS OF A PUMP TAKING WATER FROM AN AUXILIARY SUPPLY. ALL PIPING MUST BE PROPERLY FILLED AND FLUSHED TO DISPEL ALL AIR BEFORE THE TEST IS MADE USING POTABLE WATER.

B. LEAKAGE IS DEFINED AS THE QUANTITY OF WATER TO BE SUPPLIED INTO THE NEWLY LAID PIPE, OR ANY VALVED SECTION THEREOF, NECESSARY TO MAINTAIN THE SPECIFIED LEAKAGE TEST PRESSURE AFTER THE PIPE HAS BEEN FILLED WITH WATER AND THE AIR EXPELLED.

C. DURING THE HYDROSTATIC TEST, A THOROUGH EXAMINATION OF ALL PIPING, FITTINGS, VALVES, HYDRANTS, ETC. SHALL BE PERFORMED. LEAKING JOINTS SHALL BE TIGHTENED AND THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED. CRACKED OR OTHERWISE DEFECTIVE MATERIAL SHALL BE REMOVED AND REPLACED AND THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.

DISINFECTION

A. AFTER SATISFACTORY HYDROSTATIC TESTING, THE COMPLETED WATER WORK SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C-651 BY THE CONTRACTOR.

B. MAINTAIN PIPES FREE OF DIRT AND FOREIGN MATTER DURING CONSTRUCTION BY DEWATERING TRENCH AND SEALING OPEN PIPE BARRELS. THIS IS ALSO A REQUIREMENT IF REPAIRS OCCUR.

C. FLUSH CHLORINE SOLUTION TO WASTE INTO SANITARY SEWER AT A CONTROLLED RATE, NOT TO EXCEED 25 GPM. IF CHLORINE RESIDUAL DROPS IN 10 MG PER LITER, FLUSH MAIN AT 2 FPS AND REPEAT STERILIZATION PROCEDURE.

D. WATER SAMPLES – PERFORM BACTERIOLOGICAL TEST PER AWWA C-651. THIS TEST WILL BE PERFORMED BY THE CITY. TWO CONSECUTIVELY NEGATIVE RESULTS WILL CONSTITUTE A PASSABLE TEST. THE CONTRACTOR SHALL FURNISH ALL REQUIRED TESTING APPENDAGES OR EXCAVATION NEEDED BY THE CITY.

E. BACTERIA TEST-PORTS SHALL BE AT GROUND LEVEL AND WITH A VALVE INSTALLED.

ALLOWABLE LEAKAGE PER 1000 FT. (305M) OF PIPELINE (GPH+)

AVG. TEST PRESSURE (PSI) BAR	NOMINAL PIPE DIAMETER– INCHES 6	8	10	12	14	16	18	20	24	30
250(17)	0.71	0.95	1.19	1.42	1.66	1.90	2.14	2.37	2.85	3.56
225(16)	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.25	2.70	3.38
200(14)	0.64	0.85	1.06	1.28	1.48	1.70	1.91	2.12	2.55	3.19
175(12)	0.59	0.80	0.99	1.19	1.39	1.59	1.79	1.98	2.38	2.98
150(10)	0.55	0.74	0.92	1.10	1.29	1.47	1.66	1.84	2.21	2.76
120(9)	0.50	0.67	0.84	1.01	1.18	1.34	1.51	1.68	2.01	2.52

WATER MAIN MATERIAL AND TESTING

NOTES

A. NO WORK SHALL BE APPROVED OR ACCEPTED BY THE CITY UNLESS 2 WORKING DAYS NOTICE OF COMMENCING WORK IS GIVEN TO THE CITY.

B. ALL TEMPORARY PAVEMENT AND SIDEWALK SHALL BE MAINTAINED BY THE CONTRACTOR OR THE DEVELOPER AT HIS OWN EXPENSE IN A SUITABLE AND SAFE CONDITION FOR TRAFFIC UNTIL PERMANENT REPLACEMENT IS MADE OR THE PROJECT IS FINALLY ACCEPTED BY THE CITY, UNLESS OTHERWISE APPROVED.

C. THE MINIMUM LENGTH OF PIPE NIPPLES SHALL BE 18" UNLESS OTHERWISE APPROVED BY THE CITY.

D. ALL CUSTOMERS SHALL MEET BACKFLOW PREVENTION REQUIREMENTS AS PER CITY [redacted] STANDARDS.

E. ALL WATERLINE CONSTRUCTION INCLUDING EXTENSIONS ON PRIVATE PROPERTY SHALL FOLLOW THE CITY STANDARDS, ODOT ITEM 638, AND AWWA STANDARDS WHICHEVER IS MORE RESTRICTIVE AS DETERMINED BY THE CITY.

F. OPERATION OF CITY FIRE HYDRANTS, VALVES, METERS, SERVICES, STOPS, AND ALL OTHER MECHANICAL INFRASTRUCTURE ITEMS IS STRICTLY PROHIBITED.

G. ALL WATER MAINS SHALL HAVE A MINIMUM DEPTH OF 4'-6" AND A MAXIMUM DEPTH OF 6'-0" FROM TOP OF PIPE TO SURFACE, UNLESS REQUIRED BY DESIGN.

PIPE

A. ALL PIPE FITTINGS SHALL BE DUCTILE IRON

B.

WATER MAIN MINIMUM SIZE UNLESS OTHERWISE APPROVED	
RESIDENTIAL	8"
COMMERCIAL	10"
INDUSTRIAL	12"
6" MAY BE CONSIDERED FOR LOOPING PURPOSES IN RESIDENTIAL AREAS	

C. DEADENDS ARE NOT PERMITTED AND MUST BE LOOPED UNLESS THEY ARE DEEMED UNPRACTICAL BY THE CITY ENGINEERING DEPARTMENT AFTER A REVIEW OF A WATER MAIN DESIGN. WHEN APPROVED, THEY SHALL BE TERMINATED WITH A FIRE HYDRANT AT THE END.

EXCAVATION AND PIPE LAYING

A. THE OPEN ENDS OF ALL PIPES SHALL BE CLOSED WITH A WATERTIGHT PLUG TO THE APPROVAL OF THE CITY BEFORE LEAVING THE WORK FOR THE NIGHT AND AT OTHER TIMES OF INTERRUPTION OF THE WORK.

FITTINGS, VALVES AND HYDRANTS

A. FITTINGS OR SPECIALS IN SIZES 12" THROUGH 48" SHALL CONFORM TO ALL REQUIREMENTS OF AWWA C-153. FITTINGS AND SPECIALS 12" AND SMALLER SHALL BE CLASS 250. LARGER FITTINGS AND SPECIALS SHALL BE CLASS 150. FITTINGS AND SPECIALS SHALL HAVE MECHANICAL JOINTS AND SHALL BE DUCTILE IRON. CLUSTER VALVES WHENEVER POSSIBLE UNLESS APPROVED BY THE CITY.

B.

MAXIMUM SPACING UNLESS OTHERWISE APPROVED	HYDRANTS	VALVES
SINGLE & TWO FAMILY RESIDENTIAL	400'	600'
INDUSTRIAL, COMMERCIAL & MULTI-FAMILY	300'	500'

C. ALL TEES AND CROSSES SHALL BE VALVED IN EACH DIRECTION UNLESS OTHERWISE APPROVED.

D. NO VALVE SHALL BE OPERATED BY PERSONNEL OTHER THAN A REPRESENTITIVE EMPLOYED BY THE CITY.

UTILITY STAKING

A. OFFSETS EVERY 25' ON CURVES. OFFSETS EVERY 100' ON STRAIGHT SECTIONS. FLOW LINE OF WATER MAIN (CUT) MARKED EVERY 100' AND OFFSETS SHALL BE CLEARLY MARKED AND EVERY HYDRANT WITH TOP OF CURB ELEVATION.

BORING AND CASING PIPE DETAIL

A. SEE DETAILS ON PAGE 1167.26 AND 1167.27.

MISCELLANEOUS WATER NOTES

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

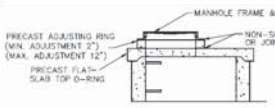
HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

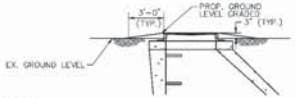
CONSTRUCTION STANDARDS

yellowsprings2017commerceparkdesign.dwg

ISSUE DATE:	REVISION DATE:	REVISION DATE:	REVISION DATE:
Nov. 9, 2017	------	------	------



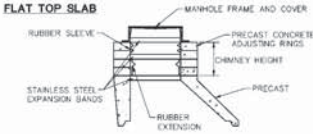
FLAT TOP SLAB



TYPICAL OFF STREET MANHOLE GRADING

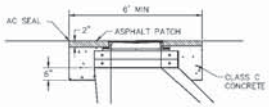
NOTES

A. MANHOLE STEPS SHALL BE SECURLY INSTALLED INTO EACH MANHOLE SECTION, BY THE MANUFACTURER, PRIOR TO DELIVERY TO THE JOB SITE.
B. MANHOLE STEPS SHALL BE PFS-1 STEP BY M.A. INDUSTRIES OR EQUIVILENT.



INTERNAL MANHOLE CHIMNEY SEAL

(REQUIRED BY ALL SANITARY APPLICATIONS)



MANHOLE REPAIR CASTING CONSTRUCTION

NOTES-

1. PRECAST CONCRETE ADJUSTING RINGS- ENCASE WITH CONCRETE 6" DOWN FROM BARRELL TOP AND UP TO WITHIN 2" OF SURFACE AND EXTENSIONS. METAL ADJUSTING RINGS WILL NOT BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
2. SET MANHOLE, PRECAST CONCRETE ADJUSTING RINGS AND CASTING AND PAVE OVER MANHOLE. THEN DIG OUT, ENCASE COLLARS AND CASTING AS PER DETAIL WITH CONCRETE TO WITHIN 2" OF SURFACE. THE MANHOLE WILL HAVE A PATCHED RADIUS OF (2") ASPHALT.

MISCELLANEOUS SANITARY MANHOLE DETAILS

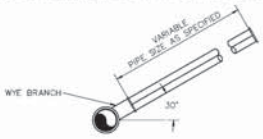
NOTES

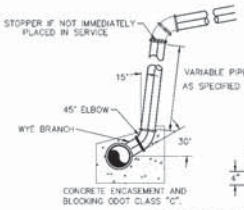
A. RISER PIPE TO BE BEDDED SOLIDLY AGAINST UNDISTURBED GROUND. ALSO, TEE MAY BE SUBSTITUTED FOR WYE BRANCH IF SPECIFIED.

B. RISER PIPE TO BE INSTALLED SO THAT CONNECTING SERVICE SHALL HAVE A MINIMUM DEPTH OF 7' AT THE PROPERTY LINE UNLESS OTHERWISE DIRECTED BY THE CITY.

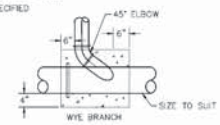
C. CONCRETE ENCASEMENT AND BLOCKING REQUIRED IF DEPTH OF CONNECTION IS 12' OR GREATER.

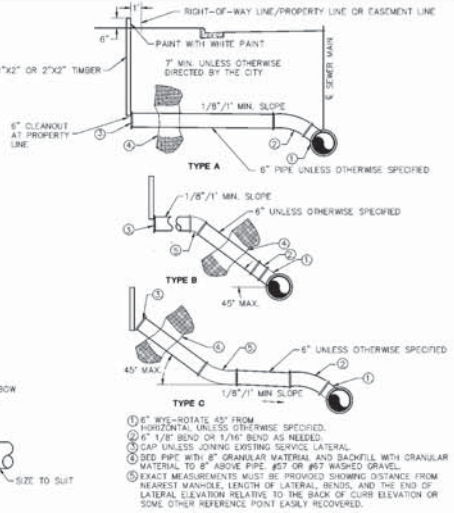
D. EACH SANITARY LATERAL MUST BE IN SEPARATE TRENCHES.





SERVICE RISER





1. 6" WYE-ROTATE 45° FROM HORIZONTAL UNLESS OTHERWISE SPECIFIED.
2. 6" 1/8" BEND OR 1/16" BEND AS NEEDED.
3. CAP UNLESS JOINING EXISTING SERVICE LATERAL.
4. BED PIPE WITH 8" GRANULAR MATERIAL AND BACKFILL WITH GRANULAR MATERIAL TO 8" ABOVE PIPE. #57 OR #67 WASHED GRAVEL.
5. EXACT MEASUREMENTS MUST BE PROVIDED SHOWING DISTANCE FROM NEAREST MANHOLE, LENGTH OF LATERAL, BENDS, AND THE END OF LATERAL ELEVATION RELATIVE TO THE BACK OF CURB ELEVATION OR SOME OTHER REFERENCE POINT EASILY RECOVERED.

SERVICE LATERAL

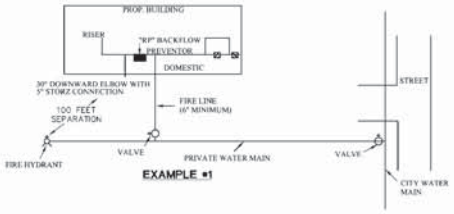
SERVICE RISER AND SERVICE LATERAL NEW CONSTRUCTION ONLY

NOTES

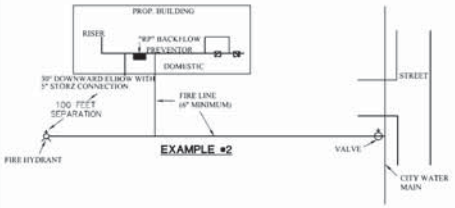
A. THE FIRE LINE SHALL BE DEFINED AS "THE LINE FROM THE WATER MAIN THAT SUPPLIES THE SYSTEM.
B. MINIMUM FIRE LINE SIZE SHALL BE 6".
C. A FIRE HYDRANT SHALL BE INSTALLED WITHIN 100 FEET OF THE 5" STORZ CONNECTION.
D. FIRE LINE CHARGES SHALL BE BASED ON SIZE OF RISER.
E. CONTRACTOR SHALL INSTALL A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR ON FIRE LINE PRIOR TO RISER.
F. LIMITED AREA SPRINKLERS SHALL BE CONNECTED BEFORE METER.
G. ALL MATERIAL AND CONSTRUCTION METHODS SHALL CONFORM TO CITY STANDARDS.
H. PRIVATE WATER MAIN SHALL REMAIN PRIVATE UNLESS ACCEPTED BY THE CITY AND AN EASEMENT IS GRANTED.
I. ALL FIRE LINES SHALL BE TESTED AT 200psi. SEE HYDROSTATIC TEST ON PAGE 1167.55 FOR ADDITIONAL REQUIREMENTS. FIRE DEPARTMENT TO WITNESS TEST.

TESTING PROCEDURES FOR EXAMPLE #1

A. FIRE LINE SHALL BE INSTALLED, INSPECTED AND CERTIFIED BY A STATE LICENSED FIRE LINE INSTALLER.
B. PRIVATE WATER MAIN CAN BE INSTALLED BY THE GENERAL CONTRACTOR AND MUST BE INSPECTED BY THE CITY. CONTRACTOR SHALL PRESSURE TEST MAIN AND OBSERVED BY THE CITY. CITY SHALL PERFORM DISINFECTION AND BACTERIA TEST ON BOTH THE FIRE LINE AND PRIVATE WATER MAIN AFTER PRESSURE TEST HAVE BEEN PERFORMED AND APPROVED.



EXAMPLE #1

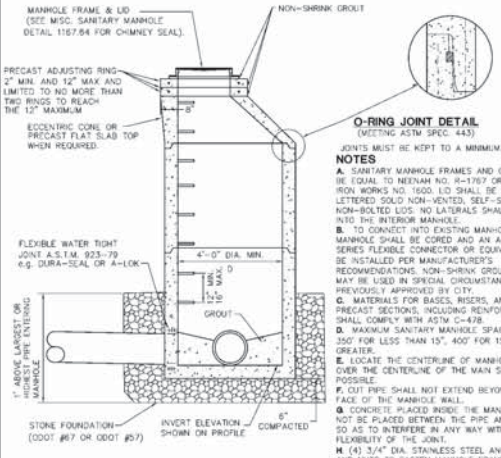


EXAMPLE #2

TESTING PROCEDURES FOR EXAMPLE #2

A. ENTIRE WATER LINE SHALL BE CONSIDERED THE FIRE LINE PER THE DEFINITIONS.
B. THE ENTIRE FIRE LINE SHALL BE INSTALLED, INSPECTED AND CERTIFIED BY A STATE LICENSED FIRE LINE INSTALLER.
C. CITY SHALL PERFORM BACTERIA TEST AFTER PRESSURE TEST AND DISINFECTION HAVE BEEN PERFORMED AND APPROVED.

FIRE LINE DETAIL AND NOTES



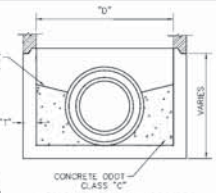
O-RING JOINT DETAIL

(MEETING ASTM SPEC. 443)

JOINTS MUST BE KEPT TO A MINIMUM.

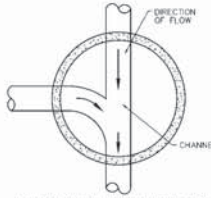
NOTES

A. SANITARY MANHOLE FRAMES AND COVERS SHALL BE EQUAL TO NEENAH NO. R-1767 OR EAST JORDAN IRON WORKS NO. 1600. LID SHALL BE SANITARY LETTERED SOLID NON-VENTED, SELF-SEALING AND NON-BOLTED LIDS. NO LATERALS SHALL PROTRUDE INTO THE INTERIOR MANHOLE.
B. TO CONNECT INTO EXISTING MANHOLE, THE MANHOLE SHALL BE CORED AND AN A-LOK XP SERIES FLEXIBLE CONNECTOR OR EQUIVALENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. NON-SHRINK GROUT ALTERNATIVE MAY BE USED IN SPECIAL CIRCUMSTANCES WHEN PREVIOUSLY APPROVED BY CITY.
C. MATERIALS FOR BASES, RISERS, AND OTHER PRECAST SECTIONS, INCLUDING REINFORCEMENTS SHALL COMPLY WITH ASTM C-478.
D. MAXIMUM SANITARY MANHOLE SPACING SHALL BE 350' FOR LESS THAN 15", 400' FOR 15" AND GREATER.
E. LOCATE THE CENTERLINE OF MANHOLE COVERS OVER THE CENTERLINE OF THE MAIN SEWER WHENEVER POSSIBLE.
F. CUT PIPE SHALL NOT EXTEND BEYOND THE INSIDE FACE OF THE MANHOLE WALL.
G. CONCRETE PLACED INSIDE THE MANHOLE SHALL NOT BE PLACED BETWEEN THE PIPE AND THE OPENING SO AS TO INTERFERE IN ANY WAY WITH THE FLEXIBILITY OF THE JOINT.
H. (4) 3/4" DIA. STAINLESS STEEL ANCHOR BOLTS AND NUTS TO FASTEN MANHOLE FRAME TO MANHOLE CONE OR FLAT LID SECTION WHEN REQUIRED BY THE CITY ENGINEER.



PRECAST BASE SECTION

PIPE SIZE	T	D
24" & UNDER	5"	48"
27" & ABOVE	6"	60"



THE FLOW CHANNEL THROUGH MANHOLES SHALL BE MADE TO CONFORM IN SHAPE, SLOPE AND SMOOTHNESS TO THAT OF THE SEWERS.

STANDARD INVERT CHANNEL

ALL INVERTS TO BE CHANNELED FOR OPTIMUM FLOW.

TYPE 3 SANITARY MANHOLE

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

CONSTRUCTION STANDARDS

yellowsprings2017commerceparkdesign.dwg

REVISION DATE:	REVISION DATE:	REVISION DATE:
-----	-----	-----

ISSUE DATE: Nov. 9, 2017

LOW PRESSURE AIR TEST

A. AFTER BACKFILLING, THE AIR TEST SHALL BE CONDUCTED BETWEEN TWO CONSECUTIVE MANHOLES. ALL PIPE OUTLETS MUST BE PLUGGED IN THE SECTION BEING TESTED WITH SUITABLE TEST PLUGS. ONE OF THE PLUGS USED AT A MANHOLE MUST BE TAPPED AND EQUIPPED FOR AN AIR INLET CONNECTION FOR FILLING THE LINE FROM THE AIR COMPRESSOR. AIR SHALL BE SUPPLIED SLOWLY TO THE TEST SECTION UNTIL THE INTERNAL PRESSURE REACHES APPROXIMATELY 4 PSI. IF THE PIPE IS BELOW EXISTING GROUNDWATER LEVEL, THE INTERNAL PRESSURE SHALL BE INCREASED BY THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE OVER THE PIPE, BUT IN NO CASE SHOULD THE INTERNAL PRESSURE EVER EXCEED 5 PSI.

B. AT LEAST 2 MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE 3.5 PSI, THE AIR SUPPLY SHALL BE DISCONNECTED AND TIMING SHALL BEGIN WITH A STOP WATCH. THE STOP WATCH SHALL BE ALLOWED TO RUN UNTIL THE PRESSURE HAS DROPPED 1.0 PSI. IF THE TIME SHOWN ON THE STOP WATCH IS GREATER THAN THE SPECIFIED MINIMUM TIME, THE SECTION SHALL BE CONSIDERED TO HAVE PASSED THE TEST. TIME MAY BE INTERPOLATED FROM THE FIGURES LISTED BELOW.

PIPE DIA. (IN.)	Time for Longer Length (sec)	Specified Minimum for Length (L) Shown (min:sec)						
		100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.
6	0.854L	5:40	5:40	5:40	5:40	5:40	5:40	5:42
8	1.520L	7:34	7:34	7:34	7:34	7:36	8:52	10:08
10	2.374L	9:26	9:26	9:26	9:53	11:52	13:51	15:49
12	3.418L	11:20	11:20	11:24	14:15	17:05	19:56	22:47
15	5.342L	14:10	14:10	17:48	22:15	26:42	31:09	35:36
18	7.692L	17:00	19:13	25:38	32:03	38:27	44:52	51:16
21	10.470L	19:50	26:10	34:54	43:37	52:21	61:00	69:48
24	13.674L	22:47	34:11	45:34	56:58	68:22	79:46	91:10

SPECIFICATION TIME FOR LENGTH (L) SHOWN (MIN-SEC)

*ALL TESTS SHALL BE WITNESSED BY A CITY ENGINEERING DEPARTMENT REPRESENTATIVE

DEFLECTION TEST

A. DEFLECTION TESTS SHALL BE PERFORMED BY THE CONTRACTOR ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.

B. NO PIPE SHALL EXCEED A DEFLECTION OF 5% IF DEFLECTION EXCEEDS 5%, REPLACEMENT OR CORRECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF APPROVING AGENCY.

C. THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS MANUFACTURED. THE PIPE SHALL BE MEASURED IN COMPLIANCE WITH ASTM D-2122 STANDARD TEST METHOD OF DETERMINING DIMENSIONS OF THERMOPLASTIC PIPE AND FITTINGS. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

MANHOLE VACUUM TEST

ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED BY THE CONTRACTOR USING THE FOLLOWING PROCEDURES FROM ASTM C-1244.

A. PREPARATION OF THE MANHOLE

1. ALL LIFT HOLES SHALL BE PLUGGED.
2. ALL PIPES ENTERING THE MANHOLE SHALL BE TEMPORARILY PLUGGED TAKING CARE TO SECURELY BRACE THE PIPES AND PLUGS TO PREVENT THEM FROM BEING DRAWN INTO THE MANHOLE.

B. PROCEDURE

1. THE FIRST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN THE CASTING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. A VACUUM OF 10" OF MERCURY (4.9 PSI) SHALL BE DRAWN ON THE MANHOLE. THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9" OF MERCURY (4.4 PSI).
3. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10" OF MERCURY (4.9 PSI) TO 9" OF MERCURY (4.4 PSI) MEETS OR EXCEEDS THE VALUES INDICATED ON THE TABLE.
4. IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE BY AN APPROVED METHOD. THE MANHOLE SHALL THEN BE RETESTED UNTIL A SATISFACTORY TEST IS OBTAINED.

DEPTH (FT.)	DIAMETER, INCHES 48	60	72
	TIME, SECONDS		
8 OR LESS	20	26	33
10	25	33	41
12	30	39	49
14	35	46	57
16	40	52	67
18	45	59	73
20	50	65	81
22	55	72	89
24	59	78	97
26	64	85	105
28	69	91	113
30	74	98	121

MINIMUM TEST TIMES FOR VARIOUS MANHOLE DIAMETERS

SANITARY SEWER TESTING NOTES

NOTES

A. NO WORK SHALL BE APPROVED OR ACCEPTED BY THE CITY UNLESS 2 WORKING DAYS NOTICE OF COMMENCING WORK IS GIVEN TO THE CITY.

B. ALL TEMPORARY PAVEMENT AND SIDEWALK SHALL BE MAINTAINED BY THE CONTRACTOR OR DEVELOPER AT HIS OWN EXPENSE IN A SUITABLE AND SAFE CONDITION FOR TRAFFIC UNTIL PERMANENT REPLACEMENT IS MADE OR THE PROJECT IS FINALLY ACCEPTED BY THE CITY.

C. ROOF DRAINS, FOUNDATION DRAINS, SUMP PUMPS, AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

D. WHEN A SEWER IS TO BE EXTENDED AT THE DOWNSTREAM MANHOLE OR FIRST MANHOLE IN THE NEW LINE, IT SHALL BE PLUGGED BEFORE CONSTRUCTION BEGINS. IF THE SEWER IS SMALLER OR EQUAL TO 12" DIAMETER, IT SHALL BE PLUGGED BY PLACING A POLY-ETHELYNE BAG APPROXIMATELY 6" INTO THE SEWER PIPE. SIZES LARGER THAN 12" WILL BE PLUGGED BY OTHER APPROVED METHODS. NO PLUGS SHALL BE REMOVED UNTIL CONSTRUCTION IS COMPLETED AND SOIL IS STABILIZED AND THEN ONLY AS DIRECTED BY THE CITY.

E. CONSTRUCTION OF SANITARY SEWERS SHALL INCLUDE THE CITY DYE TESTING AS DETERMINED BY THE CITY OF ALL PIPES TO BE CONNECTED TO THE NEW SEWER PRIOR TO BACKFILLING.

F. WHEN A NEW CASTING OR OTHER PUBLIC PROPERTY IS ABANDONED IT REMAINS CITY PROPERTY, UNLESS OTHERWISE DIRECTED.

G. NEW SEWERS MUST HAVE EPA PLAN APPROVAL OR ANY SEWER THAT IS RELOCATED OR RESIZED.

EXCAVATION AND PIPE LAYING

A. THE LAYING OF THE PIPE SHALL COMMENCE AT THE LOWEST POINT, WITH THE BELL END LAID UPGRADE. THE PIPE SHALL BE CENTERED IN THE TRENCH AND ALL PIPE SHALL BE LAID WITH ENDS ABUTTING AND TRUE TO LINE AND GRADE.

B. LASER SHALL BE USED INSIDE THE PIPE WHENEVER POSSIBLE UNLESS OTHERWISE APPROVED.

UTILITY STAKING

A. LASER METHOD – OFFSET AND GRADE AT EACH MANHOLE. OFFSET AND GRADE 50' AND 100' OUT FROM EACH MANHOLE UNLESS OTHERWISE APPROVED.

TESTING - ALL PHASES PERFORMED BY CONTRACTOR OR DEVELOPER

A. BEFORE ANY SEWER LINE IS PLACED INTO SERVICE OR ACCEPTED BY THE CITY, IT SHALL BE SUBJECTED TO AND PASS LOW PRESSURE AIR TEST. EACH RUN BETWEEN MANHOLES, WITH ALL SERVICE LATERALS STUBBED INTO PROPERTY LINES, SHALL BE TESTED BEFORE BEING ACCEPTED. THE CONTRACTOR OR DEVELOPER SHALL FURNISH ALL EQUIPMENT AND MATERIAL NECESSARY TO CONDUCT THIS TEST. THE TRENCH SHALL BE COMPLETELY BACKFILLED BEFORE TESTING.

B. SEE SANITARY TESTING NOTES.

C. BEFORE FINAL ACCEPTANCE BY THE CITY AND BEFORE ANY SERVICE LINE IS PUT INTO USE, ALL SANITARY SEWERS AND MANHOLES SHALL BE THOROUGHLY CLEANED OF ALL FOREIGN MATTER BY USE OF A SEWER-JET OR EQUAL TYPE OF EQUIPMENT BY THE CONTRACTOR. SEWER-JET PROCEDURE MUST BE PERFORMED BEFORE CONTRACTOR T.V. TESTS THE PIPE.

HOUSE CONNECTIONS

A. NO SERVICE LINE SHALL BE ALLOWED TO CONNECT DIRECTLY INTO A MANHOLE, SUBJECT TO APPROVAL BY THE CITY IN SPECIFIC CASES.

B. THE ENDS OF ALL SERVICE LINES OR TEES SHALL BE ACCURATELY LOCATED, MAPPED, AND GIVEN TO THE CITY WITHIN 10 DAYS AFTER INSTALLATION.

C. BEFORE MAKING A CONNECTION TO AN EXISTING SEWER TAP OR SEWER LATERAL, THE CONTRACTOR SHALL CHECK THE EXISTING PIPE BY UTILIZING A SEWER EEL, STRAP, OR SEWER ROD TO SEE THAT THE EXISTING PIPE IS CONNECTED TO THE MAIN SEWER. IF NEEDED, THE CONTRACTOR MAY NEED TO USE A HYDRAULIC SEWER CLEANER.

D. LATERALS FROM THE MAIN TO THE PROPERTY LINE SHALL BE 6" MINIMUM WITH CLEANOUT AT THE PROPERTY LINE.

E. A RIGHT-OF-WAY PERMIT TO OPEN, ALTER, OR DISTURB ANY PUBLIC SEWER MUST BE OBTAINED.

F. IN THE DEMOLISHION OF EXISTING BUILDING, ALL ABANDONED SEWER LATERALS SHALL BE CAPPED AT THE OWNER'S EXPENSE.

PIPE

A. ALL MAINLINE PIPE AND SPECIALS SHALL BE PVC SDR-35 UNLESS OTHERWISE APPROVED BY THE CITY. MINIMUM DIAMETER OF PIPE SHALL BE 8".

B. DUCTILE IRON PIPE WILL BE USED IN STREAM CROSSINGS AND WHERE MAXIMUM SEPARATION CANNOT BE MAINTAINED OR WHEN DEPTH OF SEWER EXCEEDS 25 FEET.

C. ALL JOINTS SHALL BE OF THE BELL AND SPIGOT TYPE, THE BELLS BEING FORMED INTEGRALLY WITH THE PIPE. THE BELL SHALL CONTAIN A FACTORY INSTALLED ELASTOMETRIC GASKET WHICH IS POSITIVELY RETAINED. NO SOLVENT CEMENT JOINTS WILL BE PERMITTED IN FIELD CONSTRUCTION EXCEPT AS SPECIFICALLY AUTHORIZED BY THE CITY.

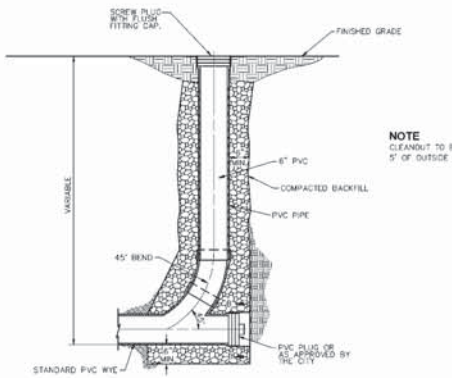
FLEXIBLE PIPES	MATERIAL SPECIFICATIONS	JOINT SPECIFICATIONS
POLYVINYL CHLORIDE	ASTM D-3034 (SDR-35) PIPE STIFFNESS = 46PSI	ELASTOMERIC GASKET ASTM D-3212
DUCTILE IRON	ANSI A-21.51 & AWWA C-151	ANSI A-21.11 & AWWA C-111

1. SDR = OUTSIDE DIAMETER DIVIDED BY WALL THICKNESS.
2. THE SPECIFICATIONS ABOVE SHALL BE THOSE MOST RECENTLY ADOPTED BY THE APPROPRIATE STANDARDS SETTING ORGANIZATIONS.

SANITARY SEWER PUMP STATION

REFER TO SANITARY SEWER DESIGN CRITERIA FOR ADDITIONAL CONSTRUCTION STANDARDS.

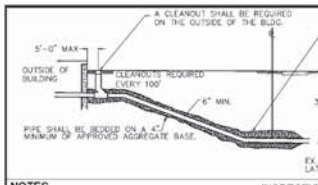
MISCELLANEOUS SANITARY SEWER NOTES



NOTE
CLEANOUT TO BE LOCATED WITHIN 5' OF OUTSIDE OF BUILDING WALL.

CLEANOUT DETAIL
AT SANITARY LATERALS ONLY

SANITARY SEWER CLEANOUT DETAIL



NOTES

PIPE SHALL HAVE A 6" MINIMUM COVER OF APPROVED AGGREGATE MATERIAL. APPROVED AGGREGATE MATERIAL SHALL BE WASHED STONE #8, #57 OR #67 OR OTHER APPROVED EQUAL. PIPES SHALL BE BEDDED ON A 4" MINIMUM OF APPROVED AGGREGATE BASE.

NOTES

A. SEPTIC TANKS, WHEN ABANDONED, SHALL BE DEWATERED BY AN ACCEPTED SEPTAGE HAULER AND PROPERLY FILLED WITH GRANULAR MATERIAL. DRAIN HOLES SHALL BE BROKEN OUT ON THE BOTTOM AND SIDES OF THE TANK WHEN DIRECTED BY THE CITY.
B. ROOF DOWNSPOUTS, EXTERIOR FOUNDATION DRAINS, SUMP PUMPS OR OTHER SURFACE RUNOFF OR GROUNDWATER SHALL NOT BE CONNECTED TO THE SANITARY SEWER MAIN.
C. ANY INDIVIDUAL OR FIRM INSTALLING SEWER CONNECTIONS SHALL BE APPROVED BY THE CITY.
D. BEFORE BEGINNING WORK, A SEWER TAP PERMIT MUST BE OBTAINED FROM UTILITY BILLING OFFICE AND APPLICABLE FEES MUST BE PAID.
E. WHEN THE BUILDING CONNECTION MUST ENTER INTO A PAVED PORTION OF THE STREET OR ALLEY, A STREET OPENING PERMIT MUST BE OBTAINED FROM THE CITY ENGINEERING DEPARTMENT BEFORE BEGINNING WORK.
F. WATER SERVICES SHALL BE A MINIMUM OF 10' MEASURED HORIZONTALLY FROM THE SEWER SERVICE AND SHALL BE A MINIMUM OF 18" ABOVE THE CROWN (WHENEVER POSSIBLE) OF THE SANITARY SEWER MAIN WHERE THE WATER SERVICE CROSSES THE SEWER MAIN.

PIPE

A. THE PIPE MATERIAL SHALL BE PVC SDR 35 OR, SCHEDULE 40, UTILIZING PURPLE PRIMER, OR AN APPROVED EQUIVALENT.
B. PIPE SIZES FOR BUILDING CONNECTIONS SHALL BE 6" MINIMUM FOR ALL USES. THE LATERALS SHALL BE RUN TO WITHIN 3' OF THE OUTSIDE OF THE BUILDING.

INSPECTION

A. A TAP INSPECTION SHALL BE REQUIRED ON ALL NEW BUILDING CONNECTIONS AND ALSO ON THE REPLACEMENT OF EXISTING BUILDING CONNECTIONS.
B. WHEN THE BUILDING SEWER IS READY FOR INSPECTION, THE CITY SHALL BE GIVEN 24 HOURS ADVANCE NOTICE. THE PIPE SHALL BE LEFT UNCOVERED UNTIL AN INSPECTION HAS BEEN MADE AND APPROVED.
C. ANY NEW BUILDING CONNECTION INSTALLED WITHOUT AN INSPECTION SHALL RESULT IN NO ISSUANCE OF A WATER METER FOR THE BUILDING. IF THIS OCCURS, THE ENTIRE LATERAL SHALL BE UNCOVERED SO THAT A PROPER INSPECTION CAN BE MADE.
D. NO TAP FEE IS REQUIRED IF AN OLD BUILDING SEWER IS TO BE REUSED. AN INSPECTION WILL BE REQUIRED. THE SANITARY DEPT. SHALL INSPECT THE ENTIRE BUILDING CONNECTION FROM THE CLEANOUT TO THE PROPERTY LINE CONNECTION OR TO THE MAIN SEWER, WHICHEVER IS APPLICABLE.
E. WHEN A SADDLE IS TO BE INSTALLED, THE INSPECTOR SHALL BE PRESENT WHILE THE SANITARY SEWER MAIN IS BEING CUT INTO. A SADDLE MAY BE USED WHERE A TEE OR WYE IS NOT PRESENT FOR LATERAL CONNECTION.

MISC.

A. STREET EXCAVATION REQUIRES A STREET OPENING PERMIT.
B. FOUNDATION DRAINS ARE TO BE CONNECTED TO THE STORM SEWER.

PIPE LAYING

A. THE OPEN ENDS OF ALL PIPES SHALL BE PLUGGED OR OTHERWISE CLOSED WITH A WATERTIGHT PLUG TO THE APPROVAL OF THE CITY BEFORE LEAVING THE WORK SITE FOR THE NIGHT.
B. THE JOINING OF PIPE WITH CONCRETE SHALL NOT BE ACCEPTED.
C. BEFORE MAKING A CONNECTION TO AN EXISTING SEWER OR SERVICE LATERAL, THE CONTRACTOR SHALL CHECK THE EXISTING PIPE BY UTILIZING A DYE TEST TO SEE THAT THE EXISTING PIPE IS CONNECTED TO THE SANITARY SEWER MAIN.
D. IN THE CASE WHERE A 90° CORNER IS REQUIRED IN THE BUILDING CONNECTION LINE, TWO 45° BENDS SHALL BE USED IN LIEU OF A 90° BEND.
E. THE BUILDING CONNECTION LINE SHALL BE LAID IN AS STRAIGHT A LINE, FROM THE BUILDING TO THE EXISTING LATERAL, AS POSSIBLE.
F. ALL NEW CONSTRUCTION SHALL HAVE SANITARY LATERALS INSTALLED.
G. MINIMUM SLOPE OF SANITARY LATERAL SHALL BE 1% GRADE (1/8" PER FOOT) MAXIMUM SLOPE (SEE 1167.87).

BUILDING CONNECTION DETAIL

Michael L. Heintz, P.E., P.S.
231 Sandpiper Place
Sidney, Ohio 45365
Ph. 937-710-3310
mike@heintzengineering.com

HEINTZ ENGINEERING, LLC

CBE / COMMERCE PARK
VILLAGE OF YELLOW SPRINGS

CONSTRUCTION STANDARDS

yellowsprings2017commerceparkdesign.dwg

ISSUE DATE:	REVISION DATE:	REVISION DATE:	REVISION DATE:
Nov. 9, 2017	-----	-----	-----