



AGENDA ITEM EXECUTIVE SUMMARY

Agenda Item Number: IIC3

Title:

Motion to approve An Ordinance Granting Approval of a Map Amendment, Special Use for Planned Unit Development and PUD Preliminary Plan for Munhall Glen

Presenter:

Russell Colby

Meeting: City Council

Date: November 16, 2020

Proposed Cost: \$

Budgeted Amount: \$

Not Budgeted:

Executive Summary *(if not budgeted please explain):*

Munhall Glen is a 50-unit single family residential subdivision and PUD proposed for a 15-acre site west of Tyler Road at Munhall Ave.

The Planning & Development Committee recommended approval of the Munhall Glen PUD project at the October 12, 2020 meeting. The vote was 8-0, with 1 recused.

A PUD Ordinance has been prepared per the Committee recommendation.

Specific items from the Committee discussion are addressed as follows:

- School/Park Land Cash and Inclusionary Housing Fee-in-lieu payments may be made on a per-unit basis. The Housing fee-in-lieu is based on the 2021 fee recently set by the City Council.
- The off-site portion of South Avenue to the west will be improved as an emergency access only and not improved as a public street.
- The City will reimburse the developer for the cost of re-routing a sanitary sewer trunk line through the project, with a reduction for “oversizing” of the on-site sewers that would otherwise be required. (The cost is estimated at up to \$500,000, but will be defined during the Final Engineering review.)

The approval of the Preliminary Plans is subject to resolution of outstanding staff comments during Final Engineering review.

Attachments *(please list):*

Ordinance

Recommendation/Suggested Action *(briefly explain):*

Motion to approve An Ordinance Granting Approval of a Map Amendment, Special Use for Planned Unit Development and PUD Preliminary Plan for Munhall Glen

City of St. Charles, Illinois
Ordinance No. 2020-Z-

**An Ordinance Granting Approval of a Map Amendment, Special Use for
Planned Unit Development and PUD Preliminary Plan for Munhall Glen**

WHEREAS, on or about July 30, 2020, Airhart Construction Corp. (the “Applicant”) filed petitions for Special Use for Planned Unit Development and PUD Preliminary Plan, and on or about August 11, 2020, the Applicant filed a petition for Map Amendment from M-2 Limited Manufacturing District and RS-4 Suburban Single-Family Residential District to RS-4 Suburban Single-Family Residential District, all for the real estate legally described on Exhibit “A” attached hereto and incorporated herein (the “Subject Property”), for the purpose of developing a 50-lot single-family residential subdivision; and,

WHEREAS, Notice of Public Hearing on said petitions for Map Amendment and Special Use for Planned Unit Development was published on or about August 21, 2020 in a newspaper having general circulation within the City, to-wit, the Daily Herald newspaper, as required by the statutes of the State of Illinois and the ordinances of the City; and,

WHEREAS, pursuant to said Notice, the Plan Commission conducted a public hearing on or about September 9, 2020 on said petitions in accordance with the statutes of the State of Illinois and the ordinances of the City; and,

WHEREAS, at said Public Hearing, the Applicant presented testimony in support of said petitions and all interested parties had an opportunity to be heard; and,

WHEREAS, the Plan Commission recommended approval of said Map Amendment, Special Use for Planned Unit Development, and PUD Preliminary Plan petitions on or about September 9, 2020; and,

WHEREAS, the Planning & Development Committee of the City Council recommended approval of said petitions on or about October 12, 2020; and,

WHEREAS, the City Council of the City of St. Charles has received the recommendations of the Plan Commission and Planning & Development Committee and has considered the same.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ST. CHARLES, KANE AND DUPAGE COUNTIES, ILLINOIS, as follows:

1. The preambles set forth hereinabove are incorporated herein as substantive provisions of this Ordinance as though fully set out in this Section 1.

2. That passage of this Ordinance shall constitute approval of the petition for a Map Amendment for the Subject Property from the M-2 Limited Manufacturing District and the RS-4 Suburban Single-Family Residential District to the RS-4 Suburban Single-Family Residential

District, and the Findings of Fact for Map Amendment attached hereto and incorporated herein as Exhibit “B” are expressly adopted by the corporate authorities of the City.

3. That passage of this Ordinance shall constitute approval of a Special Use for Planned Unit Development pursuant to the provisions of Title 17 of the St. Charles Municipal Code, as amended, and based upon the Applicant’s petitions and the evidence presented at the Public Hearing, the City Council hereby finds that the Special Use for Planned Unit Development is in the public interest and adopts the Criteria for Planned Unit Developments, set forth on Exhibit “C”, which is attached hereto and incorporated herein.

4. That passage of this Ordinance shall constitute approval of the PUD Preliminary Plan, incorporated herein as Exhibit “D”, such that the following documents and illustrations are hereby approved, reduced copies of which are attached hereto, subject to satisfactory resolution of all outstanding staff review comments and compliance with such conditions, corrections, and modifications as may be required by the Director of Community & Economic Development, Director of Public Works and Fire Chief to comply with the requirements of the St. Charles Municipal Code:

- Preliminary Engineering Plans; Engineering Resource Associates; dated 7/24/2020
- Landscape Master Plan; Airhart Construction; revisions dated 9/2/2020
- Preliminary Plat of Subdivision; Engineering Resource Associates; dated 7/23/2020
- Tree Inventory & Preservation Plan; Jay C. Peters; dated 7/11/2020
- Sanitary Sewer Conceptual Layout; dated 7/24/2020

5. The Subject Property shall be developed only in accordance with all ordinances of the City as now in effect and as hereafter amended (except as specifically varied herein), and subject to the terms, conditions and restrictions set forth herein, as follows:

- a. Zoning: The Subject Property shall be subject to the requirements of the RS-4 Suburban Single-Family Residential District, as amended, and all other applicable requirements of Title 17 of the St. Charles Municipal Code (“Zoning”), as amended, except as specifically varied in the “PUD Deviations” attached hereto and incorporated herein as Exhibit “E”.
- b. Owners’ Association: The Applicant shall create one or more Owners’ Associations and create a Declaration of Covenants, Conditions & Restrictions that clearly identifies all responsibilities of the Owners Associations with respect to the use, maintenance and continued protection of the common open space and improvements in the Subject Property, including, but not limited to stormwater detention facilities and common open space. Such Declaration shall be in a form reasonably acceptable to the City and shall be recorded immediately following the recording of the Final Plat of Subdivision for the Subject Property.
- c. Special Service Area: The City shall initiate the formation of a Special Service Area for the purpose of maintaining and repairing stormwater management facilities and other facilities serving the Subject Property. Such Special Service

Area shall be of perpetual duration with a maximum rate sufficient to provide for maintenance, repair, and reconstruction of such facilities. Such Special Service Area may provide for maintenance by the City in the event that stormwater management facilities or other facilities are not adequately maintained by the Owner or successors.

- d. **School and Park Contributions:** The School and Park contributions shall be provided by the Applicant as cash in lieu of land contribution in accordance with the provisions of Title 16 of the St. Charles Municipal Code (“Subdivisions and Land Improvement”), as the same may be amended from time to time. The School and Park contributions may be paid on a per-unit basis, and receipts from the School and Park Districts shall be provided to the City showing payment of the applicable fees for each unit prior to issuance of a building permit for said unit.
- e. **Inclusionary Housing:** The Inclusionary Housing contribution shall be provided by the Applicant as a cash in lieu of affordable units in accordance with the provisions of Title 19 of the St. Charles Municipal Code, as the same may be amended from time to time. The Inclusionary Housing contribution may be paid to the City on a per-unit basis, prior to issuance of each building permit, or as a part of the fees due at the time of building permit issuance. The Inclusionary Housing contribution shall be provided based on the 2021 Inclusionary Housing Fee of \$15,866.30 per required affordable unit (or \$1,554.90 per unit, based on 49 additional units within the subdivision).
- f. **Guarantee and Land Improvement Agreement:** A Guarantee for Completion of Land Improvements shall be provided in accordance with Title 16 of the St. Charles Municipal Code (“Subdivisions and Land Improvement”), as may be amended from time to time. The Guarantee shall be accompanied by a Land Improvement Agreement in substantially the form set forth in Appendix D of Title 16.
- g. **South Avenue off-site improvement:** As a part of the land improvements for the subdivision, the unimproved portion of South Avenue located immediately to the west of the Subject Property, approximately 350 ft. in length, shall be improved as an emergency access and shall be paved to meet the standards required for use by emergency vehicles. The width of emergency access shall meet the requirements of the Fire Code as determined by the City. Signage shall be posted limiting vehicular traffic to emergency and City vehicles only. The intent improving South Avenue within the Subject Property is to facilitate a future public street connection at the time of redevelopment of the adjoining properties to the west. The City may elect to further improve South Avenue and open the street to public traffic, subject to the approval of the City Council.
- h. **Sanitary Sewer Trunk Line:** As a part of the land improvements for the subdivision, the Applicant shall abandon an existing sanitary sewer trunk line on the north and west perimeter of the Subject Property and re-route the sewer through the subdivision as depicted on the attached Sanitary Sewer Conceptual

Layout. The final design of the sanitary sewer is subject to review and approval by the City. Reimbursement for the engineering design shall be provided following Final Engineering Plan approval by the City. Applicant shall provide itemized invoices showing costs attributable to the sanitary sewer trunk line design.

The City shall reimburse the Applicant for the actual cost of abandonment, installation and applicable soft costs for the re-routed sanitary sewer trunk line, minus any savings due to “oversizing” sanitary sewers within the development. At the time of Final Engineering approval, an Engineer’s Estimate shall be provided demonstrating the cost savings, if any, resulting from the replacement of otherwise required on-site sewers with the re-routed trunk line. This savings shall constitute the “oversizing” amount to be deducted from the reimbursement.

Reimbursement for installation shall be provided at the time of reduction of the Financial Guarantee for the sanitary sewer trunk line. Applicant shall provide lien waivers and contractor’s statements demonstrating the actual construction cost.

6. That after the adoption and approval hereof, the Ordinance shall (i) be printed or published in book or pamphlet form, published by the authority of the Council, or (ii) within thirty (30) days after the adoption and approval hereof, be published in a newspaper published in and with a general circulation within the City of St. Charles.

PRESENTED to the City Council of the City of St. Charles, Kane and DuPage Counties, Illinois this 16th day of November 2020.

PASSED by the City Council of the City of St. Charles, Kane and DuPage Counties, Illinois this 16th day of November 2020.

APPROVED by the Mayor of the City of St. Charles, Kane and DuPage Counties, Illinois this 16th day of November 2020.

Raymond P. Rogina, Mayor

Attest:

Charles Amenta, City Clerk

Vote:

Ayes:

Nays:

Absent:

Abstain:

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Date: _____

EXHIBIT "A"

LEGAL DESCRIPTION

PARCEL 1: THAT PART OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 40 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE SOUTH 88 DEGREES 50 MINUTES 28 SECONDS WEST ALONG THE SOUTH LINE OF SAID SOUTHWEST QUARTER, 215.25 FEET TO THE CENTER LINE OF TYLER ROAD; THENCE NORTH 08 DEGREES 41 MINUTES 50 SECONDS EAST ALONG SAID CENTER LINE, 73.7 FEET FOR A POINT OF BEGINNING; THENCE SOUTH 89 DEGREES 23 MINUTES 00 SECONDS WEST 222.0 FEET; THENCE NORTH 08 DEGREES 41 MINUTES 50 SECONDS EAST PARALLEL WITH THE CENTER LINE OF SAID TYLER ROAD, 132.77 FEET; THENCE NORTH 85 DEGREES 33 MINUTES 00 SECONDS EAST 224.97 FEET TO THE CENTER LINE OF SAID TYLER ROAD; THENCE SOUTH 08 DEGREES 41 MINUTES 50 SECONDS WEST ALONG SAID CENTER LINE 148.01 FEET TO THE POINT OF BEGINNING, IN THE CITY OF SAINT CHARLES, KANE COUNTY, ILLINOIS.

PARCEL 2: THAT PART OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 40 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING ON THE SOUTH LINE OF THE RIGHT OF WAY OF THE CHICAGO AND GREAT WESTERN RAILROAD COMPANY AT A POINT 615.9 FEET WESTERLY FROM THE CENTER LINE OF A NORTH AND SOUTH ROAD IN SAID SOUTHWEST QUARTER, KNOWN AS TYLER'S ROAD, MEASURED ALONG THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY; THENCE SOUTH 11 DEGREES 16 MINUTES EAST 895.5 FEET TO THE SOUTH LINE OF SAID SOUTHWEST QUARTER FOR A POINT OF BEGINNING; THENCE NORTH 11 DEGREES 16 MINUTES WEST 895.5 FEET TO THE SOUTH LINE OF SAID RAILROAD RIGHT OF WAY; THENCE WESTERLY ALONG THE SOUTHERLY LINE OF SAID RIGHT OF WAY 482 FEET; THENCE SOUTHERLY 914.3 FEET TO A POINT ON THE SOUTH LINE OF SAID SOUTHWEST QUARTER 1059.9 FEET WEST OF THE CENTER LINE OF SAID TYLER ROAD; THENCE EAST ALONG SAID SOUTH LINE 669 FEET TO THE POINT OF BEGINNING, IN THE CITY OF SAINT CHARLES, KANE COUNTY, ILLINOIS.

PARCEL 3: THAT PART OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 40 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID QUARTER; THENCE SOUTH 88 DEGREES 50 MINUTES 28 SECONDS WEST ALONG THE SOUTH LINE OF SAID QUARTER 215.25 FEET TO THE ORIGINAL CENTER LINE OF MUNHALL AVENUE (FORMERLY TYLER ROAD); THENCE NORTH 8 DEGREES 41 MINUTES 50 SECONDS EAST ALONG SAID ORIGINAL CENTER LINE 221.71 FEET FOR A POINT OF BEGINNING; THENCE SOUTH 8 DEGREES 41 MINUTES 50 SECONDS WEST ALONG SAID ORIGINAL CENTER LINE 95.20 FEET; THENCE NORTHEASTERLY ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 233.0 FEET TANGENT TO A LINE DRAWN NORTH 39 DEGREES 33 MINUTES 44 SECONDS

EAST FROM THE LAST DESCRIBED POINT 89.15 FEET TO A LINE DRAWN CONCENTRIC WITH AND 40.0 FEET SOUTHWESTERLY OF THE PRESENT CENTER LINE OF TYLER ROAD; THENCE NORTHWESTERLY ALONG SAID CONCENTRIC LINE, BEING A CURVE TO THE RIGHT HAVE A RADIUS OF 1081.0 FEET; 43.34 FEET TO A LINE DRAWN NORTH 85 DEGREES 33 MINUTES 0 SECONDS EAST FROM THE POINT OF BEGINNING; THENCE SOUTH 85 DEGREES 33 MINUTES 0 SECONDS WEST 39.68 FEET TO THE POINT OF BEGINNING, IN THE CITY OF SAINT CHARLES, KANE COUNTY, ILLINOIS.

PARCEL 4: THAT PART OF THE SOUTHWEST QUARTER OF SECTION 26 AND PART OF THE NORTHWEST QUARTER OF SECTION 35, TOWNSHIP 40 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE SOUTH 88 DEGREES 50 MINUTES 28 SECONDS WEST ALONG THE SOUTH LINE OF SAID SOUTHWEST QUARTER, 215.25 FEET TO THE CENTER LINE OF TYLER ROAD FOR THE POINT OF BEGINNING; THENCE NORTH 08 DEGREES 41 MINUTES 50 SECONDS EAST ALONG SAID CENTER LINE, 73.7 FEET; THENCE SOUTH 89 DEGREES 23 MINUTES 00 SECONDS WEST 222.0 FEET; THENCE NORTH 08 DEGREES 41 MINUTES 50 SECONDS EAST PARALLEL WITH THE CENTER LINE OF SAID TYLER ROAD, 132.77 FEET; THENCE SOUTH 85 DEGREES 33 MINUTES 00 SECONDS WEST 237.82 FEET; THENCE SOUTH 10 DEGREES 39 MINUTES 00 SECONDS EAST 194.53 FEET TO THE NORTH EAST CORNER OF PHASE NO. 1 CAMBRIDGE, SAINT CHARLES, KANE COUNTY, ILLINOIS; THENCE SOUTH 17 DEGREES 28 MINUTES 03 SECONDS EAST ALONG A NORTHEASTERLY LINE OF SAID PHASE NO. 1, 253.08 FEET; THENCE NORTH 72 DEGREES 44 MINUTES 11 SECONDS EAST 305.44 FEET OF THE CENTER LINE OF SAID TYLER ROAD; THENCE NORTHERLY ALONG SAID CENTER LINE 160.54 FEET TO THE POINT OF BEGINNING IN THE CITY OF SAINT CHARLES, KANE COUNTY, ILLINOIS.

PARCEL 5: THAT PART OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 40 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID QUARTER; THENCE SOUTH 88 DEGREES 50 MINUTES 28 SECONDS WEST ALONG THE SOUTH LINE OF SAID QUARTER 215.25 FEET TO THE ORIGINAL CENTER LINE OF MUNHALL AVENUE (FORMERLY TYLER ROAD); THENCE NORTH 8 DEGREES 41 MINUTES 50 SECONDS EAST ALONG SAID ORIGINAL CENTER LINE 221.71 FEET FOR A POINT OF BEGINNING; THENCE SOUTH 08 DEGREES 41 MINUTES 50 SECONDS WEST ALONG SAID ORIGINAL CENTER LINE 95.20 FEET; THENCE SOUTHWESTERLY ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 233.00 FEET TANGENT TO A LINE DRAWN SOUTH 39 DEGREES 33 MINUTES 44 SECONDS WEST FROM THE LAST DESCRIBED POINT 52.64 FEET; THENCE NORTH 08 DEGREES 48 MINUTES 33 SECONDS EAST 138.04 FEET TO A LINE DRAWN SOUTH 85 DEGREES 33 MINUTES 00 SECONDS WEST FROM THE POINT OF BEGINNING; THENCE NORTH 85 DEGREES 33 MINUTES 00 SECONDS EAST 22.0 FEET TO THE POINT OF BEGINNING, IN THE CITY OF SAINT CHARLES, KANE COUNTY, ILLINOIS.

EXHIBIT "B"

FINDINGS OF FACT FOR MAP AMENDMENT

1. The existing uses and zoning of nearby property.

The property is currently zoned a mix of RS-4 and M-2. The property to the south is zoned RS-4 and so this property melds well to the existing residential. The property to the east is zoned M-2 and used as office space. The buildings have a residential feel and will work well with this property. The properties to the north and west are M-2 and St. Charles owned properties. The zoning change to this property will be a positive for this area and act well as a transition between the residential to the south and more commercial uses to the north.

2. The extent to which property values are diminished by the existing zoning restrictions.

The highest and best use of this property is residential under the RS-4 classification with a PUD. This property will fill a niche of unmet need of first floor master bedroom housing and is a much better use than the current M-2 zoning. The M-2 zoning in this location is unneeded due to the properties to the east of this property toward the DuPage Airport and the Route 64 corridor. The fact that this property has not been developed under M-2 and left as a field while every property around it has been developed is a testament to that fact. This property has been underperforming on the tax rolls as farm land and one residential property. The change in zoning will be a great benefit to the tax rolls and improve its value to the City of St. Charles.

3. The extent to which the reduction of the property's value under the existing zoning restrictions promotes the health, safety, morals or general welfare of the public.

This is not applicable. The current zoning has no benefit to the health, safety, morals or general welfare of the public. In fact, the change in zoning will be a great benefit of the health, safety, morals and general welfare of the public by meeting housing needs and creating a much more orderly procession of development.

4. The suitability of the property for the purposes for which it is presently zoned, i.e. the feasibility of developing the property for one or more of the uses permitted under the existing zoning classification.

The property is not suitable for the purpose for which it is presently zoned. The traffic patterns into the residential area make commercial traffic an issue as well as the location being into a residential neighborhood. The fact that it has sat for so long underutilized while every property around it many, many years ago had been developed is testament to the fact that the value of the property is not M-2. There are many much better options to the east for commercial usages and the best use of this property is rezoning to RS-4 under a PUD.

5. The length of time that the property has been vacant, as presently zoned, considered in the context of the land development in the area where the property is located.

This property is the last property in this area for development. It has been many years since all the properties around it have been developed and this property has sat underutilized. Due to the inadequacies for development as M-2 is the reason it has been left behind as other properties have been developed. The change in zoning to RS-4 PUD residential usage makes much more sense in this area.

6. The evidence, or lack of evidence, of the community's need for the uses permitted under the proposed district.

The rezoning of the property to RS-4 PUD will meet a substantial need of single level and first floor master bedroom homes in St. Charles. The demographics show that this is a substantial void in the market. The change in zoning allowing housing to be built on this property will allow those individuals who need first floor master bedrooms in St. Charles to stay in St. Charles rather than moving away from their community. It will create a better mix of housing in St. Charles meeting the needs of more residents and creating a greater mix of housing in the community.

7. The consistency of the proposed amendment with the City's Comprehensive Plan.

The change in zoning to RS-4 PUD conforms to the purposes and intent of the Comprehensive Plan by promoting development within the current boundaries of the City. It focuses development on an underutilized property thereby enhancing the tax base, utilizing surrounding infrastructure instead of needlessly extending infrastructure past undeveloped properties. It provides housing close to shopping districts and the downtown areas as well as promoting development in an area with significant road and transportation corridors promoting orderly and efficient development.

8. Whether the proposed amendment corrects an error or omission in the Zoning Map.

Not applicable.

9. The extent to which the proposed amendment creates nonconformities.

The rezoning of this property will not create any nonconformities.

10. The trend of development, if any, in the general area of the property in question.

The trend in development for M-2 is to be in better transportation corridors specializing in ease of commercial traffic flow for large trucks. This property does not meet that need. The need is for residential in this area and this change in zoning will allow housing for those looking for single level living or first floor master bedrooms. Changing to RS-4 PUD allows for housing and will be a much better use for the property.

EXHIBIT "C"

CRITERIA FOR PLANNED UNIT DEVELOPMENTS

- i. **The proposed PUD advances one or more of the purposes of the Planned Unit Development procedure stated in Section 17.04.400.A:**
- 1. To promote a creative approach to site improvements and building design that results in a distinctive, attractive development that has a strong sense of place, yet becomes an integral part of the community.**
 - 2. To create places oriented to the pedestrian that promote physical activity and social interaction, including but not limited to walkable neighborhoods, usable open space and recreational facilities for the enjoyment of all.**
 - 3. To encourage a harmonious mix of land uses and a variety of housing types and prices.**
 - 4. To preserve native vegetation, topographic and geological features, and environmentally sensitive areas.**
 - 5. To promote the economical development and efficient use of land, utilities, street improvements, drainage facilities, structures and other facilities.**
 - 6. To encourage redevelopment of sites containing obsolete or inappropriate buildings or uses.**
 - 7. To encourage a collaborative process among developers, neighboring property owners and residents, governmental bodies and the community.**

The proposed PUD promotes a creative solution to an unmet growing housing need of single story and first floor master bedroom housing. This housing will allow for long-time community residents, business people and leaders in St. Charles to remain in St. Charles as their housing needs change. The PUD zoning promotes creative housing and provides attractive streetscapes that incentivizes porches and pedestrian friendly neighborhoods. It promotes social interaction by providing sidewalks, paths, neighbourhood connection areas as well as connection to a potential linear park to the north of the property. The PUD provides a harmonious usage of the property by changing a potential heavy commercial use of the property to residential use more in scale with the residential use to the south and the less intense commercial use to the east. The development of this property will promote higher levels of landscaping and higher quality trees than currently exist on the property as uncontrolled Buckthorn, Honeysuckle, Mulberry, Box Elder, etc. and other invasive landscaping is allowed to multiply. The installation of detention areas with natural landscaping will enhance water quality and native plants. Munhall Glen will be a benefit to future residents, the surrounding neighbors, local businesses and the City of St. Charles.

- ii. **The proposed PUD and PUD Preliminary Plans conform to the requirements of the underlying zoning district or districts in which the PUD is located and to the applicable Design Review Standards contained in Chapter 17.06, except where:**
- A. Conforming to the requirements would inhibit creative design that serves community goals, or**

B. Conforming to the requirements would be impractical and the proposed PUD will provide benefits that outweigh those that would have been realized by conforming to the applicable requirements.

Factors listed in Section 17.04.400.B shall be used to justify the relief from requirements:

- 1. The PUD will provide community amenities beyond those required by ordinance, such as recreational facilities, public plazas, gardens, public are, pedestrian and transit facilities.**
- 2. The PUD will preserve open space, natural beauty and critical environmental areas in excess of what is required by ordinance or other regulation.**
- 3. The PUD will provide superior landscaping, buffering or screening.**
- 4. The buildings within the PUD offer high quality architectural design.**
- 5. The PUD provides for energy efficient building and site design.**
- 6. The PUD provides for the use of innovative stormwater management techniques.**
- 7. The PUD provides accessible dwelling units in numbers or with features beyond what is required by the Americans with Disabilities Act (ADA) or other applicable codes.**
- 8. The PUD provides affordable dwelling units in conformance with, or in excess of, City policies and ordinances.**
- 9. The PUD preserves historic buildings, sites or neighborhoods.**

The proposed RS-4 PUD and PUD Preliminary Plans provide a significantly more harmonious usage of the property than the current more intrusive usage and negative impact on the surrounding properties of the existing M-2 (industrial) zoning classification currently in place. By allowing for the PUD the property will be able to meet a significant housing need in the community of single level and first floor master bedroom housing. This housing would not be allowed in the M-2 zoning classification. By changing the zoning and allowing the PUD, storm water facilities, open space, and sidewalks and paths will allow for residents to enjoy the open space and property as well as provide for a pedestrian connection to the potential linear park to the north. The planned landscaping will be a significant improvement to the invasive species currently on the property and the trees planted as part of the development will be a significant improvement. Due to the size and shape of the property by downzoning the property to an RS-4 PUD it allows for implementation of a variety of lot sizes which provides for varied architecture, improved rear yard setbacks and a unique streetscape that incentivizes porches and neighbour interaction than the current M-2 zoning classification allows. The development will provide stormwater facilities with native species enhancing the water quality where currently no storm water facilities exist. The RS-4 PUD will enhance the opportunity for single level living while not infringing on the size of the homes for the those requiring single level living. The PUD promotes quality residential development and provides good transitional zoning to benefit those properties that currently surround it. The development will be a benefit to the City of St. Charles housing and significant increase in tax base.

iii. The proposed PUD conforms with the standards applicable to Special uses (section 17.04.330.C.0):

A. Public Convenience: The Special Use will serve the public convenience at the proposed location.

The Special Use will serve the public convenience at Munhall Glen by filling a housing void in the market of single story and first floor master bedroom homes. This void in the market is causing those needing this type of housing to look outside of St. Charles even though they have been long time residents. In addition, by providing housing in this location it helps support area businesses and supports good planning putting residential housing close to both public and private amenities.

B. Sufficient Infrastructure: That adequate utilities, access roads, drainage and/or necessary facilities have been, or are being, provided.

There is sufficient infrastructure and utilities in this area to support the development. There is a major sanitary sewer main on the north end of the property installed for the future development of this property. The utility infrastructure installed on this property will help with the connectivity of utilities, specifically water main, which will help “loop” the water system in the area and provide for better servicing and water circulation. The installation of storm water controls and Best Management Practices on this property will provide stormwater detention where no stormwater controls currently exist. The traffic pattern will provide excellent vehicular movement because Munhall Glen exits onto a major collector, Tyler Road, which links to principal arterials of E. Main St. and Kirk Rd. providing for safe and efficient vehicular movement.

C. Effect on Nearby Property: That the Special Use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the neighborhood.

Munhall Glen will not be injurious to the use and enjoyment of surrounding properties and it will act as an excellent transition from the commercial to the east and west and the residential to the south. By approving this Special Use, the downzoning of this property from M-2 Limited Manufacturing to RS-4 PUD will ensure a more harmonious residential usage of the property and ensure Munhall Ave. stays primarily a residential street rather than negatively impacted by commercial heavy trucking transportation uses.

D. Effect on Development of Surrounding Property: That the establishment of the Special Use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

The establishment of the Special Use will not impede the normal and orderly development and improvement of the surrounding properties due to the fact that all surrounding properties are currently developed. As the last piece of property in this area for development the approval of the Special Use will in fact promote a harmonious interconnecting and buffer for the surrounding properties.

- E. Effect on General Welfare: That the establishment, maintenance or operation of the Special Use will not be detrimental to or endanger the public health, safety, comfort or general welfare.**

The approval of the Special Use will not be detrimental to or endanger the public health, safety, comfort or general welfare. As planned, the property's development will provide buffering between different property usages, will extend and improve municipal infrastructure, and will provide housing needed in the City of St. Charles.

- F. Conformance with Codes: That the proposed Special Use conforms to all existing Federal, State and local legislation and regulation and meets or exceeds all applicable provisions of this Title, except as may be varied pursuant to a Special Use for Planned Unit Development.**

The proposed Special Use conforms to all applicable provisions of the St. Charles Municipal Code and meets or exceeds all applicable provisions of this Title, except as varied pursuant to the Special Use for Planned Unit Development. The Special Use for PUD zoning allows for a more inventive design, the average lot sizes are significantly larger than the minimum requirements, and the housing will be constructed at or above current codes and energy requirements. The Special Use and minor changes to the zoning requirements allows for an inventive solution for meeting a needed housing niche within the St. Charles housing stock.

- iv. The proposed PUD will be beneficial to the physical development, diversity, tax base and economic well-being of the City.**

The proposed PUD will be beneficial to the physical development, diversity, tax base and economic well-being of the City. The development of this property will improve connections to the water and sewer systems and provide storm water management facilities where none currently exist. It will provide a diversity of housing by providing single story and first floor master bedroom housing providing solutions for current St. Charles residents whose housing needs have changed over time and want to stay in the City due to civic, cultural, social and religious activities that they have long time connections. The PUD will substantially increase the tax base for the City, School District, Park District, etc. over the current use in perpetuity benefiting many taxing bodies. In addition, it provides housing close to many commercial districts benefiting many surrounding businesses and the economic wellbeing of the City.

- v. The proposed PUD conforms to the purposes and intent of the Comprehensive Plan.**

The proposed PUD conforms to the purposes and intent of the Comprehensive Plan by promoting development within the current boundaries of the City. It focuses development on an underutilized property thereby enhancing the tax base, utilizing surrounding infrastructure instead of needlessly extending infrastructure past undeveloped properties. It provides housing close to shopping districts and the downtown area as well as promoting development in an area with significant road and transportation corridors promoting orderly and efficient development.

EXHIBIT "D"

PUD PRELIMINARY PLAN

MUNHALL GLEN

ST. CHARLES, IL 60174
 JOB NO. 190726.CO
 JULY 24TH, 2020
 PRELIMINARY ENGINEERING

SECTION 26 T40N R8E

INDEX TO DRAWINGS

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AREA SUMMARY
 670,397 SF = 15.390 AC

ZONING CLASSIFICATION
 EXISTING = M-2
 PROPOSED = RS-4

LOCATION MAP



ENGINEERING
 RESOURCE ASSOCIATES

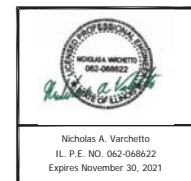
2416 GALEN DRIVE
 CHAMPAIGN, ILLINOIS 61821
 PHONE (217) 351-6268
 FAX (217) 355-1902

35701 WEST AVENUE, SUITE 150
 WARRENVILLE, ILLINOIS 60555
 PHONE (630) 393-3060
 FAX (630) 393-2152

10 S. RIVERSIDE PLAZA, SUITE 875
 CHICAGO, ILLINOIS 60606
 PHONE (312) 474-7841
 FAX (312) 474-6099

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE DRAINAGE OF THE SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THESE LOT IMPROVEMENTS OR ANY PART THEREOF, OR THAT IF SUCH WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES, SO THAT THE DEVELOPMENT SHALL NOT ADVERSELY INCREASE FLOOD ELEVATIONS OR DECREASE FLOOD CONVEYANCE CAPACITY UPSTREAM OR DOWNSTREAM OF THE PROJECT AREA.

Engineer: _____
 Seal: _____




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MUNHALL GLEN
 ST. CHARLES, IL
 ENGINEERING PROJECT NO. 190726.CO

DATE	07-24-2020
PROJECT #	190726.CO
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

COVER

C-1.0
 SHEET

© PROJECTS/Airhart_Construction/190726.CO_Munhall_Si_Charles_Site_Rev_06/24/20/190726.CO_SHEET C-1.0_Cover.dwg

GENERAL NOTES

1. AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF ALL PHASES OF WORK, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING:
ST CHARLES PUBLIC WORKS (630) 377-4486
ENGINEERING RESOURCE ASSOCIATES (630) 393-3660

2. UTILITY INFORMATION IS BASED UPON FIELD MEASUREMENTS AND BEST AVAILABLE RECORDS. FIELD MEASUREMENTS ARE TO BE VERIFIED AND CAN BE REASURED. THIS DOES NOT PRECLUDE THE EXISTENCE OF OTHER UNDESIRED UTILITIES.
3. THE CONTRACTOR SHALL NOTIFY 1-811 (1-800-892-2323) 24 HOURS PRIOR TO ANY EXCAVATION WORK TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.

4. EXCEPT WHERE MODIFIED BY THE CONTRACT DOCUMENTS, ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING DOCUMENTS:
"STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN THE STATE OF ILLINOIS, ILLINOIS DEPARTMENT OF TRANSPORTATION, LATEST EDITION."
"STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS," LATEST EDITION.

"ILLINOIS URBAN MANHOLE"
"DUPAGE COUNTY STORMWATER ORDINANCE," LATEST EDITION
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC. THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AS ADOPTED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, LATEST EDITION, SHALL BE CONSULTED. APPROPRIATE CONTROL METHODS SHOULD BE APPLIED TO THE SPECIFIC SITUATION AND TYPES OF CONSTRUCTION OPERATIONS BEING PERFORMED.

6. UNLESS WRITTEN AUTHORIZATION IS OBTAINED FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION, ALL OPENINGS IN ANY PAVEMENT OR TRAVELWAY SURF SHALL BE BACKFILLED PRIOR TO THE END OF THE WORKING DAY.

7. THE CONTRACTOR SHALL ESTABLISH THE NECESSARY PERFORMANCE BONDS REQUIRED. PERMITS SHALL BE OBTAINED FROM ALL APPLICABLE GOVERNMENTAL AGENCIES HAVING JURISDICTION PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.

8. THE CONTRACTOR IS RESPONSIBLE FOR HAVING THE MOST RECENT SET OF THE "APPROVED" FINAL ENGINEERING PLANS WITH THE LATEST REVISION DATE ON THE JOB SITE PRIOR TO THE START OF CONSTRUCTION.

9. THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION AND WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE SAME.

10. CONTRACTOR SHALL RESTORE OFF-SITE SURFACES TO ORIGINAL CONDITION IF DAMAGED BY CONSTRUCTION.

11. THE CONTRACTOR IS TO PROVIDE THE CITY ENGINEER WITH RECORD DRAWINGS OF ALL UTILITIES SHOWING LOCATIONS OF ALL SEWER PIPE, MANHOLE, SERVICE STUBS, AND STRUCTURES.

12. THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO, AND THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO PERFORM OR FURNISH THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

13. THE ENGINEER WARRANTS THE DESIGN, RECOMMENDATIONS, AND SPECIFICATIONS TO HAVE BEEN PREPARED ON CONDITIONS GENERALLY ENCOUNTERED WITHIN THE INDUSTRY. THE ENGINEER ASSUMES NO RESPONSIBILITY WHATSOEVER WITH RESPECT TO THE DESIGN RECOMMENDATIONS AND SPECIFICATIONS, FOR COMPLEX OR UNUSUAL SOIL CONDITIONS ENCOUNTERED ON THE PROJECT. IT SHALL BE THE OWNER/SUPERVISOR'S RESPONSIBILITY TO ASCERTAIN THE EXACT NATURE OF SUBSURFACE CONDITIONS PRIOR TO THE CONSTRUCTION OF THE IMPROVEMENT.

14. ALL TRENCHES DRAINED BY THE CONSTRUCTION OF SEWERS, WATERMANS, WATER SERVICE PIPES AND EXCAVATIONS, AROUND SATCH BASINS, MANHOLES, INLETS, AND OTHER APERTURES WHICH OCCUR WITHIN FIVE FEET OF THE LIMITS OF EXISTING AND PROPOSED IMPROVEMENTS, SIDEWALKS, AND CURB, AND GUTTERS SHALL BE BACKFILLED WITH TRENCH BACKFILL AS WELL AS AREAS INDICATED ON THE PLANS AS DEFINED IN THE CITY OF LOCKPORT DETAILS FOR UTILITY TRENCHES.)

15. AT LEAST 2 WORKING DAYS BEFORE COMMENCEMENT OF ANY WORK ACTIVITIES, THE CONTRACTOR WILL BE REQUIRED TO ATTEND AN ON-SITE PRECONSTRUCTION CONFERENCE. AT THIS CONFERENCE, THE CONTRACTOR WILL BE REQUIRED TO FURNISH AND DISCUSS INFORMATION BUT NOT LIMITED TO THE FOLLOWING: 1) WRITTEN PROGRESS SCHEDULE AND SCHEDULING OF WORK 2) NAMES OF PROJECT MANAGER, FIELD SUPERINTENDENT AND THE NAME AND PHONE NUMBER OF A RESPONSIBLE INDIVIDUAL, WHO CAN BE REACHED 24 HOURS A DAY.

16. IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO APPLY FOR ALL REQUIRED IEPA PERMITS AND COMPLY WITH ALL EPA RULES AND REGULATIONS.

17. THE CONTRACTOR SHALL NOT BE PERMITTED TO OPERATE WATER VALVES OR HYDRANTS. THE CONTRACTOR SHALL CALL THE CITY OF LOCKPORT PUBLIC WORKS DEPARTMENT (312) 658-6641 24 HOURS OF THE NEED TO OPERATE VALVES OR HYDRANTS.

18. THE OWNER SHALL PROVIDE A FULL AND COMPLETE CIVIL ENGINEERING RECORD DRAWING PLAN SET IN HARD COPY AND DIGITIZATION ON AUTOCAD AT THE COMPLETION OF THE PROJECT. THE RECORD DRAWINGS SHALL INCLUDE ANY CHANGES FROM THE ORIGINAL CIVIL ENGINEERING PLAN. CURRENT ELEVATIONS SHALL BE SHOWN FOR THE FOLLOWING, AT A MINIMUM:
(1) ALL RIM AND INVERTS
(2) GRADE INFLECTION POINTS WITH PROPOSED GRADES SHOT IN LEVEL AREAS
(3) DETENTION POND GRADES WITH VOLUME CALCULATION
(4) NOTE COMPARING ACTUAL TO REQUIRED POND VOLUME

19. DUST CONTROL WILL BE IN ACCORDANCE WITH IDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN THE STATE OF ILLINOIS, ILLINOIS DEPARTMENT OF TRANSPORTATION, LATEST EDITION, SECTION 107.36.

STORM SEWER:

1. REINFORCED CONCRETE PIPE STORM SEWER SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C-1245 CLASS III. PVC PIPE STORM SEWER SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM D-3034 (SDR 36). WATERMAN QUALITY PVC SHALL BE PRECASTED IN ACCORDANCE WITH ASTM D-2241 AND ELASTOMERIC GASKETS TO COMPLY WITH #477 AND PRESSURE RATED IN ACCORDANCE WITH ASTM D-2319.

2. SEWER PIPE JOINTS SHALL BE "O-RING" TYPE. ASTM C-443 FOR RCP AND SHALL BE PUSH-IN TYPE. ASTM D-3212 FOR PVC PIPE.

3. VERTICAL SEPARATION - WATERMANS AND SEWERS
1. A WATERMAN SHALL BE SEPARATED FROM A SEWER SO THAT ITS INVERT IS A MINIMUM OF 18 INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER UNLESS WATERMANS CROSS STORM SEWERS. SANITARY SEWERS OR SEWER SERVICE CONNECTIONS, THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSING. A LENGTH OF WATERMAN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIVARIANT WITH THE SEWER OR DRAIN.

2. BOTH THE WATERMAN AND SEWER SHALL BE CONSTRUCTED OF SLP-OR OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE, ASBESTOS-CEMENT PRESSURE PIPE, OR STRESSED CONCRETE PIPE, OR PVC PIPE EQUIVALENT TO WATERMAN STANDARDS OF CONSTRUCTION WHEN:
A. IT IS NECESSARY TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED IN (1) ABOVE, OR:
B. THE WATERMAN PASSES UNDER A SEWER OR DRAIN.

3. A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAN SHALL BE MAINTAINED WHERE A WATERMAN CROSSES UNDER A SEWER. SUPPORT THE SEWER WITH BRICKS OR CONCRETE, AND SETTLE AND BREAKING THE WATERMAN, AS SHOWN ON THE PLANS AS APPROVED BY THE ENGINEER.

4. CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATERMAN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN FEET.

5. MANHOLES AND CATCH BASINS SHALL BE PRECAST REINFORCED CONCRETE - ASTM C-478 AND SHALL BE ALLOWED TO THE MINIMUM SIZE CRITERIA SPECIFIED IN THE PLANS.
6. NO MORE THAN TWO PRECAST ADJUSTING RINGS WITH A MAXIMUM HEIGHT ADJUSTMENT OF SIX INCHES SHALL BE ALLOWED.

7. STORM SEWER MANHOLE JOINTS SHALL BE SEALED WITH PORTLAND CEMENT MORTAR. "O-RING" GASKETS, OR ELASTIC MATERIAL.

8. MANHOLES CLOSED LID FRAME AND COVER CASTINGS SHALL BE NEWMAN NO. 8-1710 / SOLID LID OR EAST JOHNSON IRON WORKS TONGUES, UNLESS OTHERWISE SPECIFIED. INLET CASTINGS IN PAVED AREAS SHALL BE NEWMAN 1710 / TYPE 7 LID OR EAST JOHNSON IRON WORKS 10221 / TYPE 81 UNLESS OTHERWISE SPECIFIED. INLET AND CATCH BASIN CASTINGS IN GRASSY AREAS SHALL BE NEWMAN 8-1710 / TYPE 8 LID OR EAST JOHNSON IRON WORKS 10221 / TYPE 81 UNLESS OTHERWISE SPECIFIED.

9. INLETS SHALL BE TWENTY-FOUR (24) INCH DIAMETER PRECAST REINFORCED CONCRETE CONFORMING TO ASTM C-478.
10. 6" OF CA-7 (ASTM C-33, SIZE NO. 47) SHALL BE USED AS BEDDING UNDER THE PIPE. THE BEDDING STONE SHALL BE GRADED ABOVE THE ENTIRE LENGTH OF THE PROPOSED FULL BEARING. THE BEDDING STONE SHALL EXTEND TO THE SPRINGLINE OF THE PIPE.

11. RIM GRADES IN CURB AND GUTTER ARE EDGE OF PAVEMENT ELEVATIONS.
12. ALL EXISTING FIELD TILE AND/OR DRAIN PIPES ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM. IF THIS CANNOT BE ACCOMPLISHED, THEN IT SHALL BE REPAIRED WITH A NEW PIPE OF SIMILAR SIZE AND MATERIAL TO THE ORIGINAL LINE AND GRADE AND PUT INTO AN ACCEPTABLE OPERATING CONDITION. A RECORD OF ALL FIELD TILE OR DRAIN PIPES ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER ON COMPLETION OF THE PROJECT. THE COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED.

13. ALL FOOTING DRAINS AND DOWNPOUTS SHALL DISCHARGE TO THE STORM SYSTEM.
14. ANY PIPES OR MANHOLES CONTAINING SEDIMENT SHALL BE CLEANED OUT PRIOR TO FINAL ACCEPTANCE.
15. ALL WINDOW WELLS, WHERE APPLICABLE, SHALL DISCHARGE TO THE STORM SYSTEM.

16. ALL MANHOLES IN PAVEMENT SHALL HAVE EXTERNAL CHIMNEY SEALS.
SANITARY SEWER:
1. ALL FLEXIBLE GRAVITY SANITARY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2231-89. ALL FLEXIBLE GRAVITY SANITARY SEWER PIPE SHALL BE PVC SDR 26 PIPE MEETING THE REQUIREMENTS OF ASTM D-3034 WITH JOINTS TO BE ELASTOMERIC GASKETS CONFORMING WITH ASTM #477 AND PRESSURE RATED IN ACCORDANCE WITH ASTM D-3212. WATERMANS QUALITY PVC SHALL BE PRECASTED IN ACCORDANCE WITH ASTM D-2241 AND ELASTOMERIC GASKETS TO COMPLY WITH #477 AND PRESSURE RATED IN ACCORDANCE WITH ASTM D-3212.

2. EMBEDED MATERIALS FOR BEDDING, HAUNCHING AND INITIAL BACKFILL AT AT LEAST TWELVE INCHES OVER THE TOP OF THE PIPE WITH CA-7 PROPOSED MATERIAL PROCURED FOR HIGHWAY CONSTRUCTION USED IN THE PROJECT CLASSIFIED ACCORDING TO PRACTICE SIZE, SHAPE AND QUANTITY IN ACCORDANCE WITH ASTM D-2241-89, SECTION 9, TABLE 1.

3. ALL RIGID GRAVITY SEWER PIPE TO BE INSTALLED IN ACCORDANCE WITH ASTM C-12 AND BEDDING MATERIAL CA-7.
4. POKCHOLDS IN ALL MANHOLES LIKELY TO BE FLOODED SHALL NOT BE LARGER THAN ONE INCH IN DIAMETER AND SHALL BE OF THE CONCEALED TYPE.
5. THE MINIMUM BUILDING/SANITARY SEWER SERVICE SIZE SHALL BE SIX (6) INCHES IN DIAMETER. THE SERVICE LATERAL SHALL SLOPE TOWARD THE MAIN AT THE MINIMUM RATE OF ONE (1) PERCENT.

6. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE. ASTM C-478 WITH TONGUE AND GROOVE JOINTS SEALED WITH GASKETS OR CONFORMING TO ASTM C-443 OR BITUMINOUS JOINTING MATERIAL.
7. NO MORE THAN TWO PRECAST ADJUSTING RINGS WITH A MAXIMUM HEIGHT ADJUSTMENT OF SIX INCHES SHALL BE ALLOWED.

8. ALL PVC CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER-TIGHT PIPE TO MANHOLE SLEEVES OR SEALS, PER ASTM C-923.
9. MANHOLES SHALL INCLUDE EXTERNAL CHIMNEY SEALS.

10. ALL SANITARY SEWER CONSTRUCTION REQUIRES SIX (6) INCHES OF CA-7 CRUSHED GRAVEL OR CRUSHED STONE BEDDING UNDER THE PIPE. BEDDING STONE SHALL EXTEND TO A POINT TWELVE INCHES ABOVE THE TOP OF THE PIPE.

11. THE INSTALLATION OF SANITARY SEWER AND APURTANCES SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034 FOR PVC PIPE AND FITTINGS.

12. BACKFILLING OF THE TRENCH SHALL BE ACCOMPLISHED BY CAREFUL PACKING OF THE TRENCH WITH MATERIAL AFTER THE PIPE, BEDDING, AND THE COVER MATERIAL HAVE BEEN INSTALLED. ANY PIPE INSTALLED UNDER OR WITHIN FIVE (5) FEET OF A PAVEMENT EDGE, SIDEWALK, CURB AND GUTTER SHALL BE BACKFILLED TO THE TOP OF THE TRENCH WITH CA-7 MATERIAL.

13. "BAND-SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED WITH THE CONNECTION OF SEWER PIPE DISSIMILAR MATERIALS. ALL CHANGES OF MATERIAL SHALL OCCUR INSIDE A MANHOLE.

14. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING TIE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED: A. CONCRETE SHALL BE SEWER MAIN BY PROPER TOOLS ("SEWER TAP" MACHINE OR SIMILAR), AND PROPER INSTALLATION OF RUBBER GASKETS OR RUB-TIE GASKETS. B. REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A TIE OR TIE BRANCH SECTION. C.) WITH PROPER CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR RESECTION OF PROPER FITTING, USING "BAND-SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.

15. MANHOLE FRAMES SHALL BE NEWMAN NO. 8-1710/WATERPROOF LID OR EAST JOHNSON IRON WORKS TONGUES. ALL CLOSED LIDS SHALL HAVE A CONCEALED PICK-HOLE. WATER AND SANITARY LIDS SHALL BE WATER-TIGHT AND SELF-SEALING. LIDS SHALL BE EMBOSSED WITH "SANITARY SEWER" AND "CITY OF LOCKPORT," UNLESS OTHERWISE NOTED.

16. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER.
17. ALL SANITARY SEWER PIPES SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, AS A MINIMUM, AND WITH CITY OF LOCKPORT SANITARY CODE REQUIREMENTS, INCLUDING VISUAL, TELEVISION, INFILTRATION, EXFILTRATION, AIR TESTS, LEAKAGE TESTS AND DEFLECTION TESTS.

18. THE SEWER SHALL MEET THE REQUIREMENTS OF EXERCUTION OR AIR UNDER PRESSURE AND TELEVISION INSPECTION. PVC SEWER PIPE MUST PASS DEFLECTION TESTS TO THE SAME STANDARDS AS TO BE APPROVED BY THE ENGINEER'S REPRESENTATIVES.

19. MANHOLES SHALL BE TESTED PER ASTM C-969 OR C-1244.
PAVEMENT SIDEWALK:

1. PAVEMENT THICKNESS SHALL COMPLY WITH DUPAGE COUNTY AND BUREAU CODE REQUIREMENTS.
2. HANDICAPPED RAMPS AND DEPRESSED CURBS SHALL BE PROVIDED AT LOCATIONS SHOWN ON PLANS.

3. EXPOSURE JOINTS SHALL BE PLACED, AS A MINIMUM AT ALL CONSTRUCTION JOINTS IN THE CURB. TWO NO. 4 REINFORCING BARS SHALL BE PLACED CONTINUOUSLY BETWEEN EXPOSURE JOINTS. EXPOSURE JOINTS SHALL BE CONVELED AND SPACED NO MORE THAN SIXTY (60) FEET ON CENTER.

4. PRIOR TO PLACING ANY PAVEMENT MATERIAL, THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY PREPARING AND COMPACTING THE SUBGRADE. THE PAVEMENT BASE COURSE SHALL BE PROPERLY PROOF-ROLLED WITH A FULLY LOADED DUMP TRUCK. THE ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS BEFORE PROOF-ROLLING. ADDITIONAL PROOF-ROLLS MAY BE NECESSARY IF REPORT THAT ANY UNDESIRABLE AREAS HAVE BEEN REPORTED. NO PAVEMENT MATERIAL IS TO BE PLACED ON A WET OR SOFT SUBGRADE.

5. ALL EXISTING PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAWCUT TO A NEAR EDGE ALONG LINES OF PROPOSED REMOVAL BEFORE REMOVAL OPERATIONS BEGIN.
SOIL EROSION CONTROL PLAN:

1. THE PROJECT AREA SHALL BE GRADED TO A MINIMAL AMOUNT OF STORM WATER RUNOFF AND LIKEWISE SOIL SEDIMENT WILL DISCHARGE UNRESTRICTED FROM THE SITE.
2. IN ACCORDANCE WITH NPDES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL PROTECTION DURING CONSTRUCTION AS WELL AS PROVIDING PROTECTION TO ADJOINING STREETS FROM MUD AND POLLUTED RUNOFF AS WELL AS KEEPING EXISTING PAVEMENT CLEAN OF MUD AND DEBRIS. PAVEMENT SWEEPING OF CITY ROADS SHALL BE PERFORMED AS NECESSARY ON AT THE DIRECTION OF THE CITY ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND CLEANED OR OTHERWISE MAINTAINED ON A WEEKLY BASIS, AND WITHIN 24 HOURS AFTER ANY SIGNIFICANT RAINFALL (0.5 INCHES OR GREATER) TO INSURE THAT ANY DAMAGE THAT MAY HAVE OCCURRED IS REPAIRED. ALL EROSION CONTROL INSTALLATION SHALL BE APPROVED BY CITY OF LOCKPORT ENGINEERING DIVISION PERSONNEL BEFORE CONSTRUCTION IS ALLOWED TO BEGIN.

3. INLET PROTECTORS SHALL BE USED IN ALL STORM GRATES DURING CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL THE RESTORATION IS PERMANENTLY ESTABLISHED. THE INLET PROTECTORS SHALL BE MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL KEEP A MAINTENANCE LOG.
4. SILT FENCING SHALL REMAIN IN PLACE THROUGHOUT THE CONSTRUCTION OF HOUSE BUILDINGS TO SERVE AS EROSION CONTROL FOR AT THAT CONSTRUCTION.

5. TO PREVENT SOIL FROM LEAVING THE SITE ON CONSTRUCTION VEHICLE WHEELS, WORK EQUIPMENT'S SHALL BE CLEANED ONLY OF GRAVIL AND SHALL EXTEND AT LEAST 100 FEET INTO THE JOB SITE. THE EXISTING PAVEMENT SURFACES SHALL BE PROTECTED ONLY FOR SOIL DEBRIS AND SHALL BE CLEANED WHEN NECESSARY.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY DISPOSE OF ANY EXCESS EXCAVATED MATERIAL.
7. DISPOSAL OF DEBRIS EXCAVATION AND PAVEMENT REMOVAL SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND CONCEALED FROM INCIDENTAL EXPOSURE.

8. ANY TOPSOIL THAT WILL BE STOCKPILED ON SITE SHALL BE MANAGED IN ACCORDANCE WITH THE CURRENT NPDES REGULATIONS. IF THE STOCKPILE WILL REMAIN ON SITE FOR AN EXTENDED PERIOD, IT SHALL BE STABILIZED WITH GRASS AND/OR OTHER VEGETATION AND SILT FENCING SHALL BE PLACED AROUND THE STOCKPILE.

9. ALL ACCESS TO AND FROM THE CONSTRUCTION SITE IS TO BE RESTRICTED TO THE CONSTRUCTION SITE AND TO THE REQUIREMENTS OF ACTIVITIES.

10. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE EFFECTIVE PERFORMANCE OF THESE INTERESTED FUNCTION.

11. THE ENGINEER SHALL BE NOTIFIED OF MAJOR AMENDMENTS OF THE SITE EROSION AND SEDIMENT CONTROL PLAN. SUCH AMENDMENTS, WHICH WILL BE APPROVED IN THE SAME MANNER AS THE ORIGINAL PLANS.

12. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY SHOULDER OR STREET CLEANING (NOT FLOODED) BEFORE THE END OF EACH WORKDAY AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL.

13. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DESIGNED OF WITHIN 24 HOURS AFTER THE FINAL SITE STABILIZATION IS ACHIEVED WITH PERMANENT SOIL STABILIZATION MEASURES.
14. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 7 CALENDAR DAYS FOLLOWING THE END OF ACTIVE DISTURBANCE OR RECONSTRUCTION.

15. IF NONTERRAIN FEATURES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. ALL PAVED DISCHARGES SHALL BE BUILT-THROUGH APPROPRIATELY DESIGNED BETWEEN TRENCH WALLS.

SITE GRADING:
1. EXCAVATION OF TRENCH AND OTHER STRUCTURALLY UNSUITABLE MATERIALS MUST REQUIRE EARTH EXCAVATION AND COMPLETED EXISTING MATERIAL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS.
2. PLACEMENT OF THE EXCAVATED MATERIAL SHALL BE IN AREAS DESIGNATED BY THE OWNER FOR FUTURE USE. WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL.

3. COMPACTION OF THE EXCAVATED MATERIAL PLACES IN AREAS NOT REQUIRING STRUCTURAL FILL SHALL BE MODERATE.
4. EXCESS MATERIALS, IF NOT UTILIZED AS FILL OR STOCKPILED FOR FUTURE LANDSCAPING, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF BY THE CONTRACTOR.

5. EXCAVATION OF EARTH AND OTHER MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.3 +/- OF THE PLAN SUBGRADE ELEVATIONS. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIAL SHALL BALANCE AS PART OF THE FINE GRADING OPERATION.
6. PLACEMENT AND COMPACTION OF MATERIALS SHALL CONFORM TO 120.3 SPECIFICATIONS.

7. THE CONTRACTOR SHALL MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
8. PAYMENT FOR THE REMOVAL OF UNSUITABLE MATERIAL, EXCLUDING TOPSOIL EXCAVATION SHALL BE BASED ON THE QUANTITIES AS FIELD MEASURED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE AS PART OF HIS BID A UNIT PRICE PER CUBIC YARD FOR THE REMOVAL OF UNSUITABLE MATERIALS. SAID UNIT PRICE SHALL INCLUDE THE COMPLETE REMOVAL OF THE MATERIAL, REPLACEMENT WITH SUITABLE MATERIAL OBTAINED BY THE CONTRACTOR FROM A BORROW SOURCE, AND COMPACTION TO THE REQUIRED SPECIFICATIONS OF THE ENGINEER.

9. ALL DISTURBED AREAS SHALL BE RESTORED WITH TOPSOIL AND SEED AND BURNET UNLESS OTHERWISE INDICATED.
10. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO MAINTAIN ALL THE SEDIMENTATION CONTROL MEASURES. INSPECTIONS SHALL BE CONDUCTED AFTER A RAIN EVENT, AND IF MAINTENANCE OF THE STRUCTURES IS NECESSARY, INCLUDING REPAIR OF DAMAGE AND REMOVAL OF DEBRIS OR SEDIMENT FROM VEGETATIVE FILTERS, IT SHALL BE DONE BY THE DEVELOPER.

DATE OF CONSTRUCTION: IT IS ANTICIPATED THAT CONSTRUCTION WILL BEGIN IN 2020, AND THAT EARTHWORK AND UTILITY OPERATIONS WILL BE COMPLETED BY SUMMER 2020.

• INSTALL TEMPORARY EROSION CONTROL MEASURES.
• MASS GRADE SITE AND EXCAVATE DETENTION FACILITIES.
• CONSTRUCT UTILITIES AND PERFORM TREE REMOVALS.
• CONSTRUCT ROADWAY AND BUILDING FOUNDATIONS.
• PERFORM RESTORATION, STABILIZATION, AND REMOVAL OF TEMPORARY EROSION CONTROL MEASURES.



MUNHALL GLEN
1000 W. STATE ST.
LOCKPORT, IL 60459
TEL: 815.937.6200
FAX: 815.937.6201

DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	PROJECTS/Minor Construction/190726.00 Municipal Sewer System/190726.00 SHEET C-2.0 General Notes.dwg

GENERAL NOTES

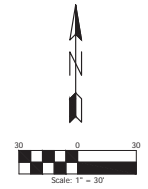
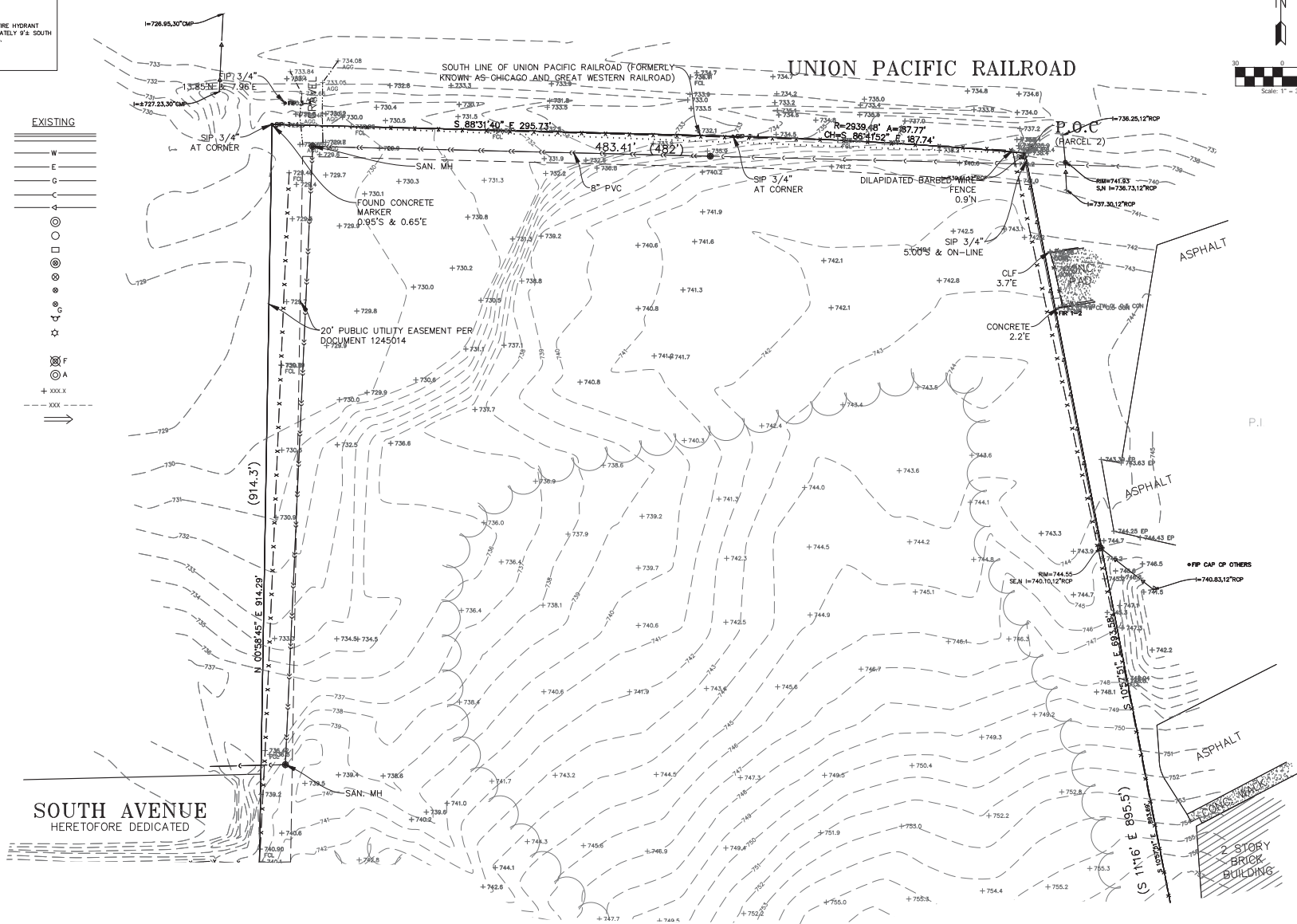
C-2.0
SHEET

SITE BENCHMARKS

SITE BENCHMARK (BM) #1
NORTHWEST BONNET BOLT ON A FIRE HYDRANT
LOCATED AT THE WEST SIDE OF TRLEX ROAD AND
APPROXIMATELY 41' NORTH OF PARCEL 3
ELEV. 656.01 (NAVD 88)

SITE BENCHMARK (BM) #2
SOUTHWEST BONNET BOLT ON A FIRE HYDRANT
LOCATED ON PARCEL 4 APPROXIMATELY 9' SOUTH
OF THE NORTH LINE OF PARCEL 4.
ELEV. 688.50 (NAVD 88)

- EXISTING**
- CURB & GUTTER
 - WATER
 - ELECTRIC
 - GAS
 - SANITARY SEWER
 - STORM SEWER
 - MANHOLE
 - CATCH BASIN
 - INLET
 - VALVE VAULT
 - VALVE & BOX
 - BUFFALO BOX
 - GAS VALVE
 - HYDRANT
 - STREET LIGHT
 - HANDICAPPED RAMP
 - FILL STRUCTURE
 - ADJUST STRUCTURE
 - ELEVATION
 - CONTOUR
 - FLOW



ENGINEERING RESOURCE ASSOCIATES
STATE WISCONSIN LICENSE NO. 1000000000
PROJECT NO. 190726.00
DATE: 07-24-2020

AIRHART CONSTRUCTION
"Building & Water Tomorrow"

MUNHALL GLEN
151 GARDNER BL.
EAGLE RIDGE, WI 53002
190726.00

PROJECT: Airhart Construction\190726.00_Munhall_Site_Rev.DWG\0400\190726.00_SHEET_C-3.0_LandingConstruction.dwg

DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

EXISTING CONDITIONS

C-3.0
SHEET

SOUTH AVENUE
HERETOFORE DEDICATED

N.: 09-26-355-020

NO ACCESS

8' WOOD FENCE
0.7' W

6' CLF 75.9
0.5'E & ON-LINE

SHED CORNER
2.6'S

PEDESTAL
+760.2'S

FIP 3/4"
0.35'N

FIP 3/4"
0.17'N

PEDESTAL
4.6'S

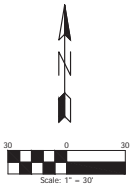
PEDESTAL
1.1'S

10' PUBLIC UTILITY & DRAINAGE
EASEMENT PER DOCUMENT
1404982

CAMBRIDGE PHASE NO.1

RECORDED FEBRUARY 2, 1977 AS DOCUMENT NUMBER 1395805

CERTIFICATE OF CORRECTION RECORDED MAY 10, 1977 AS DOCUMENT NUMBER 1404982



SITE BENCHMARKS

● SITE BENCHMARK (BM) #1
NORTHWEST BONNET BOLT ON A FIRE HYDRANT
LOCATED AT THE WEST SIDE OF TYLER ROAD AND
APPROXIMATELY 41'S NORTH OF PARCEL 3
ELEV: 656.01 (NAVD 88)

● SITE BENCHMARK (BM) #2
SOUTHWEST BONNET BOLT ON A FIRE HYDRANT
LOCATED ON PARCEL 4 APPROXIMATELY 9'S SOUTH
OF THE NORTH LINE OF PARCEL 4.
ELEV: 688.50 (NAVD 88)

- EXISTING**
- ==== CURB & GUTTER
 - W — WATER
 - E — ELECTRIC
 - G — GAS
 - C — SANITARY SEWER
 - S — STORM SEWER
 - MANHOLE
 - CATCH BASIN
 - INLET
 - VALVE VAULT
 - VALVE & BOX
 - BUFFALO BOX
 - GAS VALVE
 - HYDRANT
 - STREET LIGHT
 - HANDICAPPED RAMP
 - ADJUST STRUCTURE
 - ELEVATION
 - CONTOUR
 - FLOW

ENGINEERING RESOURCE ASSOCIATES
1000 WEST 7th Avenue, Suite 100
Denver, CO 80202
Phone: (303) 733-3300
www.eraonline.com

AIRHART CONSTRUCTION
"Building & Water Tomorrow"

MUNHALL GLEN
151 GARDNER BL.
DENVER, CO 80202

DATE: 07-24-2020
PROJECT #: 190726.00
DESIGNED BY: TF
DRAWN BY: TF
CHECKED BY: NAV
DESCRIPTION: PROJECT: Munhall St, Orleans St, Riv. DAVIS/CADDO (SHEET) 190726.00 SHEET C-3.0_LoadingCondition.dwg

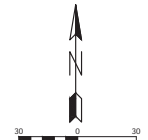
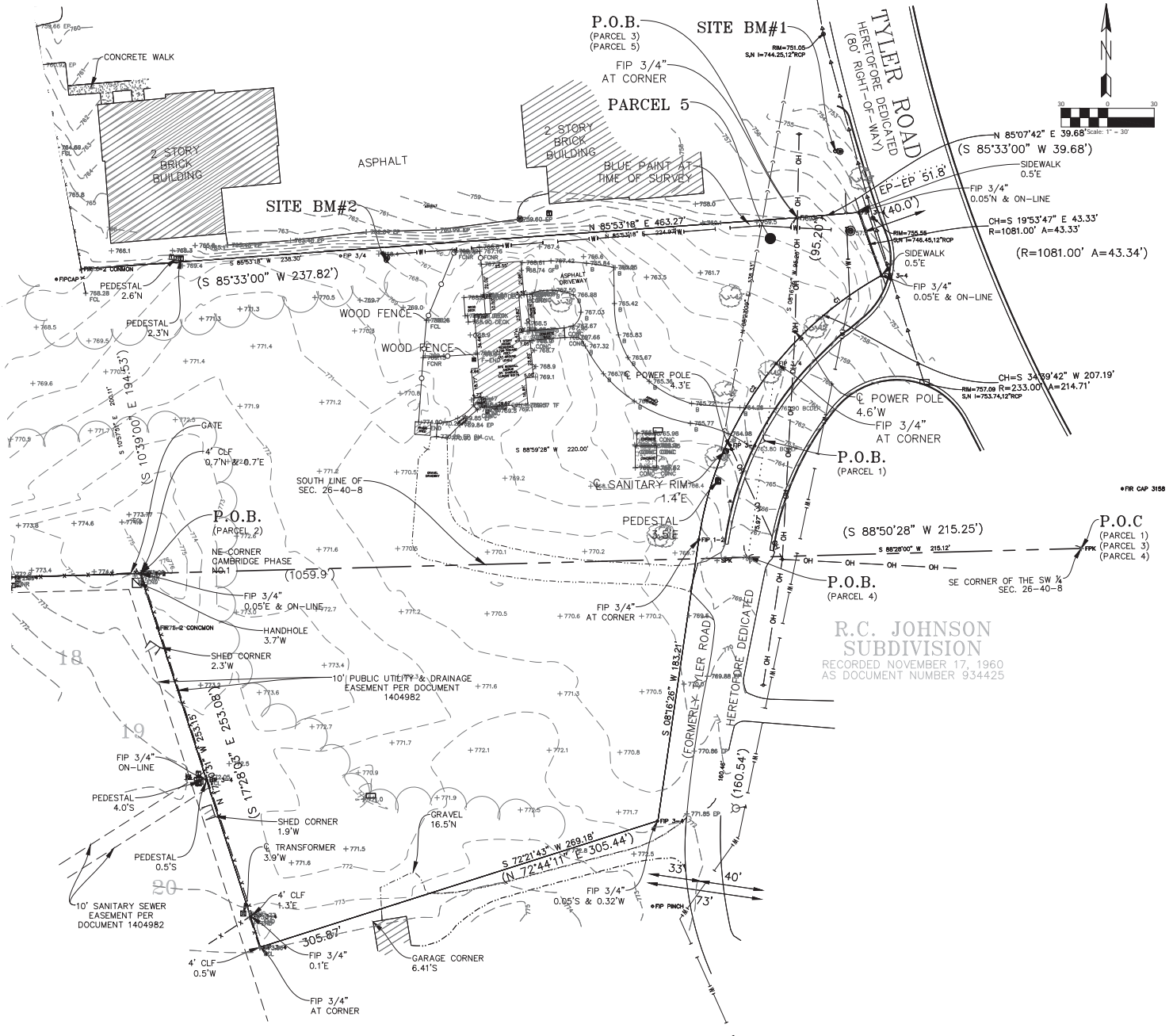
EXISTING CONDITIONS

C-3.1
SHEET

SITE BENCHMARKS

- SITE BENCHMARK (BM) #1
NORTHWEST BONNET BOLT ON A FIRE HYDRANT
LOCATED AT THE WEST SIDE OF TYLER ROAD AND
APPROXIMATELY 41' NORTH OF PARCEL 3
- SITE BENCHMARK (BM) #2
SOUTHWEST BONNET BOLT ON A FIRE HYDRANT
LOCATED ON PARCEL 4 APPROXIMATELY 9' SOUTH
OF THE NORTH LINE OF PARCEL 4.
- ELEV. 656.01 (NAVD 88)
- ELEV. 688.50 (NAVD 88)

- EXISTING**
- Curb & Gutter
 - Water
 - Electric
 - Gas
 - Sanitary Sewer
 - Storm Sewer
 - Manhole
 - Catch Basin
 - Inlet
 - ⊗ Valve Vault
 - ⊗ Valve & Box
 - ⊗ Buffalo Box
 - ⊗ Gas Valve
 - ☆ Hydrant
 - ☆ Street Light
 - ⊗ Handicapped Ramp
 - ⊗ Fill Structure
 - ⊗ Adjust Structure
 - Elevation
 - - - - - Contour
 - Flow



ENGINEERING RESOURCE ASSOCIATES
 1000 WEST 10TH AVENUE, SUITE 100
 DENVER, COLORADO 80202
 PHONE: (303) 733-1100
 FAX: (303) 733-1100
 WWW.ERACONSTRUCTION.COM

AIRHART CONSTRUCTION
 Building & Water Treatment

AIRHART CONSTRUCTION

MUNHALL GLEN
 51 GARDNER BL.
 DENVER, CO 80231
 (303) 733-1100

DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

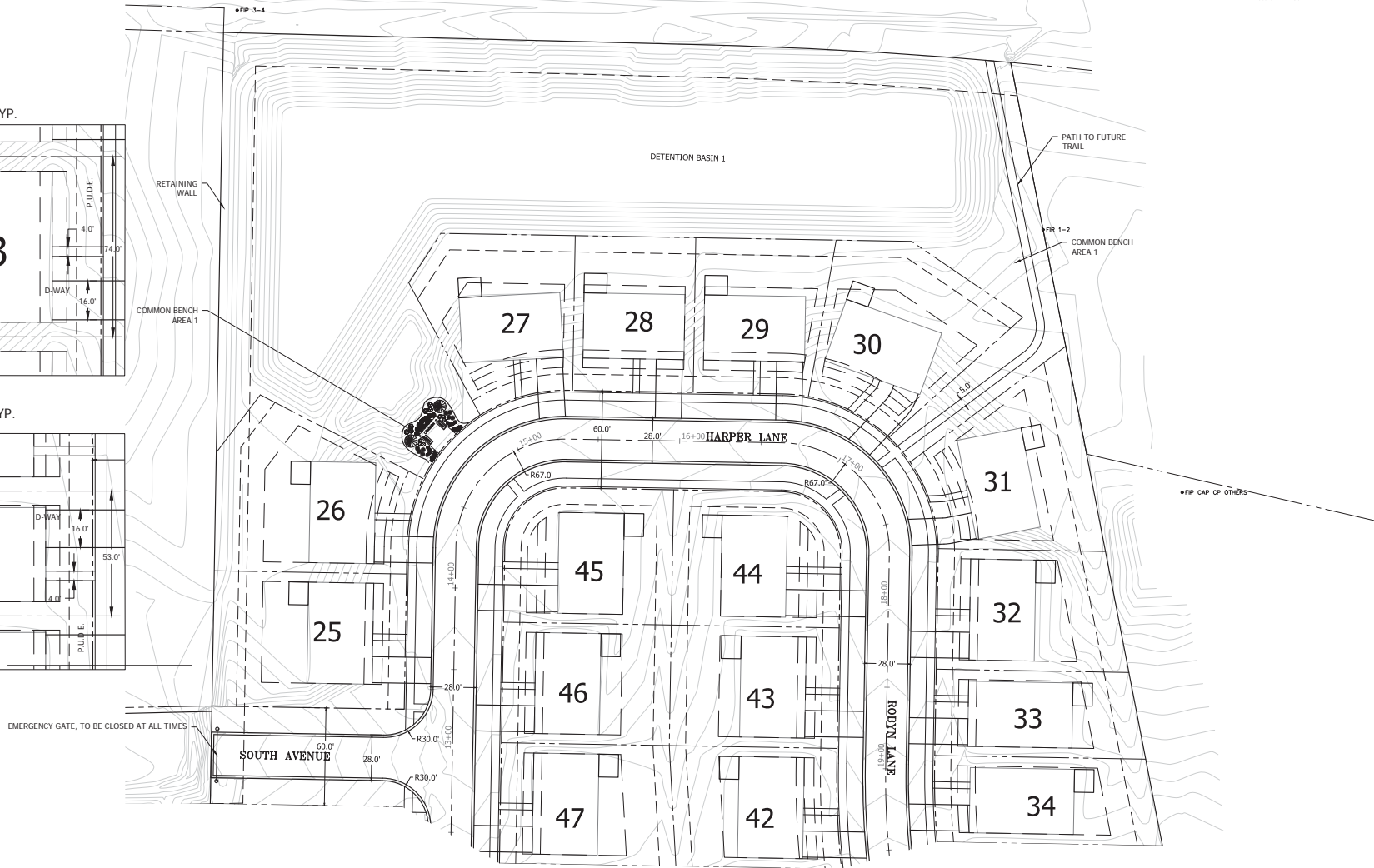
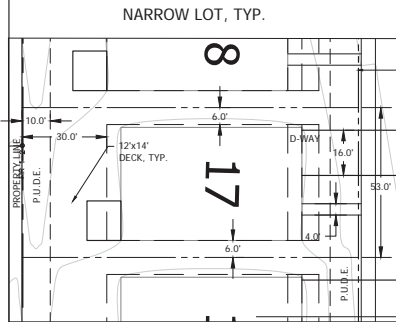
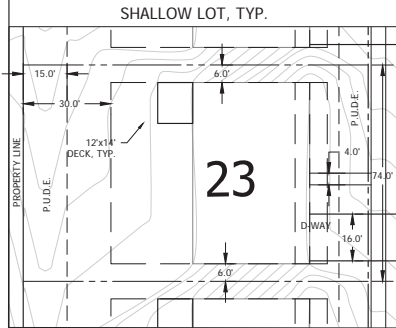
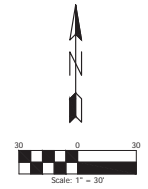
EXISTING CONDITIONS

C-3.2
SHEET


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LEGEND

- PROPERTY LINE _____
- EASEMENT _____
- SETBACKS - - - - -
- CENTERLINE _____
- RIGHT OF WAY _____



ENGINEERING RESOURCE ASSOCIATES
1200 WEST MARINE DRIVE, SUITE 100
 FORT WORTH, TEXAS 76102
 PHONE: (817) 731-3300
 FAX: (817) 731-3301
 WWW.ERACONSTRUCTION.COM



AIRHART CONSTRUCTION
Building A Better Tomorrow™

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MUNHALL GLEN
51 GARDNER, L.L.C.
 ENGINEER/PROJECT NO. 190726.00

DATE	PROJECT #	DESIGNED BY	DRAWN BY	CHECKED BY	DESCRIPTION
07-24-2020	190726.00	TF	TF	NAV	

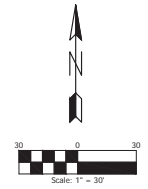
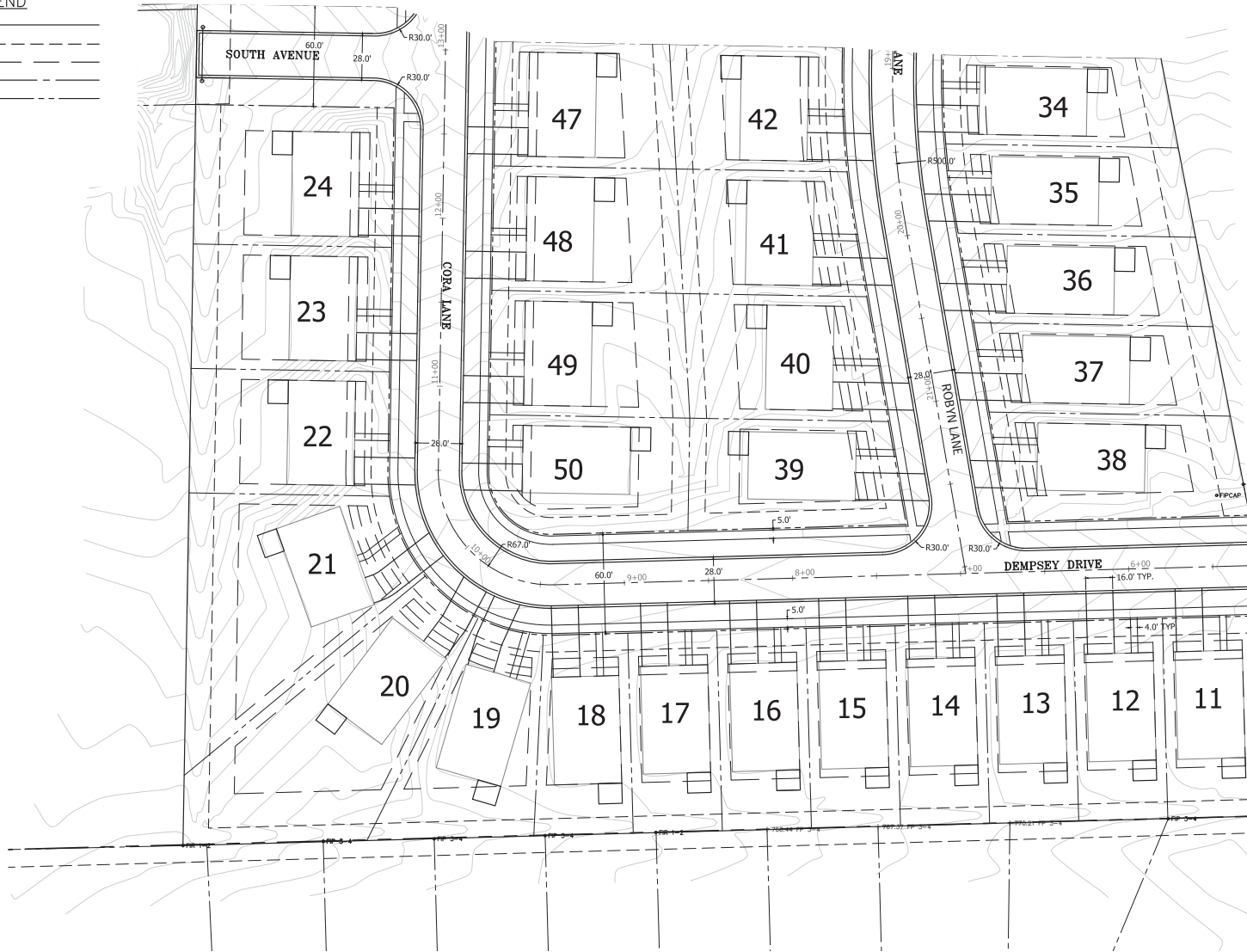
GEOMETRY PLAN

C-4.1
SHEET

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LEGEND

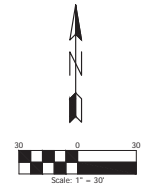
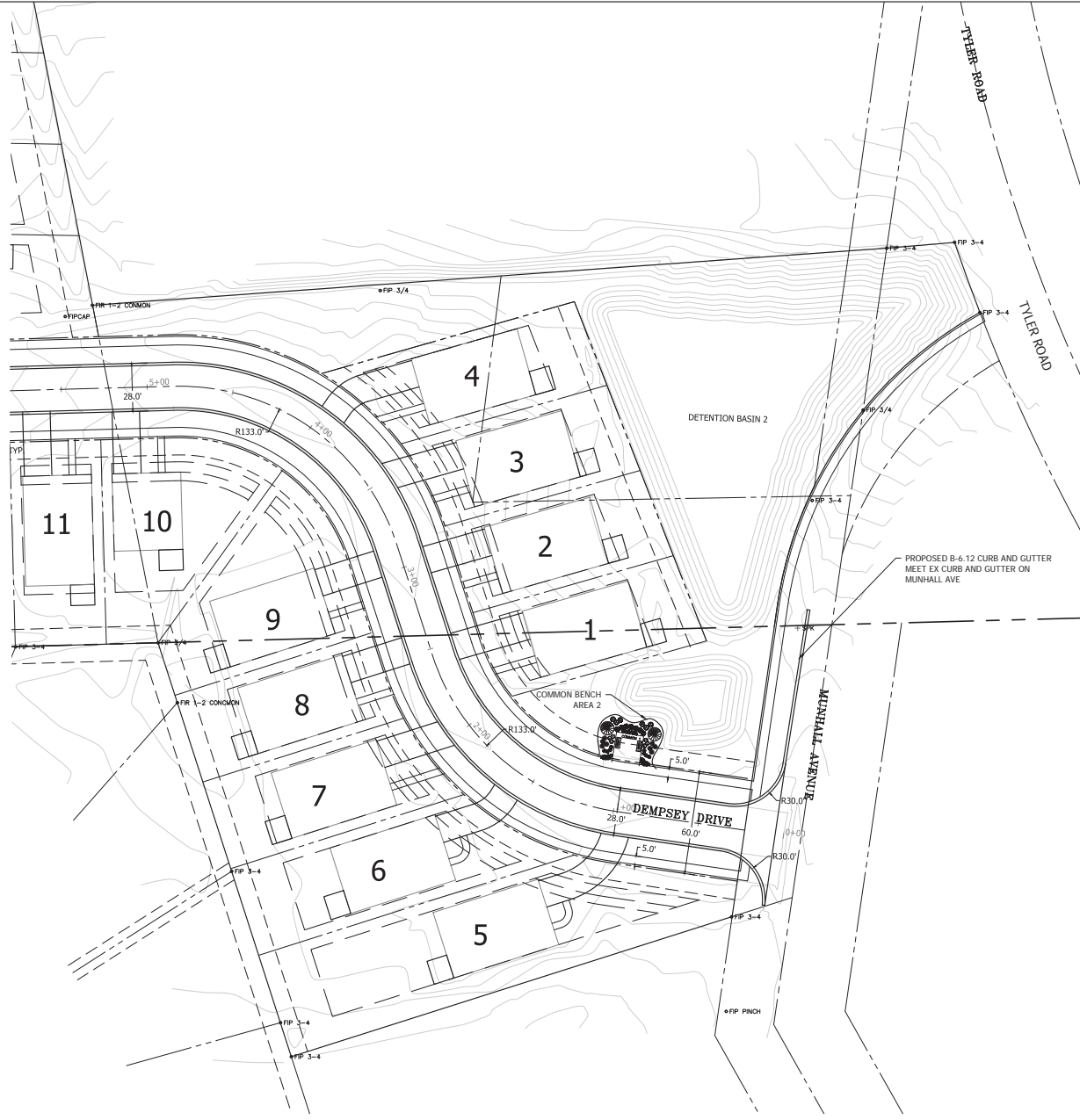
- PROPERTY LINE
- EASEMENT
- SETBACKS
- CENTERLINE
- RIGHT OF WAY




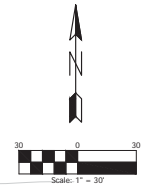
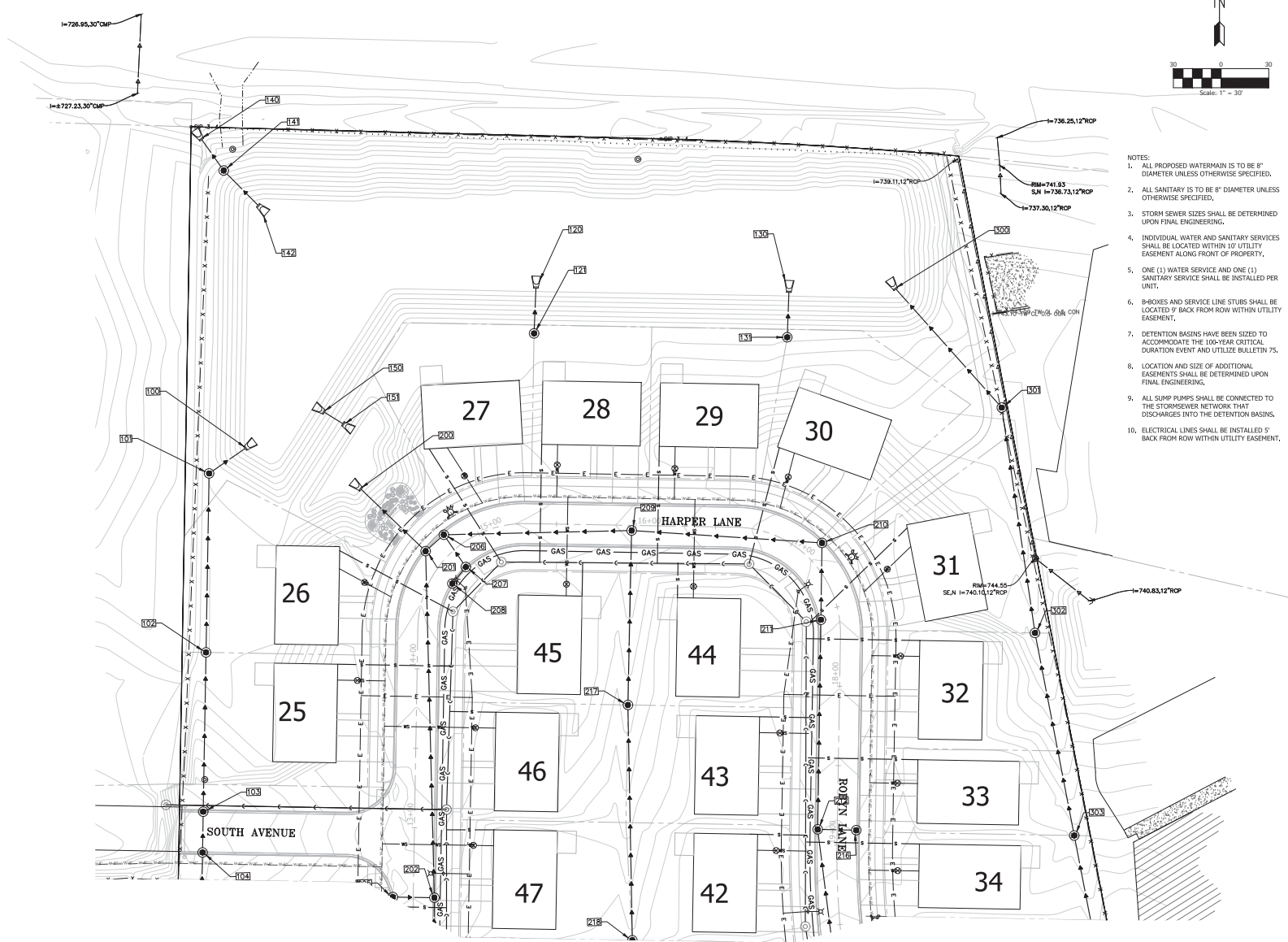
<p>ENGINEERING RESOURCE ASSOCIATES 1000 WEST MARINE DRIVE, SUITE 100 DENVER, COLORADO 80202 PH: 303.733.8200 WWW.ERA-ARAS.COM</p>												
<p>AIRHART CONSTRUCTION "Building A Better Tomorrow"</p>												
<p>AIRHART CONSTRUCTION</p>												
<p>MUNHALL GLEN 151 GLENDALE BL. DENVER, CO 80226</p>												
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DATE	07-24-2020											
PROJECT #	190726.00											
DESIGNED BY	TF											
DRAWN BY	TF											
CHECKED BY	NAV											
DESCRIPTION												
<p>© PROJECTS/Airhart Construction\190726.00_Munhall_Si_Oriana_SiE_REV.DWG\04/20/20\190726.00_SHEET C-4.2_Geometry.dwg</p>												
<p>C-4.2 SHEET</p>												

LEGEND

- PROPERTY LINE
- EASEMENT
- SETBACKS
- CENTERLINE
- RIGHT OF WAY



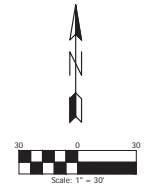
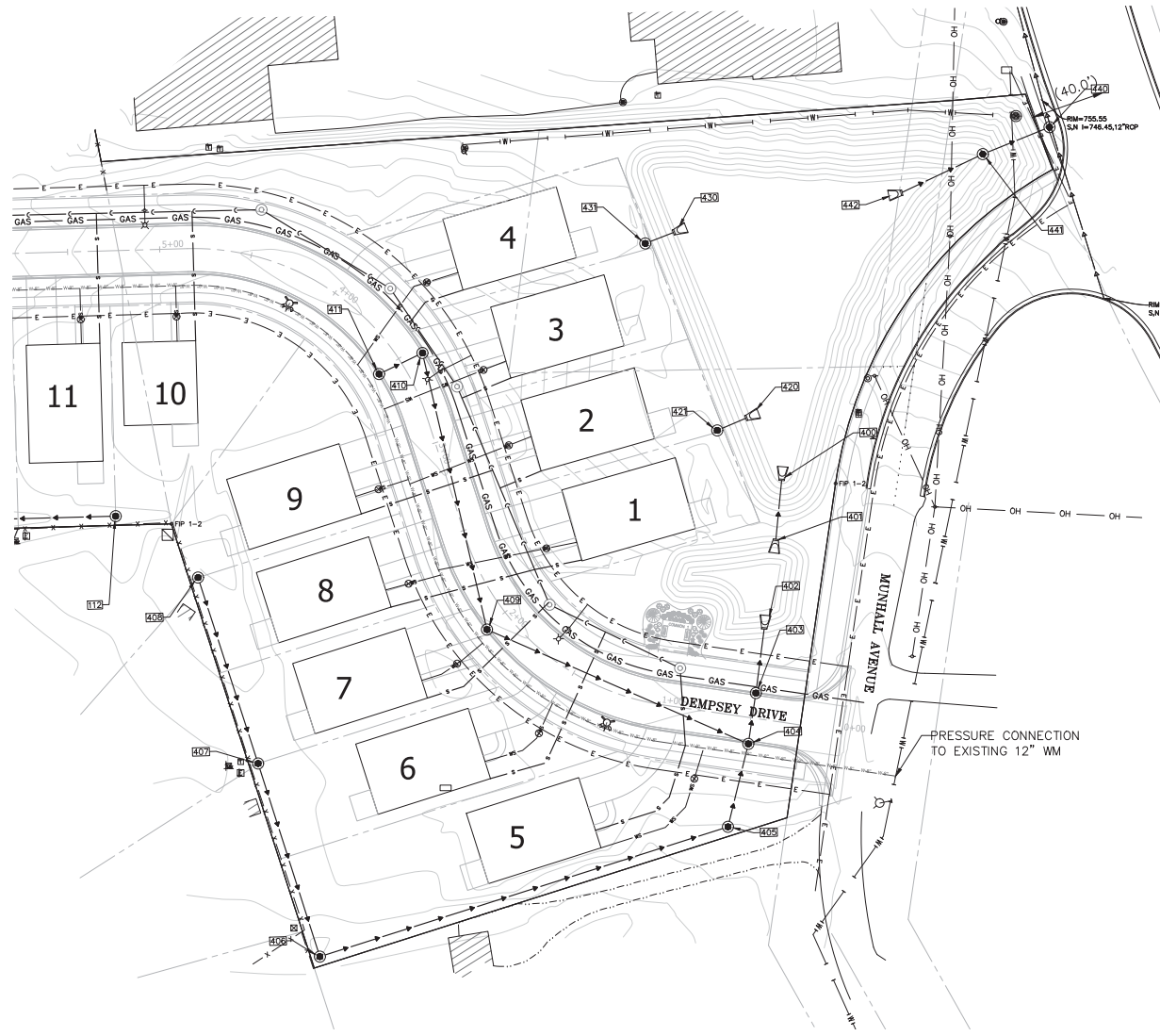
 <p>AIRHART CONSTRUCTION <i>"Building A Better Tomorrow"</i></p>	<p>ENGINEERING RESOURCE ASSOCIATES 1500 WEST MAIN ST. SUITE 100 DENVER, CO 80202 PHONE: (303) 733-3000 WWW.ERASOURCE.COM</p>
<p>MUNHALL GLEN 51 HOMER LN. DENVER, CO 80226</p>	<p>DATE: 07-24-2020 PROJECT #: 190726.00 DESIGNED BY: TF DRAWN BY: TF CHECKED BY: NAV DESCRIPTION: GEOMETRY PLAN</p>
<p>C-4.3 SHEET</p>	
<p>© PROJECTS\Airhart_Construction\190726.00_Munhall_Si_Corner_Site_REV.DWG\CAD\190726.00_SHEET C-4.3_Geometry.dwg</p>	



- NOTES:
1. ALL PROPOSED WATERMAIN IS TO BE 8" DIAMETER UNLESS OTHERWISE SPECIFIED.
 2. ALL SANITARY IS TO BE 6" DIAMETER UNLESS OTHERWISE SPECIFIED.
 3. STORM SEWER SIZES SHALL BE DETERMINED UPON FINAL ENGINEERING.
 4. INDIVIDUAL WATER AND SANITARY SERVICES SHALL BE LOCATED WITHIN 10' UTILITY EASEMENT ALONG FRONT OF PROPERTY.
 5. ONE (1) WATER SERVICE AND ONE (1) SANITARY SERVICE SHALL BE INSTALLED PER UNIT.
 6. B-BOXES AND SERVICE LINE STUBS SHALL BE LOCATED 9' BACK FROM ROW WITHIN UTILITY EASEMENT.
 7. DETENTION BASINS HAVE BEEN SIZED TO ACCOMMODATE THE 100-YEAR CRITICAL DURATION EVENT AND UTILIZE BULLETIN 75.
 8. LOCATION AND SIZE OF ADDITIONAL EASEMENTS SHALL BE DETERMINED UPON FINAL ENGINEERING.
 9. ALL SUMP PUMPS SHALL BE CONNECTED TO THE STORMSEWER NETWORK THAT DISCHARGES INTO THE DETENTION BASINS.
 10. ELECTRICAL LINES SHALL BE INSTALLED 5' BACK FROM ROW WITHIN UTILITY EASEMENT.

DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	UTILITY PLAN

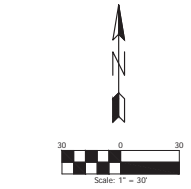
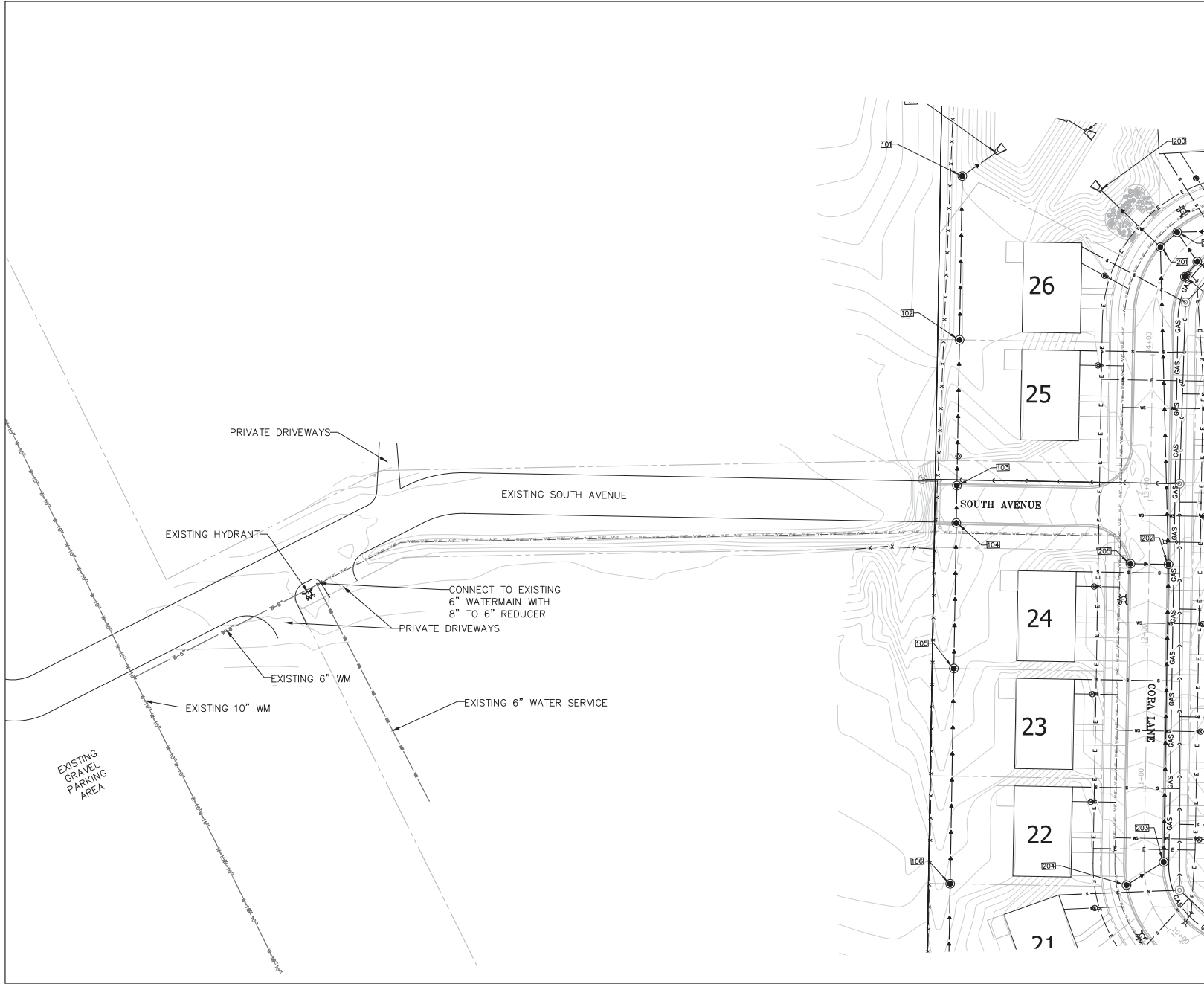
PROJECTED	190726.00
MUNHALL SITE	REV. DATE/DESCRIPTION
190726.00	SHEET C-5.0 UTILITY PLAN



- NOTES:
1. ALL PROPOSED WATERMAIN IS TO BE 8" DIAMETER UNLESS OTHERWISE SPECIFIED.
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AIRHART CONSTRUCTION	
MUNHALL GLEN 51 GARDEN LANE EPHRAHATA, OHIO 43072-0200	
DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	UTILITY PLAN
C-5.2 SHEET	

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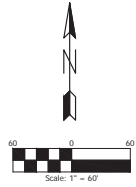
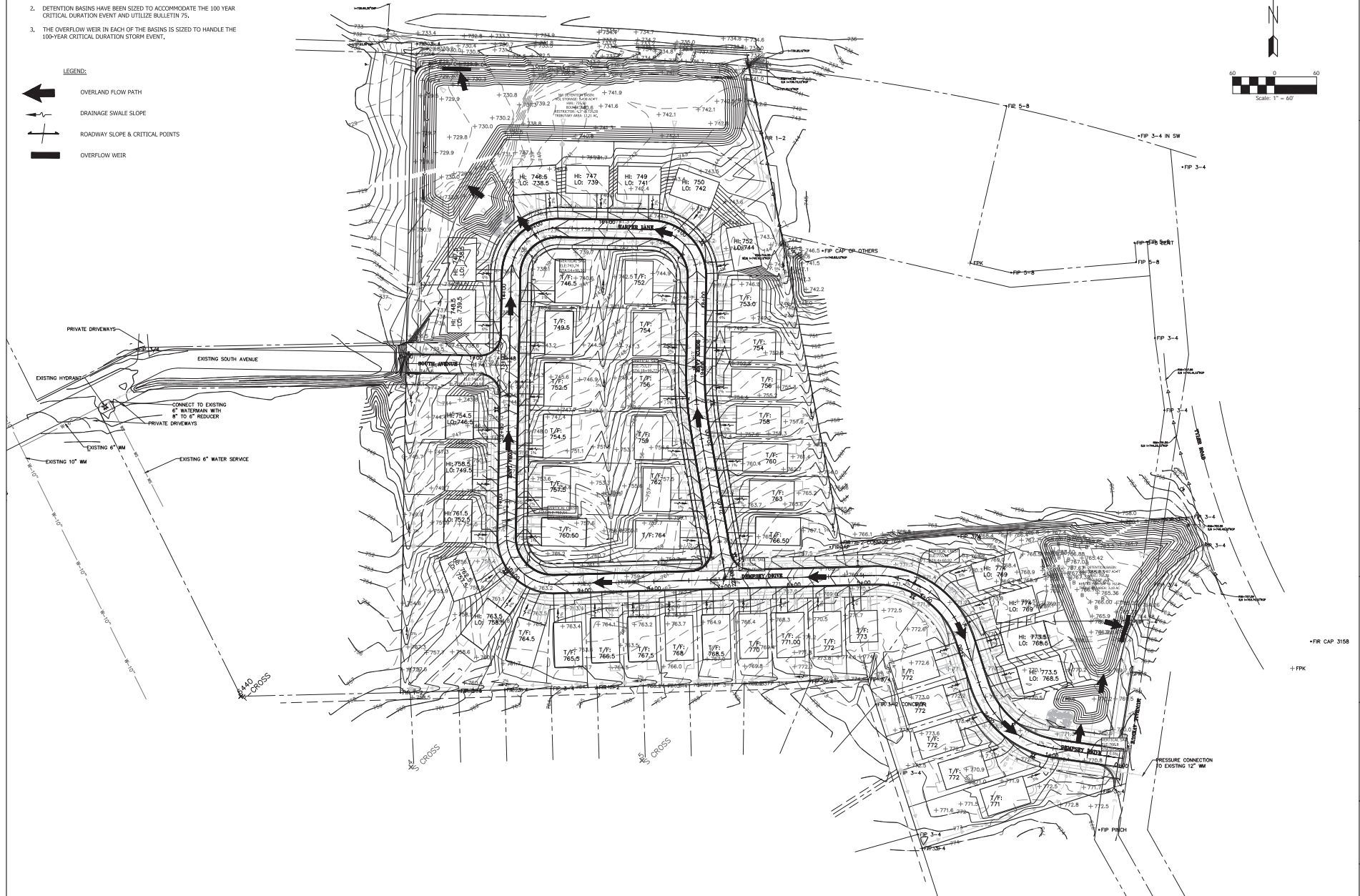
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<p>ENGINEERING RESOURCE ASSOCIATES 1200 WEST MARINE DRIVE, SUITE 100 DENVER, COLORADO 80202 PHONE: (303) 733-1300 WWW.ERACONSTRUCTION.COM</p>	
<p>AIRHART CONSTRUCTION <i>"Building a Better Tomorrow"</i></p>	
<p>AIRHART CONSTRUCTION</p>	
<p>MUNHALL GLEN 51 GLENDALE BL. DENVER, CO 80226</p>	
DATE : 07-24-2020	PROJECT # : 190726.00
DESIGNED BY : TF	DRAWN BY : TF
CHECKED BY : NAV	DESCRIPTION : UTILITY PLAN
C:\PROJECTS\Airhart_Construction\190726.00_Munhall_Site_Rev_DWG\CA00\190726.00_SHEET C-5.3_UTILITY.dwg	
<p>C-5.3 SHEET</p>	

- GRADING NOTES:
1. PRIOR TO REMOVAL OF TOPSOIL, ALL EROSION CONTROL ELEMENTS SHALL BE IN PLACE AND FUNCTIONAL.
 2. DETENTION BASINS HAVE BEEN SIZED TO ACCOMMODATE THE 100-YEAR CRITICAL DURATION EVENT AND UTILIZE BULLETIN 75.
 3. THE OVERFLOW WEIR IN EACH OF THE BASINS IS SIZED TO HANDLE THE 100-YEAR CRITICAL DURATION STORM EVENT.

LEGEND:

- ← OVERLAND FLOW PATH
- DRAINAGE SWALE SLOPE
- ROADWAY SLOPE & CRITICAL POINTS
- OVERFLOW WEIR



DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

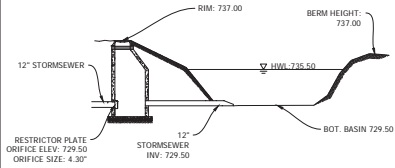
GRADING PLAN

C-6.0
SHEET

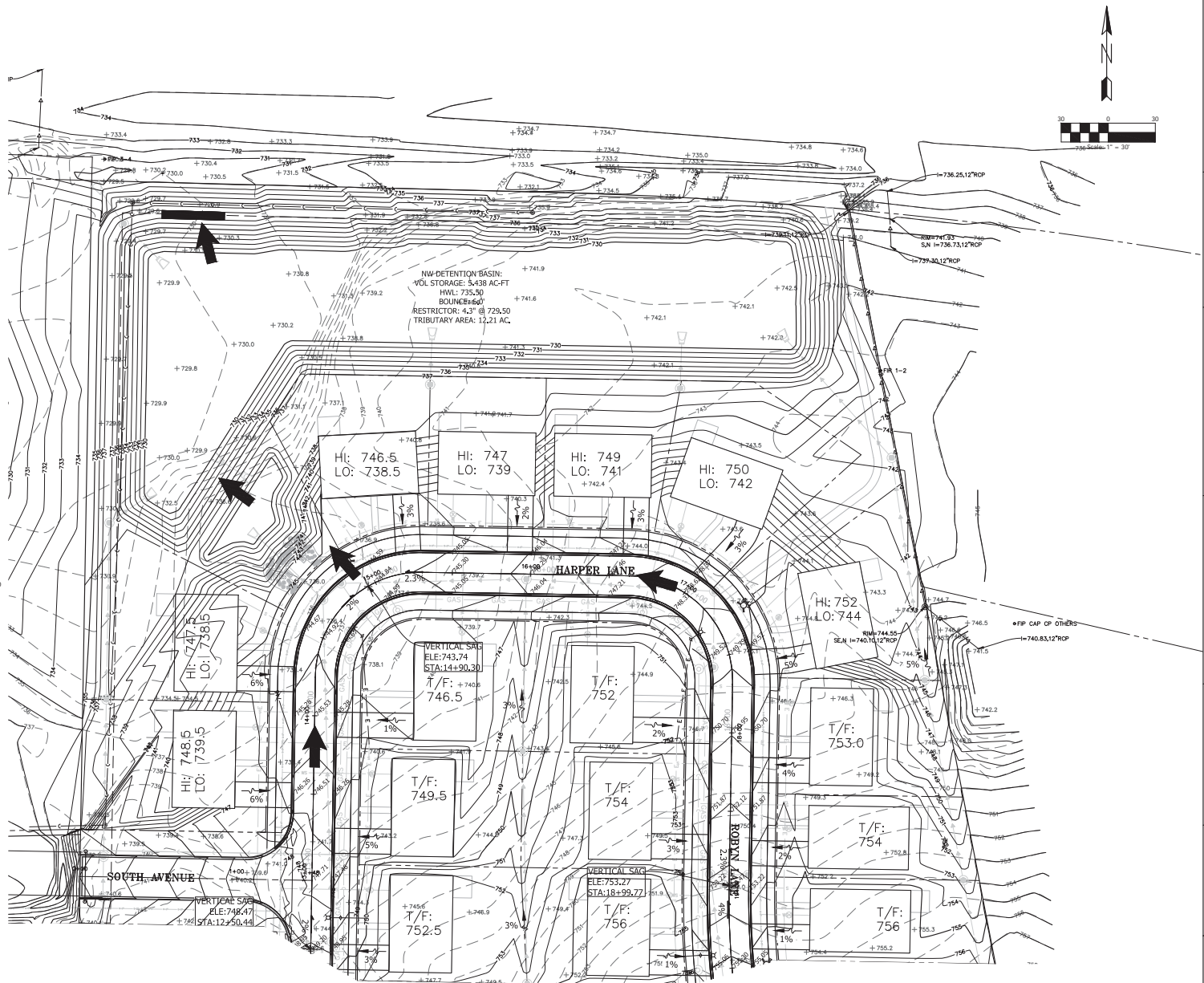
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- GRADING NOTES:
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- LEGEND:
- ← OVERLAND FLOW PATH
 - DRAINAGE SWALE SLOPE
 - ROADWAY SLOPE & CRITICAL POINTS
 - OVERFLOW WEIR



NORTHWEST DETENTION BASIN CROSS SECTION



ENGINEERING RESOURCE ASSOCIATES
 1000 WEST AVENUE, SUITE 100
 DENVER, COLORADO 80202
 PHONE: (303) 733-3000
 FAX: (303) 733-3000
 WWW: WWW.ERA-CO.COM

ERA

AIRHART CONSTRUCTION
 "Building & Water Tomorrow"

AIRHART CONSTRUCTION

MUNHALL GLEN
 51 GARDNER, N.E.
 DENVER, CO 80232
 970.726.00

DATE	DESCRIPTION
07-24-2020	PROJECT START
10/26/20	DESIGNED BY: TF
	DRAWN BY: TF
	CHECKED BY: NAV

PROJECT: Airhart Construction\190726.00_Munhall_Site_REV.DWG\0400\SHEET\190726.00_SHEET C-6.0_Covering.dwg

GRADING PLAN

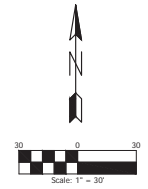
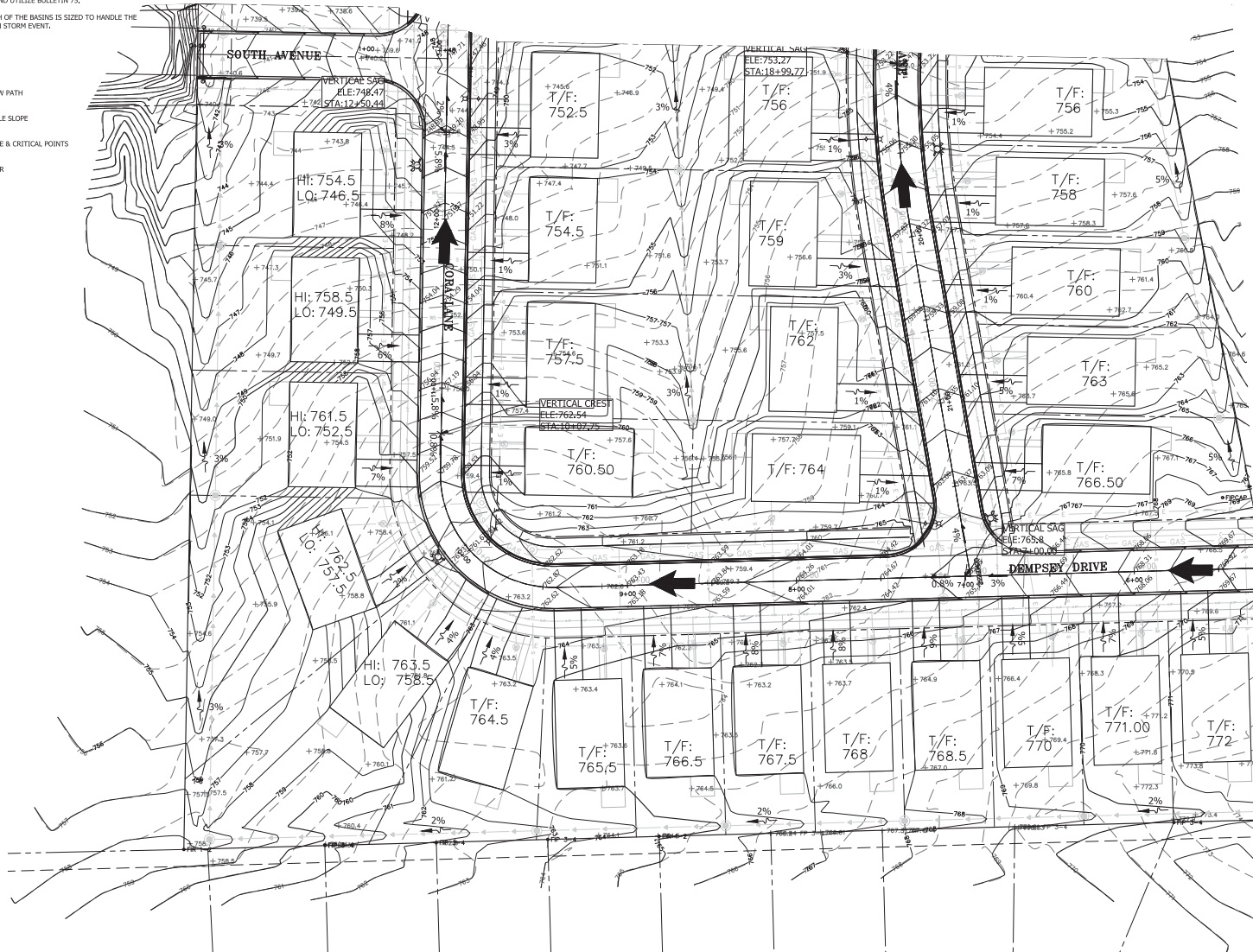
C-6.1
SHEET

GRADING NOTES:


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LEGEND:

-  OVERLAND FLOW PATH
-  DRAINAGE SWALE SLOPE
-  ROADWAY SLOPE & CRITICAL POINTS
-  OVERFLOW WEIR



ENGINEERING RESOURCE ASSOCIATES
1000 WEST ANNA, SUITE 100
 DENVER, COLORADO 80202
 PHONE: (303) 733-3300
 WWW.ERACONSTRUCTION.COM



AIRHART CONSTRUCTION
Building & Water Resources

AIRHART CONSTRUCTION

MUNHALL GLEN
51 GARDNER BL.
 DENVER, CO 80202

DATE	DESCRIPTION
07-24-2020 <td> </td>	
PROJECT # : 190726.00 <td> </td>	
DESIGNED BY : TF <td> </td>	
DRAWN BY : TF <td> </td>	
CHECKED BY : NAV <td> </td>	

© PROJECTS/Airhart Construction/190726.00 Munhall St. Channa Site. REV. DWG/CAAD/01/SHEET/190726.00 SHEET C-6.2_Grading.dwg

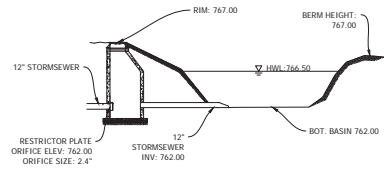
C-6.2
SHEET

GRADING NOTES:

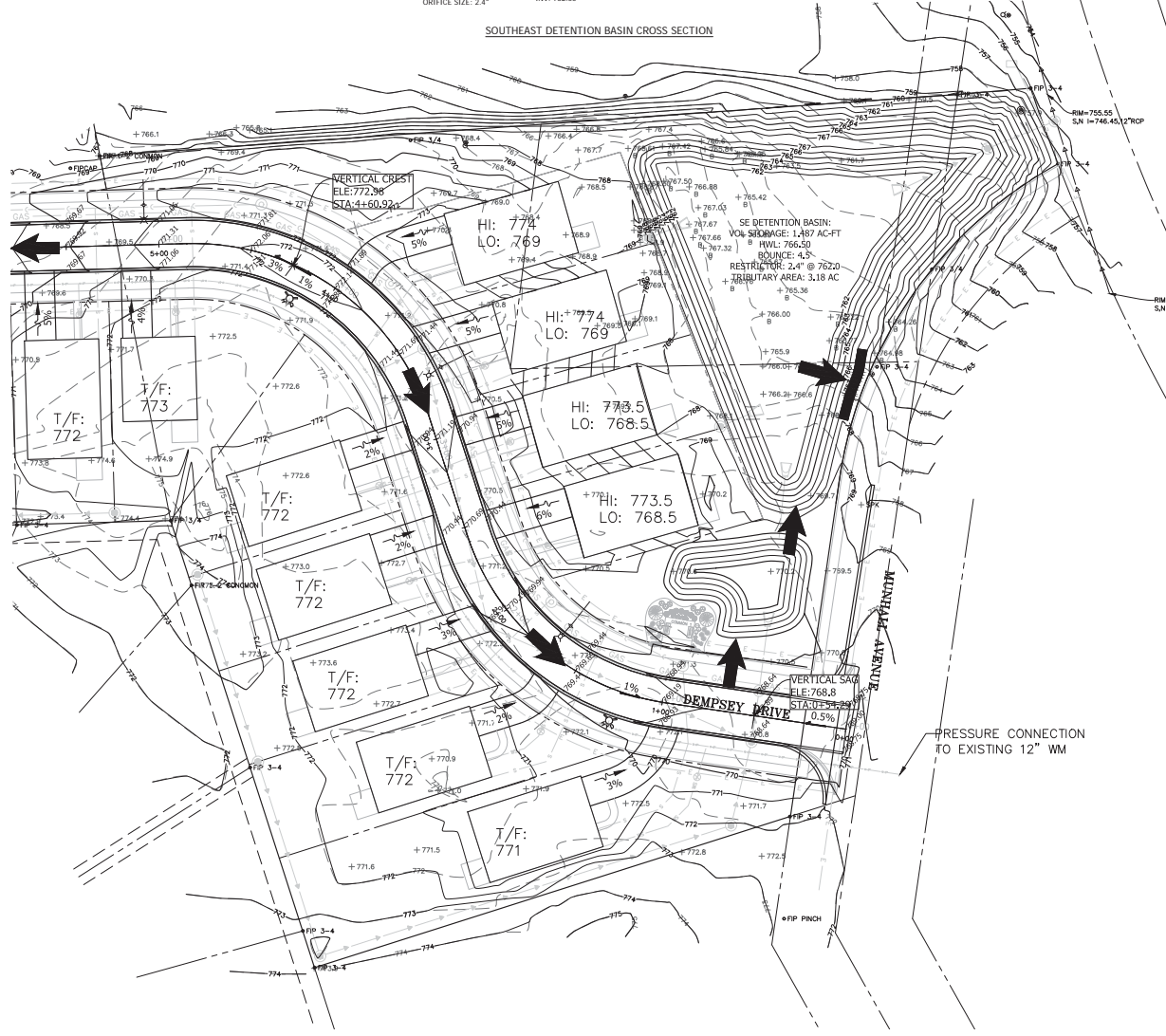
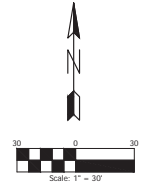
1. PRIOR TO REMOVAL OF TOPSOIL, ALL EROSION CONTROL ELEMENTS SHALL BE IN PLACE AND FUNCTIONAL.
2. DETENTION BASINS HAVE BEEN SIZED TO ACCOMMODATE THE 100 YEAR CRITICAL DURATION EVENT AND UTILIZE BULLETIN 75.
3. THE OVERFLOW WEIR IN EACH OF THE BASINS IS SIZED TO HANDLE THE 100-YEAR CRITICAL DURATION STORM EVENT.

LEGEND:

-  OVERLAND FLOW PATH
-  DRAINAGE SWALE SLOPE
-  ROADWAY SLOPE & CRITICAL POINTS
-  OVERFLOW WEIR



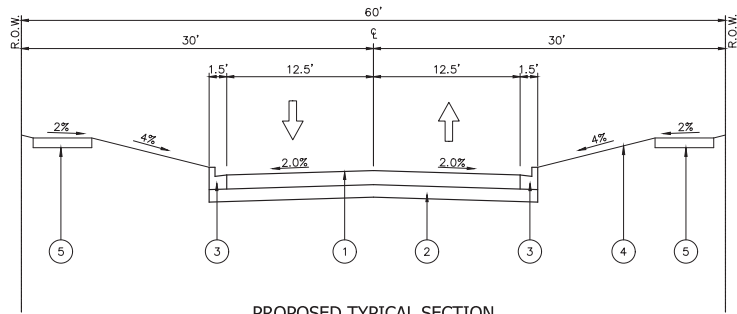
SOUTHEAST DETENTION BASIN CROSS SECTION



DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

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GRADING PLAN



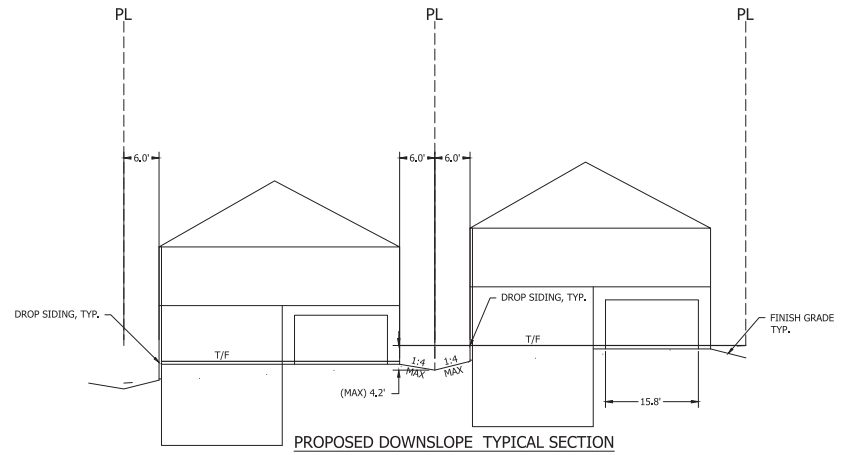
PROPOSED TYPICAL SECTION

PROPOSED LEGEND

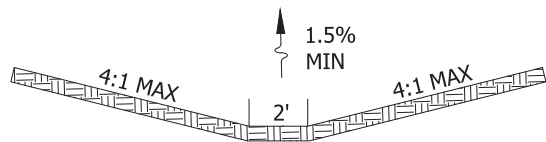
- 1 HMA PAVEMENT MIX C, N50
- 2 SUB-GRADE (SEE MIX TABLE)
- 3 COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
- 4 SEEDING, CLASS 2A, TOPSOIL 6"
- 5 PORTLAND CEMENT CONCRETE SIDEWALK (5")
SUBBASE GRANULAR MATERIAL, TYPE B 4"

MIX TABLE:

- 1.5" HMA SURFACE COURSE - MIX C, N50
- 4.5" HMA BINDER COURSE - IL 19, N50
- 8" AGGREGATE BASE COURSE (CA-6)



PROPOSED DOWNSLOPE TYPICAL SECTION

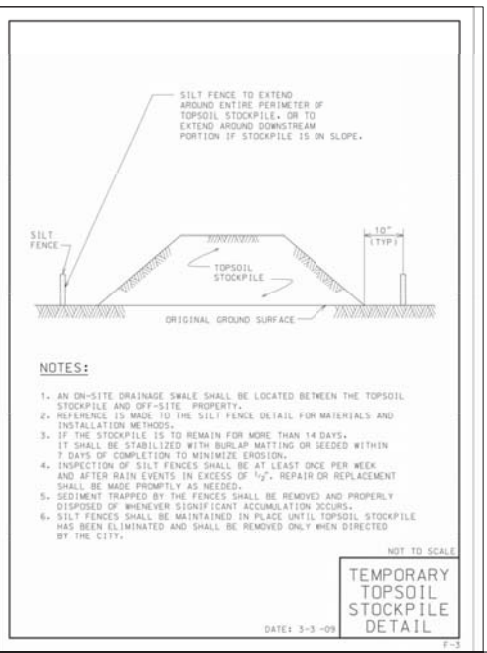
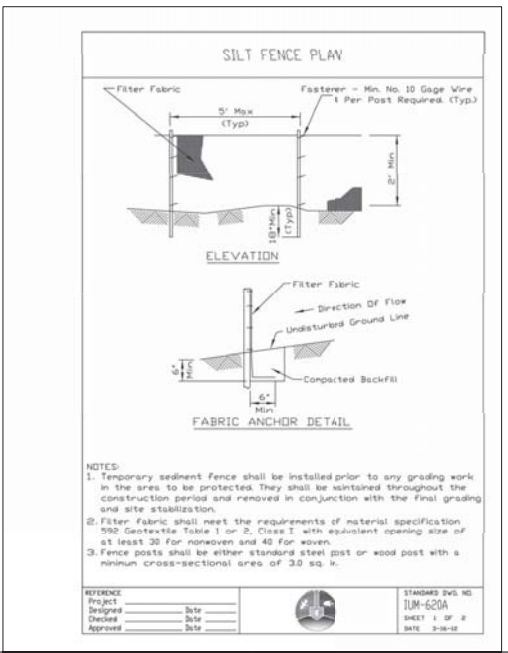
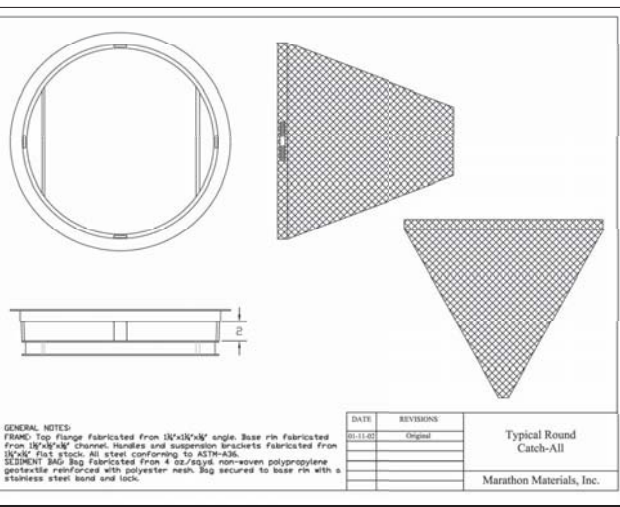
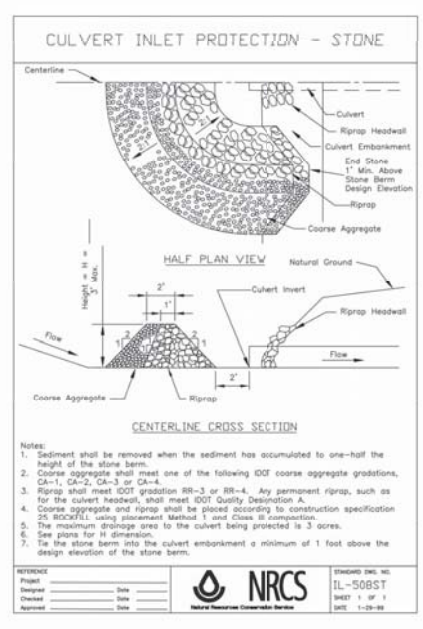
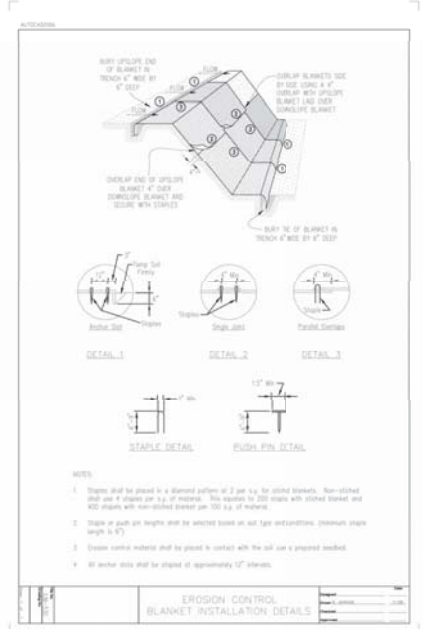
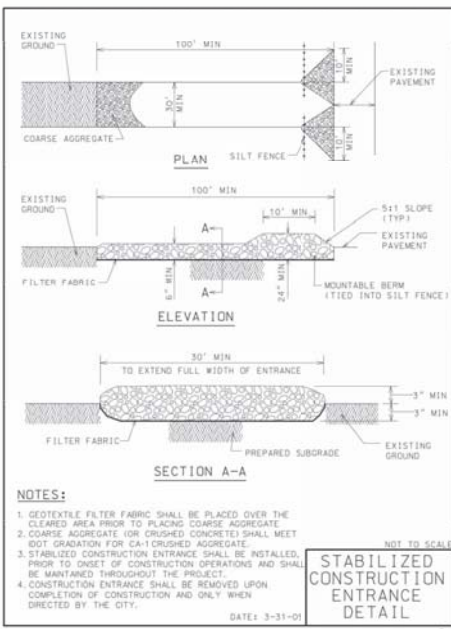


BACKYARD SWALES
N.T.S.

DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

DATE	07-24-2020
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

TYPICAL SECTIONS



ENGINEERING RESOURCE ASSOCIATES
 1000 WEST AVENUE, SUITE 100
 DENVER, COLORADO 80202
 PHONE: (303) 733-3300
 FAX: (303) 733-3300
 WWW.ERASSOCIATES.COM

AIRHART CONSTRUCTION
 Building & Water Technology

AIRHART CONSTRUCTION

MUNHALL GLEN
 ST. LOUIS, MO
 EROSION CONTROL
 190726.CO

DATE: 07-24-2009
 PROJECT # : 190726.CO
 DESIGNED BY : TF
 DRAWN BY : TF
 CHECKED BY : NAV
 DESCRIPTION: EROSION CONTROL

EROSION CONTROL DETAILS

C-8.0
 SHEET

Minimum Restrained Lengths (in feet)
back from both sides of fitting

Fitting type/nominal size	4"	6"	8"	10"	12"	16"
90 Degree Bend	17	25	32	38	45	59
45 Degree Bend	7	10	13	16	19	24
22.5 Degree Bend	3	5	6	8	9	12
11.25 Degree Bend	2	2	3	4	4	6
Dead End	39	55	73	87	103	134
Top Side Vertical Offset * (45 Degree)	16	23	30	36	43	55
Bottom Side Vertical Offset * (45 Degree)	4	6	8	10	11	15
Tee Run X Branch **	6" by	1	17			
Tee Run X Branch **	8" by	1	9	34		
Tee Run X Branch **	10" by	1	1	24	49	
Tee Run X Branch **	12" by	1	1	15	41	65
Tee Run X Branch **	16" by	1	1	1	26	52
Reducer ***	6" by	28				
Reducer ***	8" by	52	30			
Reducer ***	10" by	71	54	29		
Reducer ***	12" by	90	75	55	51	
Reducer ***	16" by	123	113	97	94	54

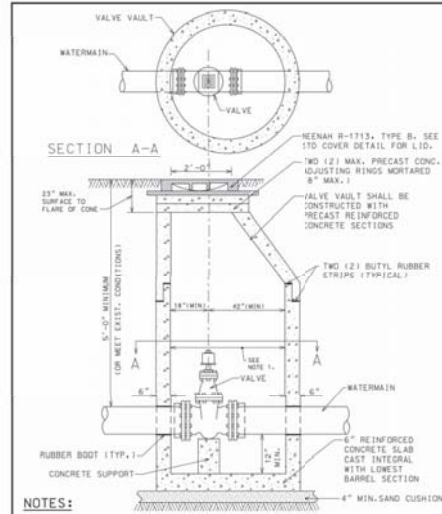
* Vertical offset with minimum 10' of solid pipe between upper and lower bend.
** Tee with MINIMUM 10' solid pipe on both sides of run.
*** Number indicates length of branch to be restrained.

*** Length back from Large End of Reducer.

WATER MAIN
RESTRAINT

DATE: 3-31-09

C-7



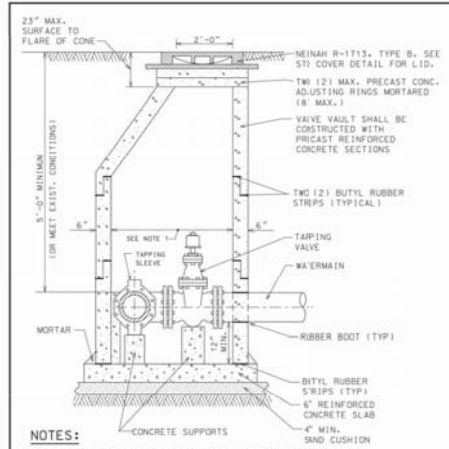
NOTES:

1. 48" MIN. INSIDE DIA. FOR VALVES LESS THAN 4" DIA.
2. 60" MIN. INSIDE DIA. FOR ALL OTHER VALVE VAULTS.
3. VALVE VAULT MUST CONFORM TO ASTM C-478.
4. USE ECCENTRIC CONE ONLY.
5. VALVE RESTRAINTS TO BE TONGUE AND GROOVED.
6. NON-PRECAST PIPE OPENINGS TO BE CORED AND RUBBER BOOTED.
7. BACKFILL MATERIAL SHALL BE 100% CA-7 VIRGIN CRUSHED LIMESTONE.
8. ALL MECHANICAL JOINT BOLTS, NUTS & WASHERS SHALL BE COMPOSED OF 304 GRADE STAINLESS STEEL.
9. PRIOR TO THE PLACEMENT OF FINAL LAYER OF ROADWAY, FRAMES AND ADJUSTING RINGS LOCATED WITHIN PAVED AREAS SHALL BE SET IN AN 100% APPROVED CONCRETE "SI" MIXTURE.

VALVE
VAULT
DETAIL

DATE: 11-12-13

B-1



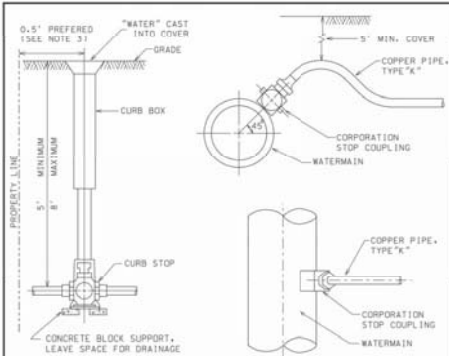
NOTES:

1. 60" (MIN) INSIDE DIA. FOR ALL PRESSURE CONNECTION VAULTS.
2. ALL NON-PRECAST PIPE OPENINGS TO BE CORED AND RUBBER BOOTED.
3. BACKFILL MATERIAL SHALL BE 100% CA-7 VIRGIN CRUSHED LIMESTONE.
4. ALL MECHANICAL JOINT BOLTS & NUTS SHALL BE COMPOSED OF CORE-TEN.
5. ALL OTHER HEXAGONAL BOLTS, NUTS & WASHERS SHALL BE COMPOSED OF 304 GRADE STAINLESS STEEL.
6. VALVE VAULT MUST CONFORM TO ASTM C-478.
7. ALL SECTIONS TO BE TONGUE AND GROOVED.
8. BLOCKING SHALL NOT INTERFERE WITH BOLT MAINTENANCE OR REPLACEMENT.
9. PRIOR TO THE PLACEMENT OF FINAL LAYER OF ROADWAY, FRAMES AND ADJUSTING RINGS LOCATED WITHIN PAVED AREAS SHALL BE SET IN AN 100% APPROVED CONCRETE "SI" MIXTURE.

PRESSURE
CONNECTION
DETAIL

DATE: 11-12-13

B-2



- A. CURB BOX:**
1. MUELLER H-10300 WITH 1-1/4" I.D. UPPER SECTION AND 2" MINNEAPOLIS TAPPED BASE.
 2. A-1, McDONALD 5615 1-1/4"

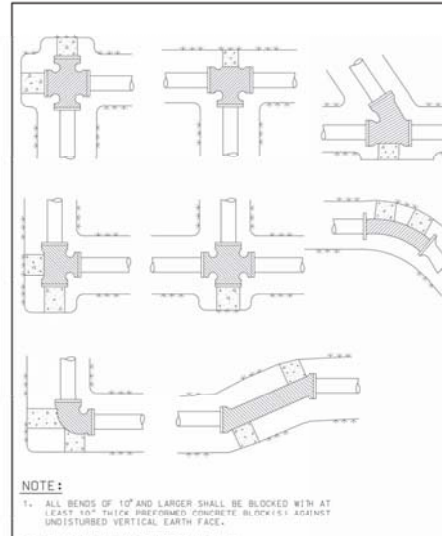
- B. CURB STOP:**
1. PIPE SIZE CAN VARY, BUT 1" MINIMUM. OTHER APPURTENANCES SHALL REFLECT SAME.
 2. COPPER PIPE SHALL BE ONE PIECE BETWEEN TAP AND CURB BOX.
 3. PLACE BETWEEN SIDEWALK AND PROPERTY LINE. KEEP BOXES OUT OF SIDEWALKS AND DRIVEWAY.
 4. MINIMUM OF 3" BETWEEN TAPS AND 3" TO NEAREST JOINT.
 5. 1" SERVICE MAY BE DIRECTLY TAPPED INTO 6" OR LARGER MAIN. LARGER SERVICES REQUIRE A SMITH-BLAIR 372 OR APPROVED EQUAL STAINLESS STEEL TAP THROUGH SLEEVE.

- C. CORPORATION STOP:**
1. MUELLER B-25155-N (1", 1-1/2", 2") FORD B-44-444-Q-NL 1" B-44-666-Q-NL 1-1/2" B-44-777-Q-NL 2" A-1, McDONALD 76104-Q 1", 1-1/2", 2" Q SERIES BRASS
 2. NOT TO SCALE
 3. MUELLER B-25008-N (1", 1-1/2", 2") FORD B1000-4-Q-NL 1" FB 1000-6-Q-NL 1-1/2" FB 1000-7-Q-NL 2" A-1, McDONALD 74701-BQ 1", 1-1/2", 2" Q SERIES BRASS, WITH 90 SWIVEL ELBOW

COPPER
WATER SERVICE
CONNECTION
DETAILS

DATE: 11-12-13

A-3



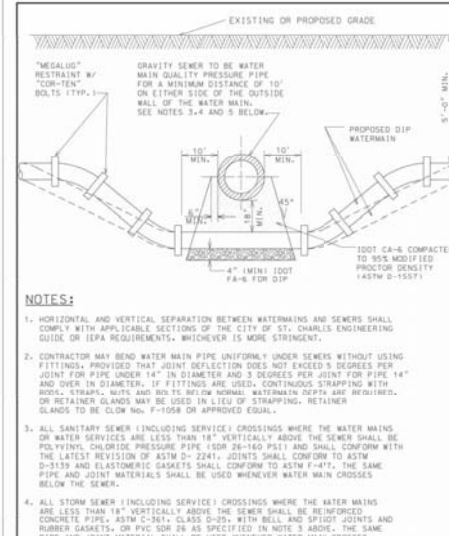
NOTES:

1. ALL BENDS OF 10" AND LARGER SHALL BE BLOCKED WITH AT LEAST 18" THICK UNREINFORCED CONCRETE BLOCK SET AGAINST UNDISTURBED VERTICAL EARTH FACE.
2. ALL CONCRETE TO BE MIN. 3,000 PSI.
3. IN ADDITION TO THE ABOVE THRUST BLOCKING: ALL MECHANICAL JOINTS, BENDS OVER 10" AND FIRE HYDRANTS SHALL HAVE A "MEGALOD" RESTRAINT, OR AS APPROVED BY THE ENGINEERING DIVISION. BOLTS SHALL BE "COR-TEN".

THRUST BLOCK
INSTALLATION
DETAILS

DATE: 3-2-11

A-1



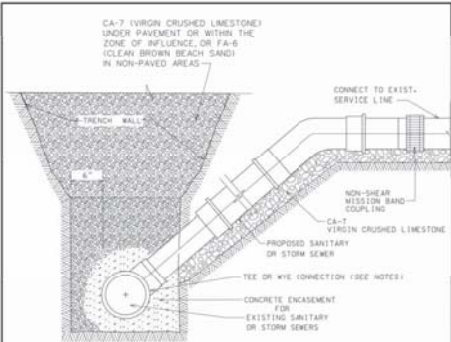
NOTES:

1. HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATERMANS AND SEWERS SHALL COMPLY WITH APPLICABLE SECTIONS OF THE CITY OF ST. CHARLES ENGINEERING GUIDE OR IUPA REQUIREMENTS, WHICHEVER IS MORE STRINGENT.
2. CONTRACTOR MAY BEND WATER MAIN PIPE UNIFORMLY UNDER SEWERS WITHOUT USING FITTINGS, PROVIDED THAT JOINT DEFLECTION DOES NOT EXCEED 5 DEGREES PER JOINT FOR PIPE UNDER 14" IN DIAMETER AND 3 DEGREES PER JOINT FOR PIPE 14" AND OVER IN DIAMETER. IF FITTINGS ARE USED, CONTINUOUS STRAPPING WITH RODS, STRAPS, NUTS AND BOLTS BELOW NORMAL WATERMAIN DEPTH ARE REQUIRED, OR RETAINER GLANDS MAY BE USED IN LIEU OF STRAPPING. RETAINER GLANDS TO BE CLOW NO. F-1058 OR APPROVED EQUAL.
3. ALL SANITARY SEWER (INCLUDING SERVICE) CROSSINGS WHERE THE WATER MAINS OR WATER SERVICES ARE LESS THAN 18" VERTICALLY ABOVE THE SEWER SHALL BE POLYVINYL CHLORIDE PRESSURE PIPE (SDR 26-160 PSI) AND SHALL CONFORM WITH THE LATEST REVISION OF ASTM D-2241. JOINTS SHALL CONFORM TO ASTM D-3159 AND ELASTOMERIC GASKETS SHALL CONFORM TO ASTM F-471. THE SAME PIPE AND JOINT MATERIALS SHALL BE USED WHENEVER WATER MAIN CROSSES BELOW THE SEWER.
4. ALL STORM SEWER (INCLUDING SERVICE) CROSSINGS WHERE THE WATER MAINS ARE LESS THAN 18" VERTICALLY ABOVE THE SEWER SHALL BE REINFORCED CONCRETE PIPE, ASTM C-311, CLASS D-20, WITH BELL AND SPIGOT JOINTS AND RUBBER GASKETS, OR PVC SDR 26 AS SPECIFIED IN NOTE 3 ABOVE. THE SAME PIPE AND JOINT MATERIALS SHALL BE USED WHENEVER WATER MAIN CROSSES BELOW THE SEWER.
5. FOR NEW SEWER INSTALLATIONS CROSSING OVER WATER MAINS, THE ENTIRE RUN OF NEW SEWER SHALL BE WATER MAIN QUALITY PIPE, EXTENDING FROM STRUCTURE TO STRUCTURE ON EACH SIDE OF THE CROSSING.

WATER MAIN
CROSSING
DETAIL

DATE: 3-31-09

E-4



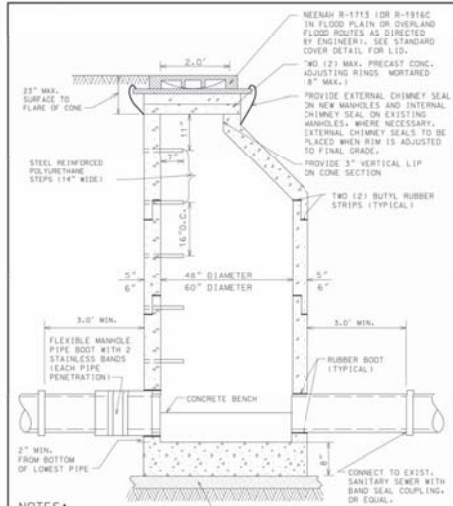
NOTES:

1. FOR PROPOSED STORM SEWER SERVICE (6" ON RCP PIPE) 15", CORE THE PIPE AND USE A BOOT CONNECTION.
2. FOR PROPOSED STORM SEWER SERVICE ≥ 8", A MANHOLE SHALL BE INSTALLED.
3. FOR CONNECTING SANITARY OR STORM SEWER SERVICE TO AN EXISTING SANITARY OR STORM SEWER ≤ 12", REMOVE A SECTION OF PIPE AND INSTALL A TEE OR WYE CONNECTION.
4. FOR CONNECTING SANITARY SEWER SERVICE TO AN EXISTING SANITARY SEWER ≥ 15", CIRCULAR SAW-CUT AND USE A HUB WYE OR TEE SADDLE CONNECTION.
5. FOR PROPOSED STORM OR SANITARY SEWER SERVICES, ENCASE ALL CONNECTIONS IN LOW STRENGTH CONCRETE TO PREVENT THE FITTINGS FROM ROTATING.
6. FOR TRENCHES WITHIN AN EXISTING PAVED SURFACE AREA, CA-7 (VIRGIN CRUSHED LESTONE) BACKFILL SHALL BE USED.
7. FOR PROPOSED 6" STORM SEWER SUMP LINE, INSTALL PLUG AND 2" X 4" POST AT END OF LINE.

NOT TO SCALE
SANITARY AND STORM SERVICE DETAIL

DATE: 12-8-10

C-2



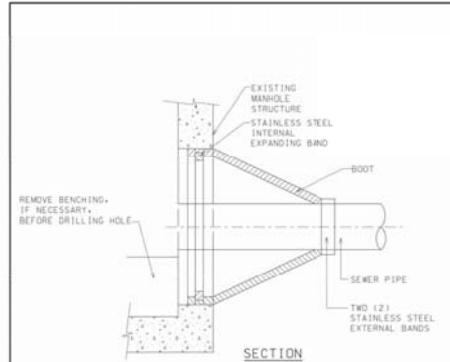
NOTES:

1. MANHOLES MUST CONFORM TO ASTM C-478.
2. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
3. BENCHES MUST BE PROVIDED IN ALL SANITARY SEWER MANHOLES.
4. USE EXTERNAL LIFTING "HOLES" ONLY, BUT NOT FULL PENETRATION.
5. NON-PRECAST OPENINGS SHALL BE CURED AND RUBBER BOOTED.
6. PIPE PENETRATIONS TO BE RUBBER BOOTED AND INTERIOR MORTARED.
7. USE ECCENTRIC CONE ONLY.
8. PRIOR TO THE PLACEMENT OF FINAL LAYER OF ROADWAY, FRAMES AND ADJUSTING RINGS LOCATED WITHIN PAVED AREAS SHALL BE SET IN AN 100T APPROVED CONCRETE "S1" MIXTURE.

NOT TO SCALE
SANITARY MANHOLE DETAIL

DATE: 7-27-10

A-2



NOTES:

1. CORE-DRILL CIRCULAR OPENING IN MANHOLE WALL OF DIAMETER TO FIT THE REQUIRED BOOT SIZE.
2. KORN SEAL FLEXIBLE RUBBER BOOT (MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC. OR AS APPROVED BY THE ENGINEERING DEPARTMENT) SHALL BE USED FOR WATERTIGHT CONNECTION.
3. CUT, SHAPE AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM NEW SANITARY SEWER CONNECTION.
4. CLEAN EXISTING MANHOLE OF ANY DIRT, CONCRETE OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.

NOT TO SCALE
SANITARY SEWER CONNECTION TO EXISTING MANHOLE

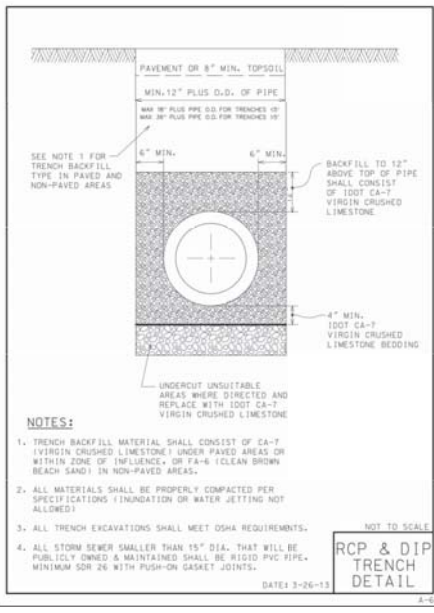
DATE: 3-31-09

A-4

DATE	07-24-2010
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

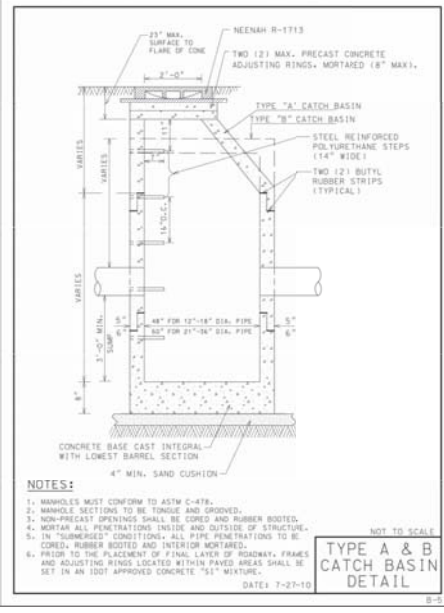
DATE	07-24-2010
PROJECT #	190726.00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

SANITARY DETAILS



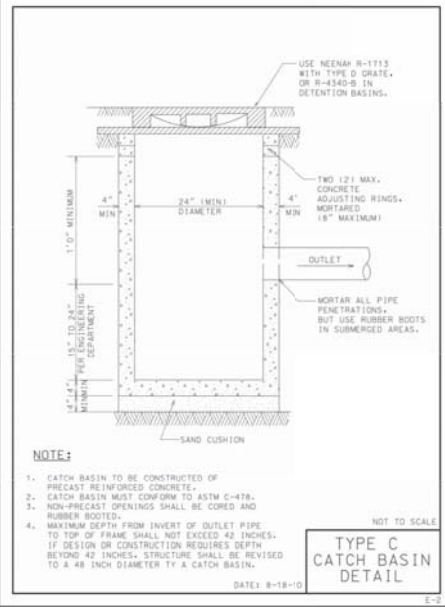
- NOTES:**
1. TRENCH BACKFILL MATERIAL SHALL CONSIST OF CA-7 (VIRGIN CRUSHED LIMESTONE) UNDER PAVED AREAS OR WITHIN ZONE OF INFLUENCE, OR FA-6 (CLEAN DROWN BEACH SAND) IN NON-PAVED AREAS.
 2. ALL MATERIALS SHALL BE PROPERLY COMPACTED PER SPECIFICATIONS (UNDRAINAGE OR WATER JETTING NOT ALLOWED).
 3. ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
 4. ALL STORM SEWER SMALLER THAN 18" DIA. THAT WILL BE PUBLICLY OWNED & MAINTAINED SHALL BE RIGID PVC PIPE, MINIMUM SDR 26 WITH PUSH-ON GASKET JOINTS.

NOT TO SCALE
RCP & DIP TRENCH DETAIL
DATE: 3-26-13
A-4



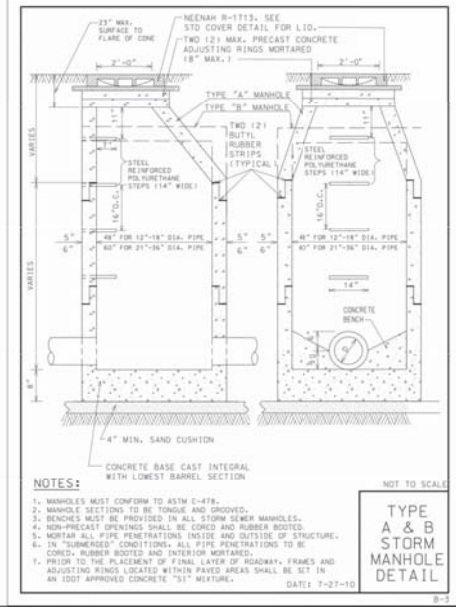
- NOTES:**
1. MANHOLES MUST CONFORM TO ASTM C-478.
 2. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
 3. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.
 4. MORTAR ALL PENETRATIONS INSIDE AND OUTSIDE OF STRUCTURE.
 5. IN "SUMMERGED" CONDITIONS, ALL PIPE PENETRATIONS TO BE CORED, RUBBER BOOTED AND INTERIOR MORTARED.
 6. PRIOR TO THE PLACEMENT OF FINAL LAYER OF ROADWAY, FRAMES AND ADJUSTING RINGS LOCATED WITHIN PAVED AREAS SHALL BE SET IN AN IDOT APPROVED CONCRETE "S1" MIXTURE.

NOT TO SCALE
TYPE A & B CATCH BASIN DETAIL
DATE: 7-27-10
B-5



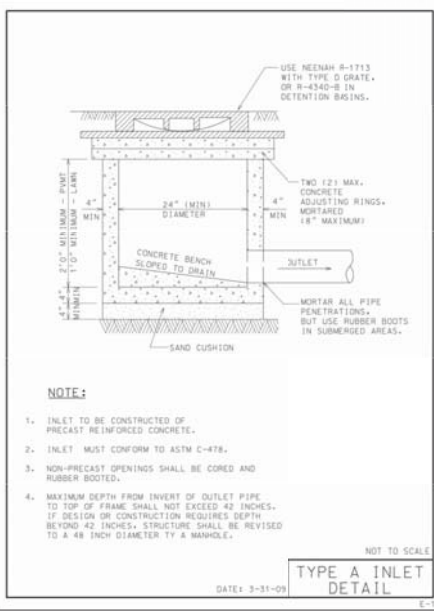
- NOTE:**
1. CATCH BASIN TO BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE.
 2. CATCH BASIN MUST CONFORM TO ASTM C-478.
 3. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.
 4. MAXIMUM DEPTH FROM INVERT OF OUTLET PIPE TO TOP OF FRAME SHALL NOT EXCEED 42 INCHES. IF DESIGN OR CONSTRUCTION REQUIRES DEPTH BEYOND 42 INCHES, STRUCTURE SHALL BE REVISED TO A 48 INCH DIAMETER TYPE C CATCH BASIN.

NOT TO SCALE
TYPE C CATCH BASIN DETAIL
DATE: 8-18-10
E-2



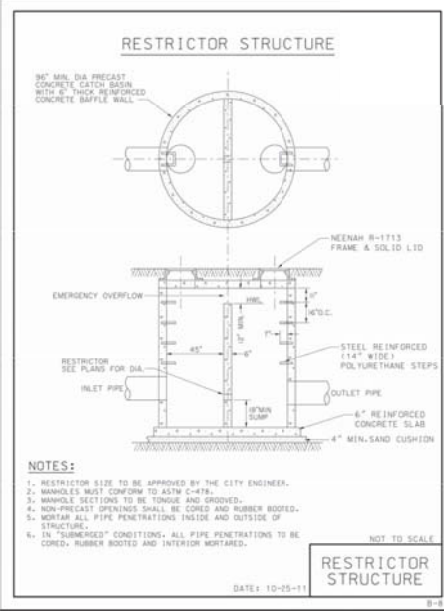
- NOTES:**
1. MANHOLES MUST CONFORM TO ASTM C-478.
 2. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
 3. BENCHES MUST BE PROVIDED IN ALL STORM SEWER MANHOLES.
 4. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.
 5. MORTAR ALL PIPE PENETRATIONS INSIDE AND OUTSIDE OF STRUCTURE.
 6. IN "SUMMERGED" CONDITIONS, ALL PIPE PENETRATIONS TO BE CORED, RUBBER BOOTED AND INTERIOR MORTARED.
 7. PRIOR TO THE PLACEMENT OF FINAL LAYER OF ROADWAY, FRAMES AND ADJUSTING RINGS LOCATED WITHIN PAVED AREAS SHALL BE SET IN AN IDOT APPROVED CONCRETE "S1" MIXTURE.

NOT TO SCALE
TYPE A & B STORM MANHOLE DETAIL
DATE: 7-27-10
B-1



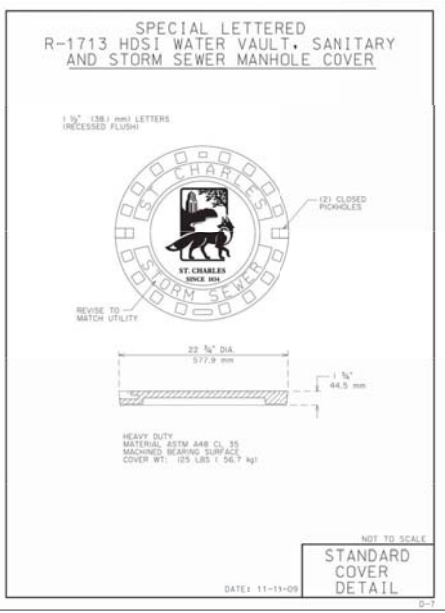
- NOTE:**
1. INLET TO BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE.
 2. INLET MUST CONFORM TO ASTM C-478.
 3. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.
 4. MAXIMUM DEPTH FROM INVERT OF OUTLET PIPE TO TOP OF FRAME SHALL NOT EXCEED 42 INCHES. IF DESIGN OR CONSTRUCTION REQUIRES DEPTH BEYOND 42 INCHES, STRUCTURE SHALL BE REVISED TO A 48 INCH DIAMETER TYPE A MANHOLE.

NOT TO SCALE
TYPE A INLET DETAIL
DATE: 3-31-09
E-1



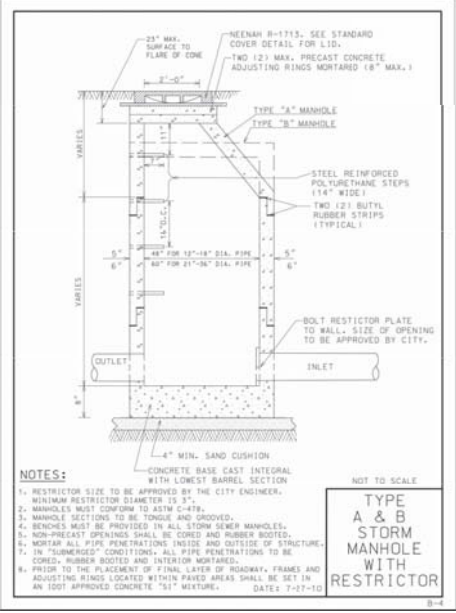
- NOTES:**
1. RESTRICTOR SIZE TO BE APPROVED BY THE CITY ENGINEER.
 2. MANHOLES MUST CONFORM TO ASTM C-478.
 3. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
 4. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.
 5. MORTAR ALL PIPE PENETRATIONS INSIDE AND OUTSIDE OF STRUCTURE.
 6. IN "SUMMERGED" CONDITIONS, ALL PIPE PENETRATIONS TO BE CORED, RUBBER BOOTED AND INTERIOR MORTARED.

NOT TO SCALE
RESTRICTOR STRUCTURE
DATE: 10-25-11
B-8



- NOTE:**
1. RESTRICTOR SIZE TO BE APPROVED BY THE CITY ENGINEER.
 2. MANHOLES MUST CONFORM TO ASTM C-478.
 3. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
 4. BENCHES MUST BE PROVIDED IN ALL STORM SEWER MANHOLES.
 5. NON-PRECAST OPENINGS SHALL BE CORED AND RUBBER BOOTED.
 6. MORTAR ALL PIPE PENETRATIONS INSIDE AND OUTSIDE OF STRUCTURE.
 7. IN "SUMMERGED" CONDITIONS, ALL PIPE PENETRATIONS TO BE CORED, RUBBER BOOTED AND INTERIOR MORTARED.
 8. PRIOR TO THE PLACEMENT OF FINAL LAYER OF ROADWAY, FRAMES AND ADJUSTING RINGS LOCATED WITHIN PAVED AREAS SHALL BE SET IN AN IDOT APPROVED CONCRETE "S1" MIXTURE.

NOT TO SCALE
STANDARD COVER DETAIL
DATE: 11-13-09
D-7



- NOTES:**
1. RESTRICTOR SIZE TO BE APPROVED BY THE CITY ENGINEER.
 2. MINIMUM RESTRICTOR DIAMETER IS 3\"/>

NOT TO SCALE
TYPE A & B STORM MANHOLE WITH RESTRICTOR
DATE: 7-27-10
B-4

ENGINEERING RESOURCE ASSOCIATES
1000 WEST MAIN, SUITE 100
MUNHALL, OHIO 44130-1000
PH: (440) 971-3300
WWW.ERACONSULTING.COM

AIRHART CONSTRUCTION
Building & Water Technology

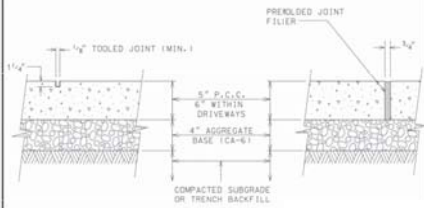
AIRHART CONSTRUCTION

MUNHALL GLEN
1000 WEST MAIN, SUITE 100
MUNHALL, OHIO 44130-1000
PH: (440) 971-3300
WWW.ERACONSULTING.COM

DATE	07-24-2000
PROJECT #	190726.00
DISIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	CONSTRUCTION DETAILS

C-11.0
SHEET

CONTRACTION JOINT DETAIL EXPANSION JOINT DETAIL



NOTES:

1. UNLESS OTHERWISE NOTED ON PLANS, CONTRACTION JOINTS TO BE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE 50'-0" MAX. OR AT BACK OF CURB, CHANGE OF DIRECTION, OTHER WALK, UTILITY APPURTENANCE, OR FACE OF STRUCTURE.
3. PORTLAND CEMENT CONCRETE SHALL CONFORM TO 100T CLASS 51, MIN. 3,500 PSI (6.1 BAG MIX) AT 14 DAYS, WITH 5% TO 8% AIR ENTRAINMENT. (NO FLY ASH ALLOWED)

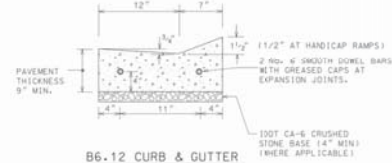
NOT TO SCALE

CONCRETE WALK JOINT DETAILS

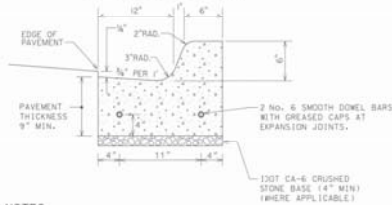
DATE: 3-31-09

E-3

DEPRESSED CURB



B6.12 CURB & GUTTER



NOTES:

1. CONTRACTION JOINTS SHALL BE PLACED AT 15' INTERVALS AND SHALL BE GROINED WITH AN EDGING TOOL. SEE ARTICLE 420.10 OF 100T STANDARD SPECIFICATIONS.
2. EXPANSION JOINTS SHALL BE PLACED AT 60' (MAX) INTERVALS, AT ALL P.C.C.'S AND P.T.'S, CURB RETURNS, AND AT THE END OF EACH POUR.
3. P.C.C. SHALL CONSIST OF 100T CLASS 51 (6.1 BAG MIX) CONCRETE, WITH 5% TO 8% AIR ENTRAINMENT, AND A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 14 DAYS. (NO FLY ASH ALLOWED)

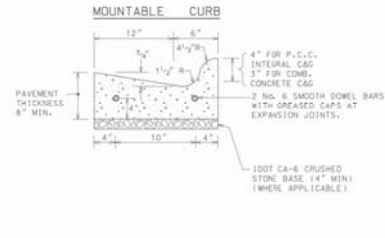
DATE: 10-22-10

FOR RESIDENTIAL STREETS ONLY

**B6.12 COMB. CONCRETE CURB AND GUTTER (SPECIAL)
B6.12 P.C.C. INTEGRAL CURB AND GUTTER (SPECIAL)**

D-3

MOUNTABLE CONCRETE CURB & GUTTER



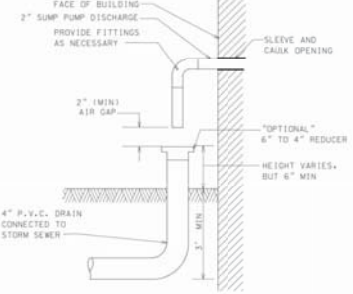
NOTES:

1. 1/2" THICK PREFORMED EXPANSION JOINTS SHALL BE INSTALLED AT 50 FOOT INTERVALS. PROVIDE 2-3/4" STEEL DOWEL BARS AT EXPANSION JOINTS.
2. EXPANSION JOINTS SHALL BE INSTALLED ON EACH SIDE, A DISTANCE OF 2 FEET FROM A STRUCTURE THAT FALLS WITHIN THE CURB AND GUTTER.
3. CONTRACTION JOINTS SHALL BE SAWS TO A MINIMUM DEPTH OF 2 INCHES AND PLACED AT 10 FOOT INTERVALS. SAW CUTS SHALL BE SAWS NO SOONER THAN 6 HOURS AND NO LATER THAN 24 HOURS AFTER PLACEMENT OF CONCRETE.
4. CURBS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (100T). MOST RECENT EDITION UNLESS NOTED OR DIRECTED HEREIN.
5. A PROTECTIVE COAT SHALL BE APPLIED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

DATE: 9-30-10

MOUNTABLE CURB & GUTTER

C-8



NOTE:

- THE CITY OF ST. CHARLES ALLOWS RESIDENTS TO CONNECT SUMP PUMP DISCHARGE LINES TO THE PUBLIC STORM SEWER SYSTEM. SUMP PUMPS SHALL BE DESIGNED WITH A MINIMUM 2" AIR GAP. A RIGID FOUR-INCH (4") DIAMETER PVC PIPE CAN BE USED TO CONNECT THE INDIVIDUAL SUMP PUMP SERVICE TO THE STORM SEWER. IN NO EVENT SHALL THE SUMP PUMP DISCHARGE INTO THE SANITARY SEWER SYSTEM. A PLUMBING PERMIT IS REQUIRED PRIOR TO ANY CONNECTION. INCLUDE A PLAN OF CONNECTION TO THE STORM SEWER. THE SITE PLAN SHALL ALSO INCLUDE PIPE SPECIFICATIONS AND INVERT ELEVATIONS. CALL THE CITY ENGINEERING DIVISION 24 HOURS IN ADVANCE TO SCHEDULE AN INSPECTION.

NOT TO SCALE

SUMP PUMP DISCHARGE CONNECTION DETAIL

DATE: 3-31-09

E-1

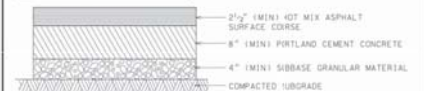
A. FLEXIBLE PAVEMENT



B. RIGID PAVEMENT



C. COMPOSITE PAVEMENT



NOTE:

1. HOT MIX ASPHALT SURFACE & BINDER COURSE SHALL CONFORM TO 100T HMA MIX SELECTION TABLE.
2. PORTLAND CEMENT CONCRETE SHALL CONFORM TO 100T CLASS PV, MIN. 3500 PSI (6.1 BAG MIX) AT 14 DAYS, WITH 5% TO 8% AIR ENTRAINMENT. (NO FLY ASH ALLOWED)
3. ALL SUBGRADE SHALL HAVE A MINIMUM ILL INDS BEARING RATIO (IBR) OF 3.0, AND BE COMPACTED TO AT LEAST 90% MODIFIED PROCTOR DENSITY (ASTM D-1557)

NOT TO SCALE

MINIMUM PAVEMENT DETAILS

DATE: 2-3-10

D-4

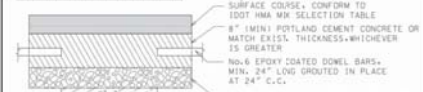
A. FLEXIBLE PAVEMENT



B. RIGID PAVEMENT



C. COMPOSITE PAVEMENT



NOTE:

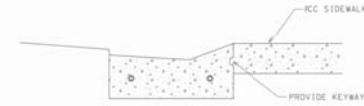
1. ALL PAVEMENT PATCHES SHALL BE SAWCUT FULL-DEPTH A MINIMUM OF ONE FOOT BEYOND THE LIMITS OF THE FAILED PAVEMENT IN ALL DIRECTIONS.
2. PORTLAND CEMENT CONCRETE SHALL CONFORM TO 100T CLASS PP MIN. 3,500 PSI (6.1 BAG MIX) AT 14 DAYS, WITH 5% TO 7% AIR ENTRAINMENT. (NO FLY ASH ALLOWED)

DATE: 12-8-10

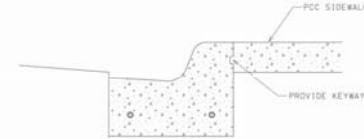
PAVEMENT PATCH DETAIL

D-3

DEPRESSED CURB



CURB & GUTTER



NOTES:

1. SEE TYPICAL DETAIL FOR CURB AND GUTTER FOR CURB DIMENSIONS AND SPECIFICATIONS.

NOT TO SCALE

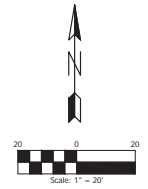
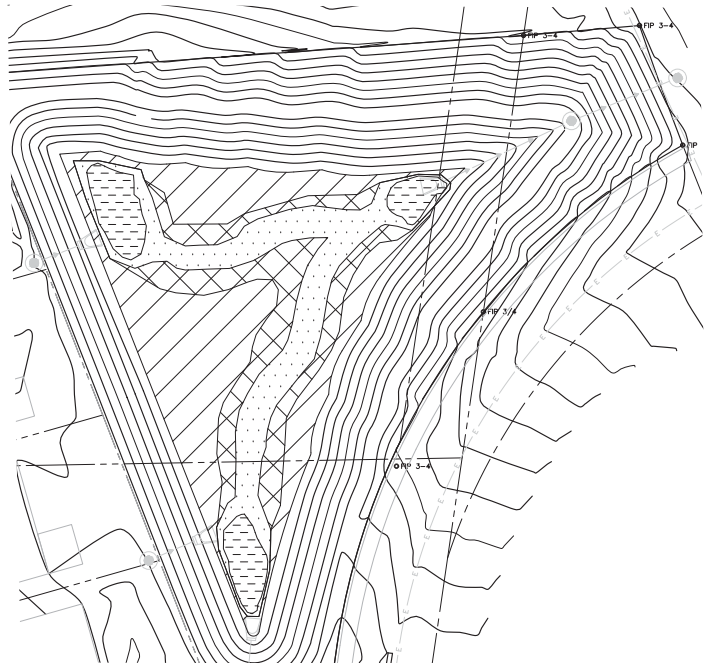
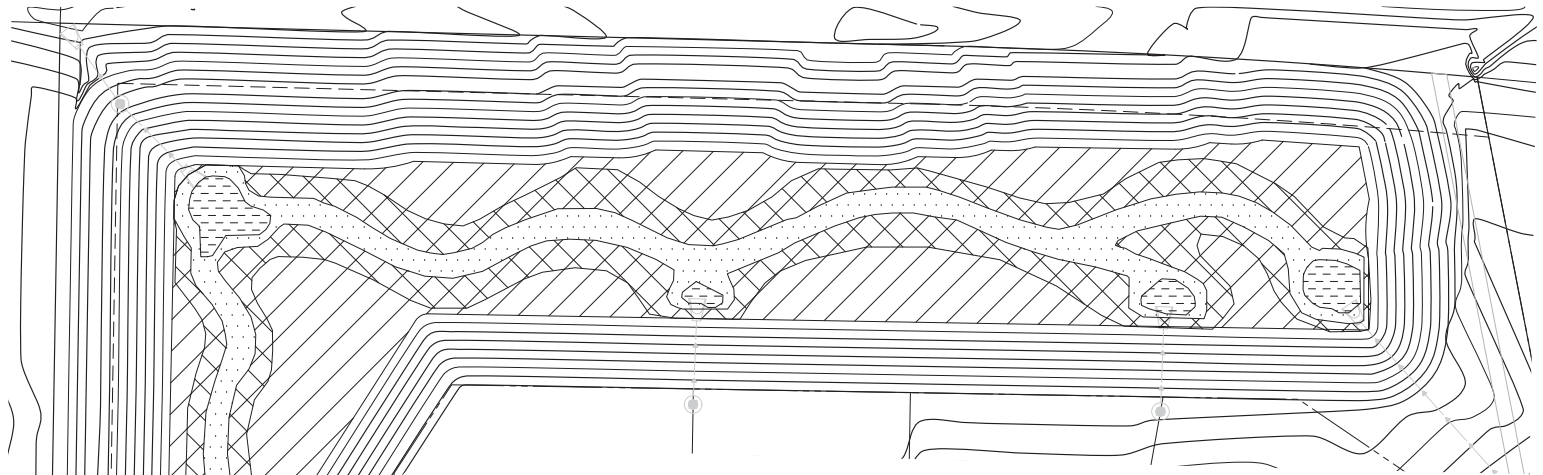
SIDEWALK AT CURB AND GUTTER





DATE: 3-31-09

G-2

DATE	07-24-2000
PROJECT #	190726.00
DISIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

DATE	07-24-2000
PROJECT #	190726.00
DISIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	



- LEGEND**
-  MICROPOOL / FOREBAY
 -  LOW FLOW MEANDER / DEEP EMERGENT (0.19 ACRES)
 -  WET MEADOW (0.38 ACRES)
 -  EMERGENT (0.26 ACRES)

**ENGINEERING
RESOURCE ASSOCIATES**
1030 WEST AVENUE, SUITE 100
CHICAGO, ILLINOIS 60606
PHONE: (312) 370-3000
WWW.ERASSOCIATES.COM



**AIRHART
CONSTRUCTION**
Building a Better Tomorrow

**AIRHART
CONSTRUCTION**

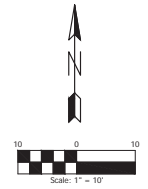
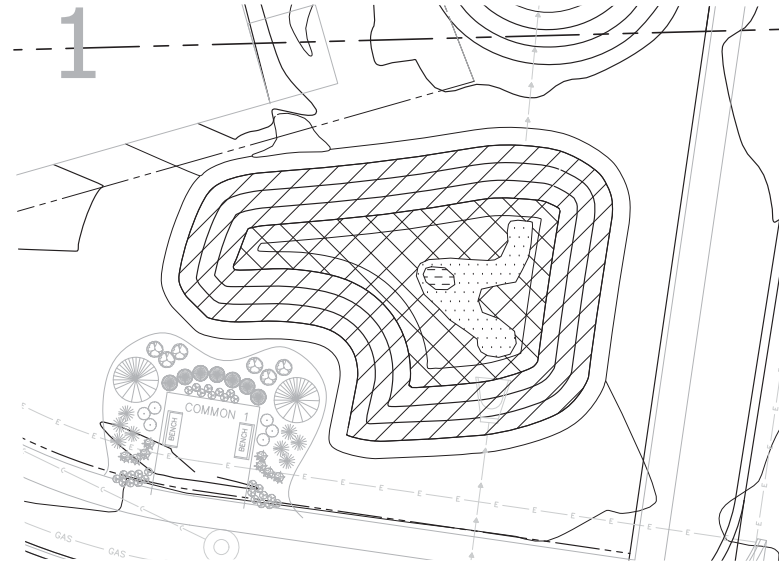
MUNHALL GLEN
ST CHARLES, IL
EPA PROJECT NO.
10026-00

DATE	DESCRIPTION


DATE	07-24-2010
PROJECT #	10026-00
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV

WETLAND
MITIGATION
PLAN

C-14.0
SHEET



- LEGEND**
- OPEN WATER
 - EMERGENT PLANT COMMUNITY (0,012 ACRES)
 - MESIC PRAIRIE BUFFER (0,052 ACRES)
 - WET PRAIRIE / SEDGE MEADOW (0,045 ACRES)

 AIRHART CONSTRUCTION <i>Building a Better Tomorrow</i>	ENGINEERING RESOURCE ASSOCIATES <small>2200 WEST AVENUE SUITE 100 CHICAGO, ILLINOIS 60616 TEL: (312) 733-3000 WWW.RESOURCEASSOCIATES.COM</small>
AIRHART CONSTRUCTION	MUNHALL GLEN <small>ST CHARLES, IL EIR PROJECT NO. 10026.CO</small>
	<small>DATE : 07-24-2020 PROJECT # : 10026.CO DESIGNED BY : TF DRAWN BY : TF CHECKED BY : NAV</small>
RAIN GARDEN PLAN	C-15.0 <small>SHEET</small>

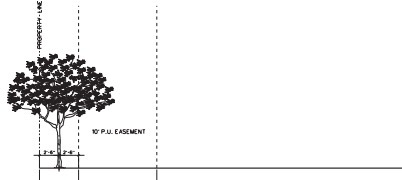
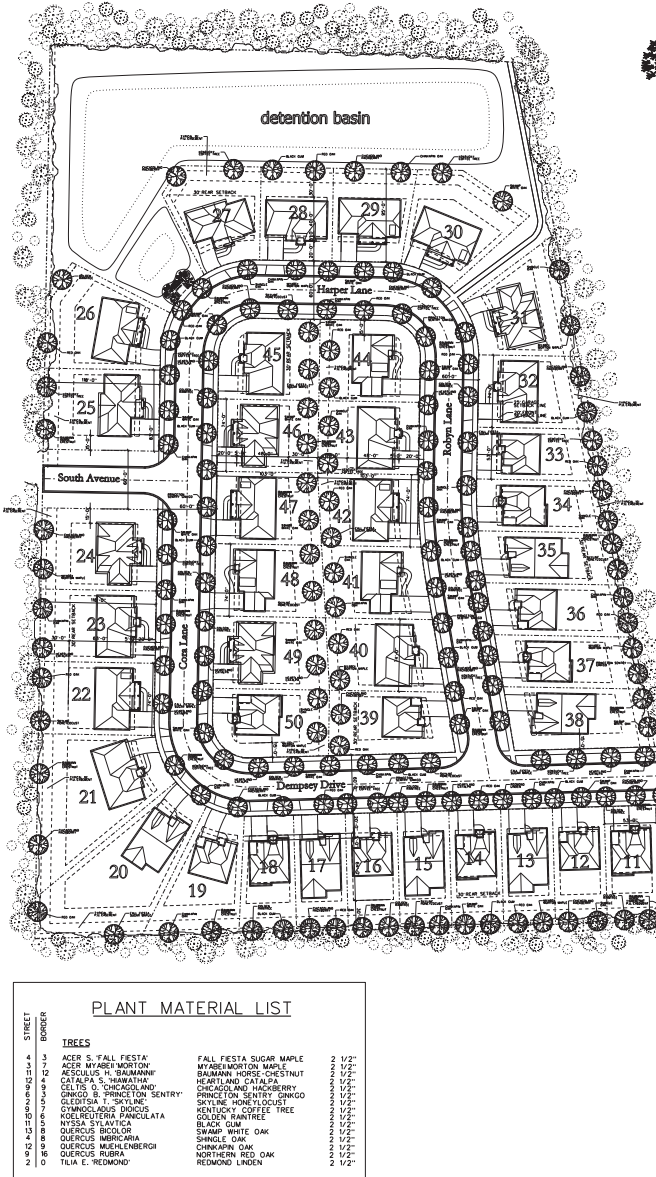


Exhibit A
BORDER TREE PLANTING LOTS 1-38

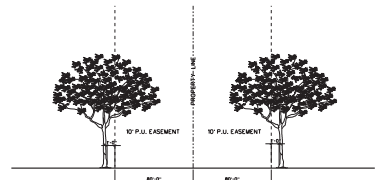
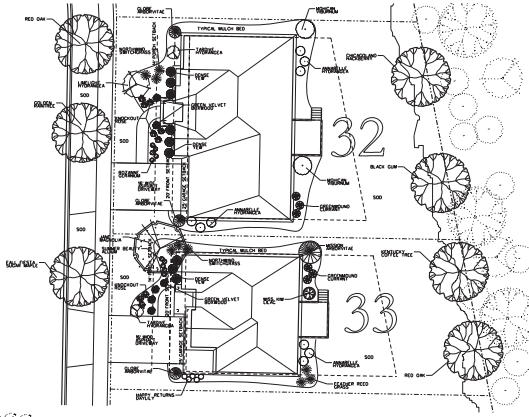
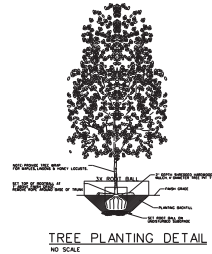


Exhibit B
BORDER TREE PLANTING LOTS 39-50



PLANT MATERIAL LIST

1. 10' S. OAK	1. 10' S. OAK	1. 10' S. OAK	1. 10' S. OAK
2. 10' S. OAK	2. 10' S. OAK	2. 10' S. OAK	2. 10' S. OAK
3. 10' S. OAK	3. 10' S. OAK	3. 10' S. OAK	3. 10' S. OAK
4. 10' S. OAK	4. 10' S. OAK	4. 10' S. OAK	4. 10' S. OAK
5. 10' S. OAK	5. 10' S. OAK	5. 10' S. OAK	5. 10' S. OAK
6. 10' S. OAK	6. 10' S. OAK	6. 10' S. OAK	6. 10' S. OAK
7. 10' S. OAK	7. 10' S. OAK	7. 10' S. OAK	7. 10' S. OAK
8. 10' S. OAK	8. 10' S. OAK	8. 10' S. OAK	8. 10' S. OAK
9. 10' S. OAK	9. 10' S. OAK	9. 10' S. OAK	9. 10' S. OAK
10. 10' S. OAK	10. 10' S. OAK	10. 10' S. OAK	10. 10' S. OAK

NOTE: 2 TO GARDEN BED & 12" TO SHALLOW HOUSE BED

LOT 32 SHALLOW HOUSE DESIGN

PLANT MATERIAL LIST

1. 10' S. OAK	1. 10' S. OAK	1. 10' S. OAK	1. 10' S. OAK
2. 10' S. OAK	2. 10' S. OAK	2. 10' S. OAK	2. 10' S. OAK
3. 10' S. OAK	3. 10' S. OAK	3. 10' S. OAK	3. 10' S. OAK
4. 10' S. OAK	4. 10' S. OAK	4. 10' S. OAK	4. 10' S. OAK
5. 10' S. OAK	5. 10' S. OAK	5. 10' S. OAK	5. 10' S. OAK
6. 10' S. OAK	6. 10' S. OAK	6. 10' S. OAK	6. 10' S. OAK
7. 10' S. OAK	7. 10' S. OAK	7. 10' S. OAK	7. 10' S. OAK
8. 10' S. OAK	8. 10' S. OAK	8. 10' S. OAK	8. 10' S. OAK
9. 10' S. OAK	9. 10' S. OAK	9. 10' S. OAK	9. 10' S. OAK
10. 10' S. OAK	10. 10' S. OAK	10. 10' S. OAK	10. 10' S. OAK

NOTE: 2 TO GARDEN BED & 12" TO SHALLOW HOUSE BED

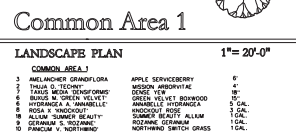
LOT 33 NARROW HOUSE DESIGN

PLANT MATERIAL LIST

STREET BINDER	TREES	QUANTITY	SIZE
1	ACER S. 'FALL FESTA'	3	1 1/2"
2	ACER MYABERTMORTON'	3	1 1/2"
3	ACER S. 'VIRIDIFOLIUM'	3	1 1/2"
4	CATALPA S. 'INDIAN PRINCE'	3	1 1/2"
5	CELTIS S. 'CHICAGO' AND 'SILVER CHERRY'	3	1 1/2"
6	GLABRATA T. 'SKYLARK'	3	1 1/2"
7	QUERCUS ALBA 'ROBUR'	3	1 1/2"
8	QUERCUS ALBA 'PANDULATA'	3	1 1/2"
9	QUERCUS BICOLOR	3	1 1/2"
10	QUERCUS IMBRICARIA	3	1 1/2"
11	QUERCUS MUEHLBERGERI	3	1 1/2"
12	QUERCUS RUBRA	3	1 1/2"
13	TILIA E. 'REDMOND'	3	1 1/2"
14	FALL FESTA SUGAR MAPLE	2	1 1/2"
15	MYABERTMORTON MAPLE	2	1 1/2"
16	REINOLDS Y. 'SILVERMANN'	2	1 1/2"
17	SHAWAN NOTICE-CHESTNUT	2	1 1/2"
18	HEARTLAND CATALPA	2	1 1/2"
19	CHICKADEE HICKBERRY	2	1 1/2"
20	SKYLARK HONEYSUCKLE	2	1 1/2"
21	KENTUCKY COFFEE TREE	2	1 1/2"
22	GOLDEN RAIN TREE	2	1 1/2"
23	BLACK OAK	2	1 1/2"
24	SWAMP WHITE OAK	2	1 1/2"
25	SINGLE OAK	2	1 1/2"
26	CHINKAPIN OAK	2	1 1/2"
27	NORTHERN RED OAK	2	1 1/2"
28	REDMOND LINDEN	2	1 1/2"

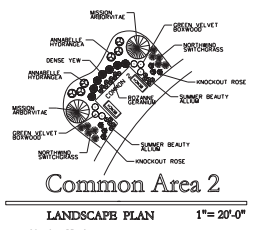
NOTES:
 1. SOIL AREAS AS NOTED.
 2. PREPARE PERENNIAL AND GROUNDCOVER BEDS W/ 1" CV. GARDEN COMPOST PER 100 SF. BOTTLED TO 4" DEPTH (APPROX. 2" CULVD).
 3. MULCH ALL TREE AND SHRUB PLANTINGS TO MAX. 3" x 2" MIN. DEPTH.
 4. SHALLOW HOUSE BEDS APPROX. 8" TO 12" OF SOIL OR SHOULDER.
 5. MULCH SHALL BE 1" MIN. DEPTH OF AGING MULCH OR TREES OR SHRUBS.
 6. A COVER OF AT LEAST 6" OF TOPSOIL SHALL BE PROVIDED IN ALL TURF AREAS.
 7. A COVER OF AT LEAST 9" OF TOPSOIL SHALL BE PROVIDED IN ALL PLANTING BEDS.

Munhall Glen



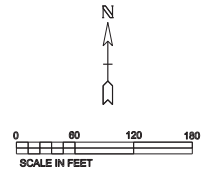
COMMON AREA 1

1. MELANOCORYMBIS GRANADIFLORA	1. APPLE SERVICEBERRY	6
2. TAXUS S. 'COCCINIFERA'	2. MESSYBERRY	4
3. TAXUS S. 'COCCINIFERA'	3. DENSE YEW	20
4. TAXUS S. 'COCCINIFERA'	4. DENSE YEW	20
5. TAXUS S. 'COCCINIFERA'	5. DENSE YEW	20
6. TAXUS S. 'COCCINIFERA'	6. DENSE YEW	20
7. TAXUS S. 'COCCINIFERA'	7. DENSE YEW	20
8. TAXUS S. 'COCCINIFERA'	8. DENSE YEW	20
9. TAXUS S. 'COCCINIFERA'	9. DENSE YEW	20
10. TAXUS S. 'COCCINIFERA'	10. DENSE YEW	20



COMMON AREA 2

1. TAXUS S. 'COCCINIFERA'	1. MESSYBERRY	6
2. TAXUS S. 'COCCINIFERA'	2. DENSE YEW	20
3. TAXUS S. 'COCCINIFERA'	3. DENSE YEW	20
4. TAXUS S. 'COCCINIFERA'	4. DENSE YEW	20
5. TAXUS S. 'COCCINIFERA'	5. DENSE YEW	20
6. TAXUS S. 'COCCINIFERA'	6. DENSE YEW	20
7. TAXUS S. 'COCCINIFERA'	7. DENSE YEW	20
8. TAXUS S. 'COCCINIFERA'	8. DENSE YEW	20
9. TAXUS S. 'COCCINIFERA'	9. DENSE YEW	20
10. TAXUS S. 'COCCINIFERA'	10. DENSE YEW	20



DATE : 9-8-2020
 DRAWN BY : JXC

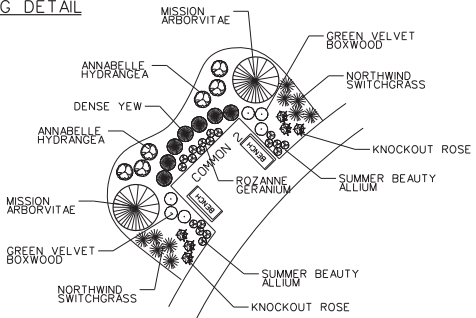
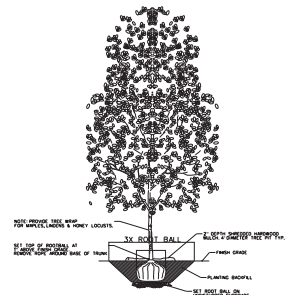
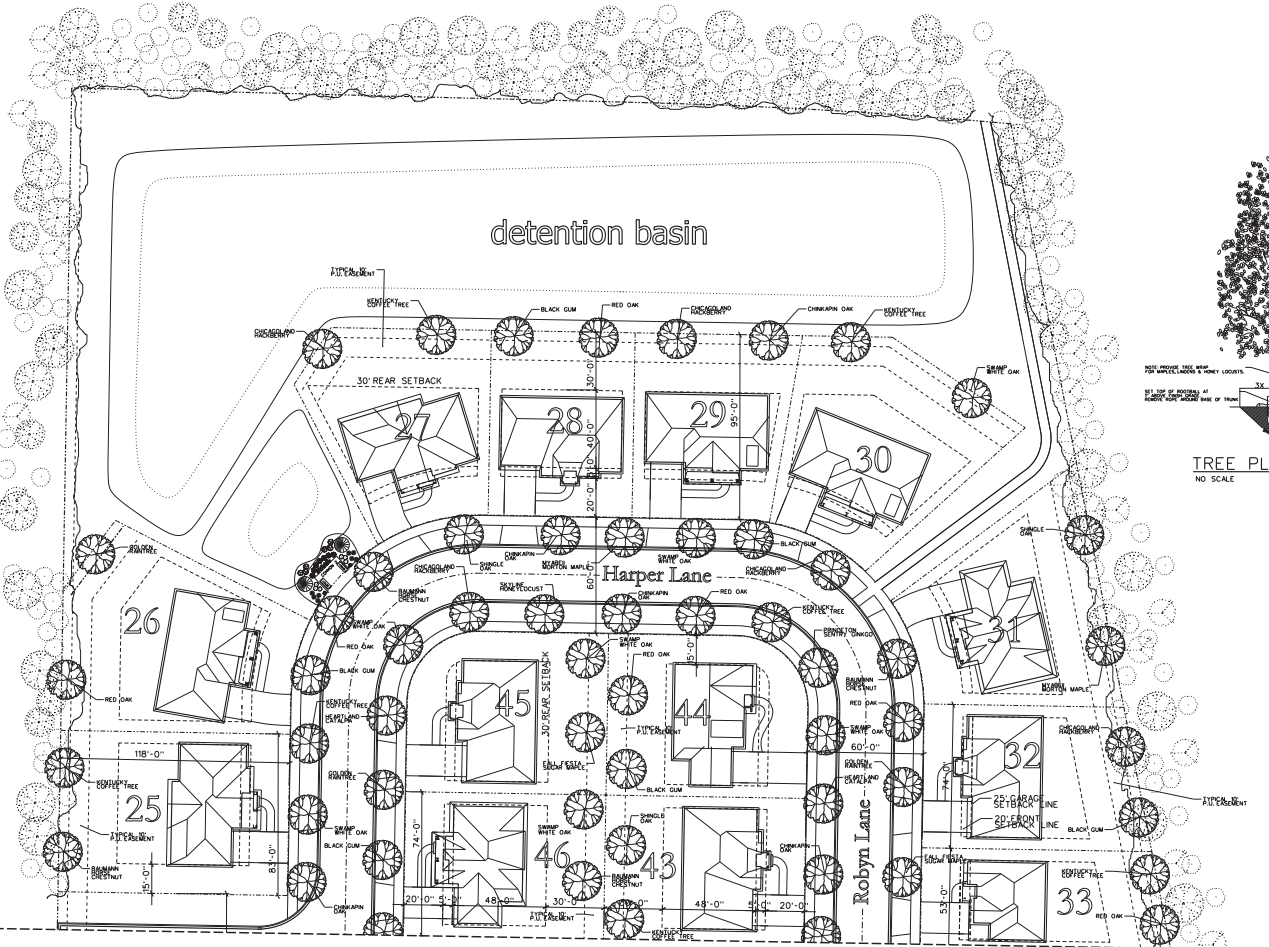
ILLUSTRATIVE SITE PLAN

..St. Charles Munhall Avenue.dgn 9/8/2020 12:19:14 PM



PLANT MATERIAL LIST

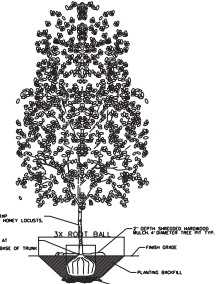
STREET BORDER		TREES		COMMON AREA 2			
1	ACER S. FALL FESTA	FALL FESTA SUGAR MAPLE	2 1/2"	2	TRILLIA O. TECHNY	MISSION ARBORVITAE	4'
1	ACER NYABERMORTON	NYABERMORTON MAPLE	2 1/2"	2	TAXUS MEDIA 'SANSIFORMIS'	DENSE YEW	38"
1	AEQUILUS R. STRAWBERRY	BAUMANN HORSE-CHESTNUT	2 1/2"	6	BUNUS M. GREEN VELVET	GREEN VELVET BOXWOOD	5"
1	CAVALPA S. 'HAWAIIA'	HEARTLAND CATALPA	1 1/2"	6	HYDRANGEA A. ANNABELLE	ANNABELLE HYDRANGEA	5 GAL.
1	CELTIS O. 'SINGAPORELAND'	CHICKSAND HICKBERRY	1 1/2"	6	ROSA X 'KNOCKOUT'	KNOCKOUT ROSE	3 GAL.
1	GRABO B. 'PRINCETON SENTRY'	PRINCETON SENTRY CINQO	1 1/2"	10	ALLIUM 'SUMMER BEAUTY'	SUMMER BEAUTY ALLIUM	1 GAL.
1	GLORIOSA S. 'JULIE'	SETTLING HONEYSUCKLE	1 1/2"	9	GERANIUM S. 'ROZANNE'	ROZANNE GERANIUM	1 GAL.
1	CHIRKOUS BUNUS	KENTUCKY COFFEE TREE	1 1/2"	10	PANICUM V. 'NORTHWIND'	NORTHWIND SWITCH GRASS	1 GAL.
1	KOHLREUTHERIA PANICULATA	GOLDEN MANITREE	1 1/2"				
1	NYSSA SYLVATICA	BLACK OAK	1 1/2"				
1	QUERCUS BICOLOR	SWAMP WHITE OAK	1 1/2"				
1	QUERCUS IMBRICARIA	SINGLE OAK	1 1/2"				
1	QUERCUS MUEHLBERGII	CHICKAPY OAK	1 1/2"				
1	QUERCUS RUBRA	NORTHERN RED OAK	1 1/2"				



AIRHART CONSTRUCTION
300 E. ROOSEVELT RD. WEST CHICAGO, IL 60608 (773) 292-2889

SCALE: 1" = 30'-0" APPROVED BY: _____ DATE: 7-23-20 REVISION: 9-8-20 DRAWN BY: JCK

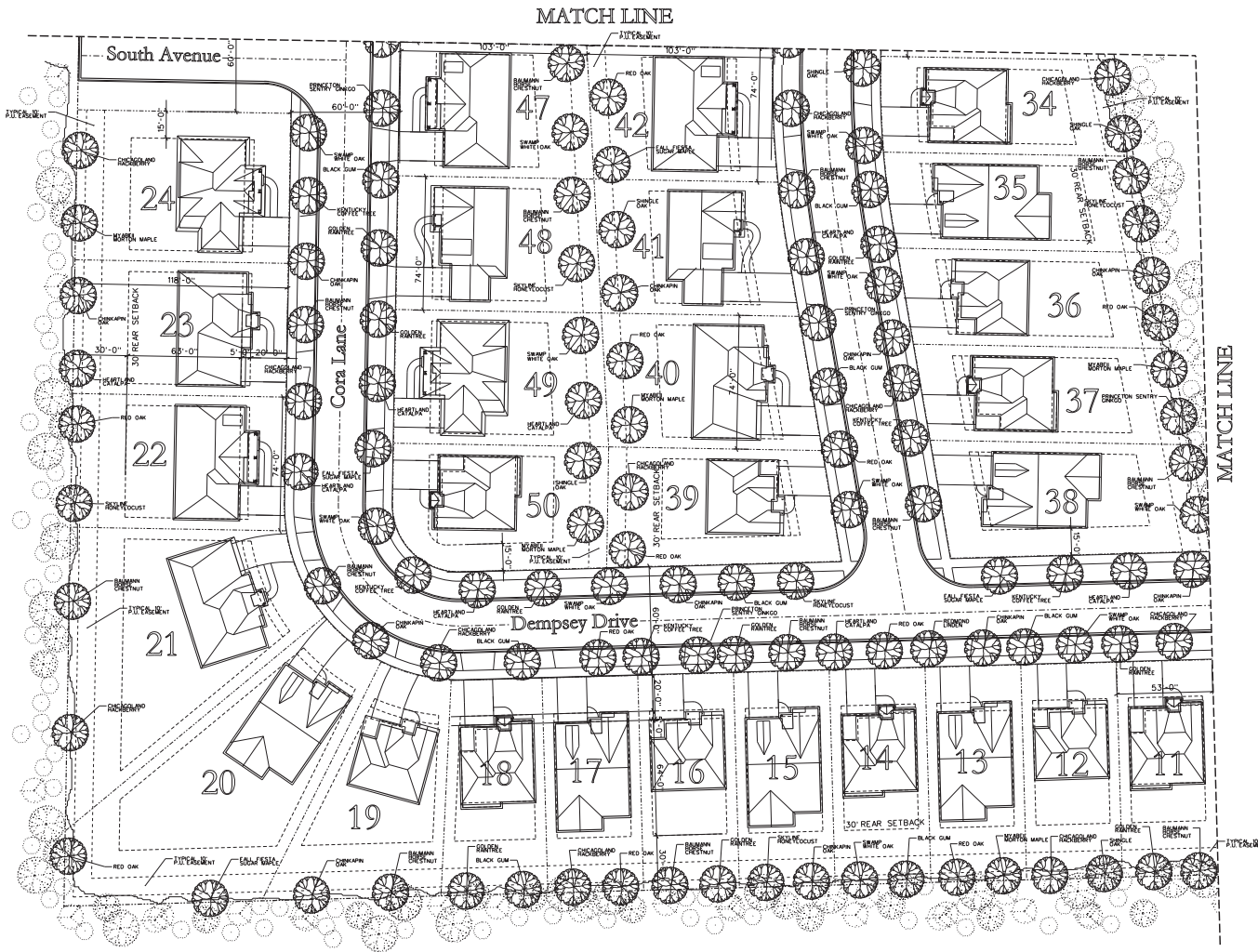
Munhall Glen
ST. CHARLES, IL
Landscape Master Plan
DRAWING NUMBER: L-1



PLANT MATERIAL LIST

STREET	BORDER	TREES	QUANTITY
2	2	ACER S. FULL PESTA	2 1/2"
2	2	ACER NYABERT MORTON	2 1/2"
2	2	ASCULUS R. BAUMANNI	2 1/2"
2	2	CATALPA S. HARWATHA	2 1/2"
2	2	CELOSIA G. THOMAS AND	2 1/2"
2	2	GINOCH B. PRINCE TON SENTRY	2 1/2"
2	2	GLEDSIA T. SUTHER	2 1/2"
2	2	GYMNOCLADUS DODGII	2 1/2"
2	2	KEULESTERA PANICULATA	2 1/2"
2	2	NYSSA STYLAVICA	2 1/2"
2	2	QUERCUS BICOLORE	2 1/2"
2	2	QUERCUS RUBRA	2 1/2"
2	2	QUERCUS RUBRA	2 1/2"
2	2	TILIA E. REDMOND	2 1/2"
2	2	FALL PESTA SUGAR MAPLE	2 1/2"
2	2	MYABERT MORTON MAPLE	2 1/2"
2	2	BALMAM HORSE CHESTNUT	2 1/2"
2	2	HEATLAND CATALPA	2 1/2"
2	2	CHICKASAW HICKORY	2 1/2"
2	2	PRINCETON SENTRY GINCHD	2 1/2"
2	2	SKYLINE HONEYLOCUST	2 1/2"
2	2	KENTUCKY COFFEE TREE	2 1/2"
2	2	GOLDEN BURNING	2 1/2"
2	2	BLACK GUM	2 1/2"
2	2	SWAMP WHITE OAK	2 1/2"
2	2	SHINGLE OAK	2 1/2"
2	2	CHICKASAW OAK	2 1/2"
2	2	NORTHERN RED OAK	2 1/2"
2	2	REDMOND LINDEN	2 1/2"

NOTES:
 - SOD AREAS AS NOTED.
 - PREPARE FRESHMAN AND GROUND COVER BEDS W/ 1" CY. GARDEN COMPOST PER SQ. YD. & INSTALL TO 4" DEPTH APPROX. 2" TO 1".
 - MULCH ALL TREE AND SHRUB PLANTINGS TO MAX. 3" & 2" MIN. DEPTH.
 - SHREDED HARDWOOD MULCH (APPROX. 30 CU. YD.)
 - MULCH SHOULD NOT BE PILED UP AGAINST TRUNKS OF TREES OR SHRUBS.
 - A COVER OF AT LEAST 6" OF TOPSOIL SHALL BE PROVIDED IN ALL TURF AREAS.
 - A COVER OF AT LEAST 9" OF TOPSOIL SHALL BE PROVIDED IN ALL PLANTING BEDS.



AIRHART CONSTRUCTION
 100 E. ROOSEVELT RD. WEST CHICAGO, IL 60658 4730-2900

SCALE: 1" = 30'-0"	APPROVED BY:	DRAWN BY: JCK
DATE: 7-23-20	REVISED: 9-8-20	
Munhall Glen		
St. Charles, IL		
Landscape Master Plan		DRAWING NUMBER: L-2

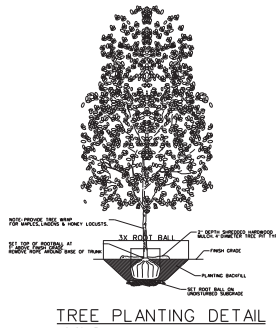
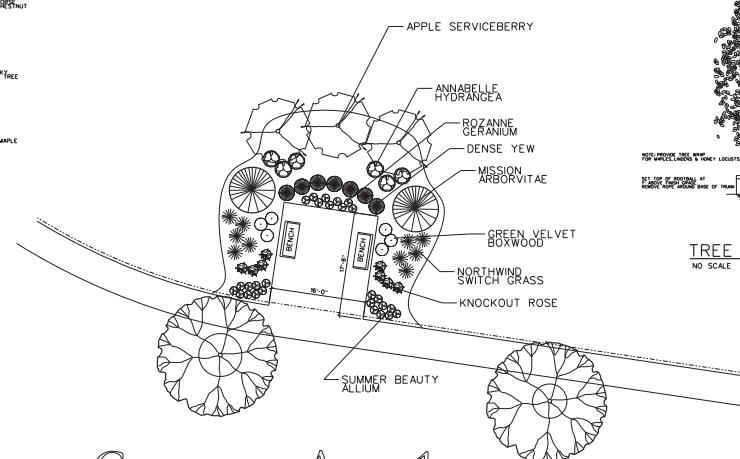
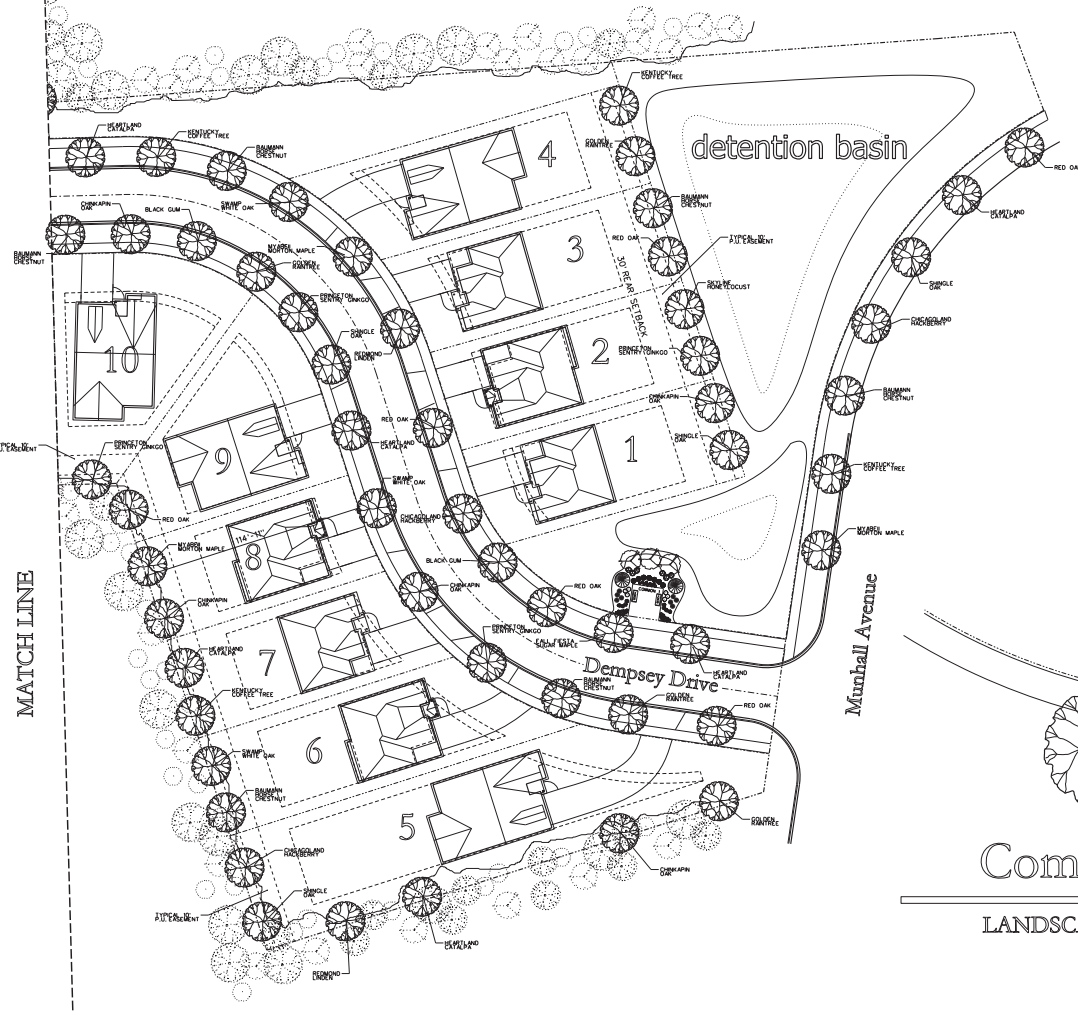


PLANT MATERIAL LIST

TREES			
0	ACER S. FAL PESTA	FALL PESTA SUGAR MAPLE	2 1/2"
1	ACER WABELE WORTON	WABELE WORTON MAPLE	1 1/2"
2	AEOLUS H. BALMANN	BALMANN HORSE CHESTNUT	1 1/2"
3	CA. PALM S. WASHINGTON	WASHINGTON PALM	1 1/2"
4	LELLIS C. CHICAGO	CHICAGO HONOREE	1 1/2"
5	GRNGO. B. PRINCETON SENTRY	PRINCETON SENTRY ENKGO	1 1/2"
6	GLETSIA T. SPKING	SPKING MORE LOGUS	1 1/2"
7	CYMOCLADUS DOUGUS	KENTUCKY COFFEE TREE	1 1/2"
8	ROE PLETIERIA PANDULATA	OLDEN HANTREE	1 1/2"
9	NYSSA SYLVATICA	BLACK OAK	1 1/2"
10	QUERCUS BICOLOR	SWAMP WHITE OAK	1 1/2"
11	QUERCUS IMBRICARIA	SHINGLE OAK	1 1/2"
12	QUERCUS MULPHERSII	CHINKAPIN OAK	1 1/2"
13	QUERCUS RUBRA	NORTHERN RED OAK	1 1/2"
14	TELIA S. RECHMOND	RECHMOND LINDEN	1 1/2"

COMMON AREA 1			
3	AMELANCHER GRANDIFLORA	APPLE SERVICEBERRY	6"
4	THUJA O. TECHNY	MISSION ARBORVITAE	4"
5	TAXUS MEDIA DENSIFORMIS	DENSE YEW	8"
6	BUXUS M. GREEN VELVET	GREEN VELVET BOXWOOD	6"
7	HYDRANGEA A. ANNABELLE	ANNABELLE HYDRANGEA	5 GAL.
8	ROSA X "KNOCKOUT"	KNOCKOUT ROSE	3 GAL.
9	ALLIUM "SUMMER BEAUTY"	SUMMER BEAUTY ALLIUM	1 GAL.
10	GERANIUM S. ROZANNE	ROZANNE GERANIUM	1 GAL.
11	PANICUM V. NORTHWIND	NORTHWIND SWITCH GRASS	1 GAL.

NOTES:
 - PREPARE PLANTING AND GROUND COVER BEDS W/ 1 CY GARDEN COMPOST PER 100 SF ROTILLED TO 8" DEPTH (APPROX. 2 CU YD).
 - MULCH ALL TREES AND SHRUBS PLANTED TO MAX 5' x 4' MIN DEPTH SHREDDED HARDWOOD MULCH (APPROX. 20 CU YD).
 - MULCH SHOULD NOT BE PILED UP AGAINST TRUNKS OF TREES OR SHRUBS.
 - A COVER OF AT LEAST 6" OF TOPSOIL SHALL BE PROVIDED IN ALL PLANTING AREAS.
 - A COVER OF AT LEAST 9" OF TOPSOIL SHALL BE PROVIDED IN ALL PLANTING BEDS.

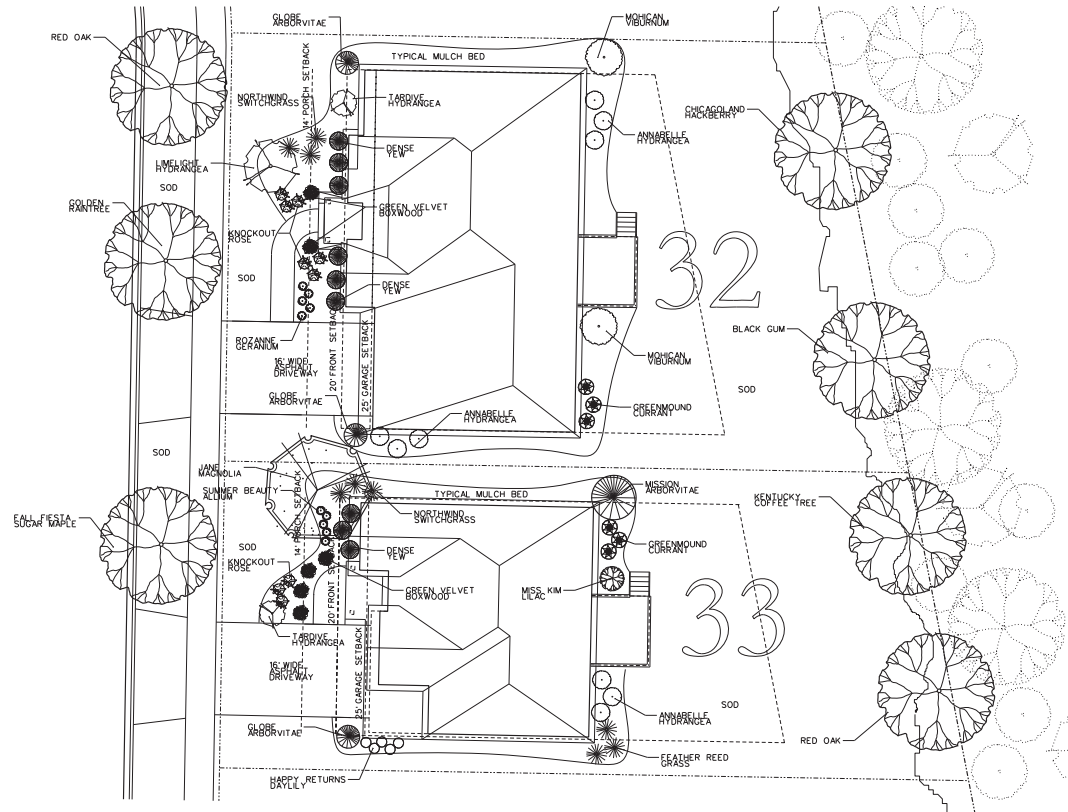


Common Area 1

LANDSCAPE PLAN

1" = 10'-0"

AIRHART CONSTRUCTION
 400 S. ROOSEVELT RD. WEST CHICAGO, IL 60608 (800) 995-0000
 SCALE: 1" = 30'-0" APPROVED BY: DATE: 7/25/20 REVISID: 9/8/20 DRAWN BY: JCK
 Munhall Glen ST. CHARLES, IL
 Landscape Master Plan DRAWING NUMBER: L-3



PLANT MATERIAL LIST

1	CELTIS O. 'CHICAGOLAND'	CHICAGOLAND HACKBERRY	2 1/2"
1	KOELREUTERIA PANICULATA	COLDEN RAIN TREE	2 1/2"
1	NYSSA SYLVATICA	BLACK GUM	2 1/2"
1	QUERCUS RUBRA	RED OAK	2 1/2"
1	HYDRANGEA P. 'LIMELIGHT'	TARDIVE HYDRANGEA	15 GAL. (TREE)
2	THUJA O. 'WOODWARD'	GLOBE ARBORVITAE	5 GAL.
2	TAXUS MEDIA 'DENSIFORMIS'	DENSE YEW	15"
6	BUXUS M. 'GREEN VELVET'	GREEN VELVET BOXWOOD	5 GAL.
6	HYDRANGEA A. 'ANNABELLE'	ANNABELLE HYDRANGEA	5 GAL.
1	HYDRANGEA P. 'TARDIVA'	TARDIVE HYDRANGEA	5 GAL.
3	RIESES A. 'GREENMOUND'	GREENMOUND CURRANT	5 GAL.
6	ROSA X 'KNOCKOUT'	KNOCKOUT ROSE	3 GAL.
2	VIBURNUM L. 'MOHICAN'	MOHICAN VIBURNUM	5 GAL.
5	GERANIUM S. 'ROZANNE'	ROZANNE GERANIUM	1 GAL.
3	PANICUM S. 'NORTHWIND'	NORTHWIND SWITCHGRASS	1 GAL.

NOTE:
PROVIDE 2 YD. GARDEN MIX &
9.5 YD. SHREADED HARDWOOD MULCH

LOT 32 SHALLOW HOUSE DESIGN

PLANT MATERIAL LIST

1	ACER S. 'FALL FIESTA'	FALL FIESTA MAPLE	2 1/2"
1	QUERCUS RUBRA	RED OAK	2 1/2"
1	GYMNOCADUS DIDICUS	KENTUCKY COFFEE TREE	2 1/2"
1	MAGNOLIA S. 'JANE'	JANE MAGNOLIA	6"
1	THUJA O. 'TECHNY'	MISSION ARBORVITAE	48"
3	TAXUS MEDIA 'DENSIFORMIS'	DENSE YEW	5 GAL.
1	THUJA O. 'WOODWARD'	GLOBE ARBORVITAE	5 GAL.
4	BUXUS M. 'GREEN VELVET'	GREEN VELVET BOXWOOD	15"
3	HYDRANGEA A. 'ANNABELLE'	ANNABELLE HYDRANGEA	5 GAL.
1	HYDRANGEA P. 'TARDIVA'	TARDIVE HYDRANGEA	5 GAL.
3	RIESES A. 'GREENMOUND'	GREENMOUND CURRANT	5 GAL.
3	ROSA X 'KNOCKOUT'	KNOCKOUT ROSE	3 GAL.
1	SYRINGA P. 'MISS KIM'	MISS KIM LILAC	5 GAL.
3	PANICUM S. 'NORTHWIND'	NORTHWIND SWITCHGRASS	1 GAL.
3	CALAMAGROSIS 'KARL FÖRSTER'	FEATHER REED GRASS	1 GAL.
5	ALLIUM 'SUMMER BEAUTY'	SUMMER BEAUTY ALLIUM	1 GAL.
5	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILLY	1 GAL.

NOTE:
PROVIDE 2 YD. GARDEN MIX &
9.5 YD. SHREADED HARDWOOD MULCH

LOT 33 NARROW HOUSE DESIGN



SCALE: T = 1/8" = 1'-0" REVISED 9-8-20 DRAWN BY: JCK

DATE: 7-23-20

Munhall Glen

ST. CHARLES, IL

Typical Unit Landscaping

DRAWING NUMBER:
L-4

P.L.N.:
 09-26-376-003 (PARCEL 1)
 09-26-376-001 (PARCEL 2)
 09-26-376-005 (PARCEL 3)
 09-35-126-010 (PARCEL 4)
 09-26-377-004 (PARCEL 5)



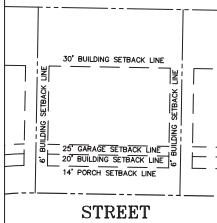
LOCATION MAP
 NOT TO SCALE

AREA SUMMARY

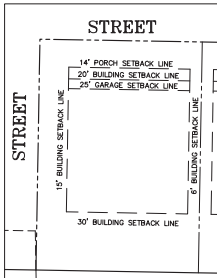
LOTS 1-50: 407,725 SQUARE FEET (9.360 ACRES±)
 OUTLOTS A & B: 126,542 SQUARE FEET (2.905 ACRES±)
 RIGHT-OF-WAY: 136,330 SQUARE FEET (3.128 ACRES±)
 TOTAL: 670,397 SQUARE FEET (15.390 ACRES±)

CURVE	RADIUS	LENGTH	CHORD	BEARING	CHORD
C1	233.00'	88.14'	N50°06'00"E	88.60'	
	(233.00')	(88.15')			
C2	233.00'	52.64'	S32°40'05"W	52.52'	
	(233.00')	(52.64')			

TYPICAL SETBACK DETAIL



TYPICAL SETBACK DETAIL
 LOTS 24-25, 39-40,
 45-46 AND 51

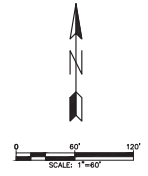
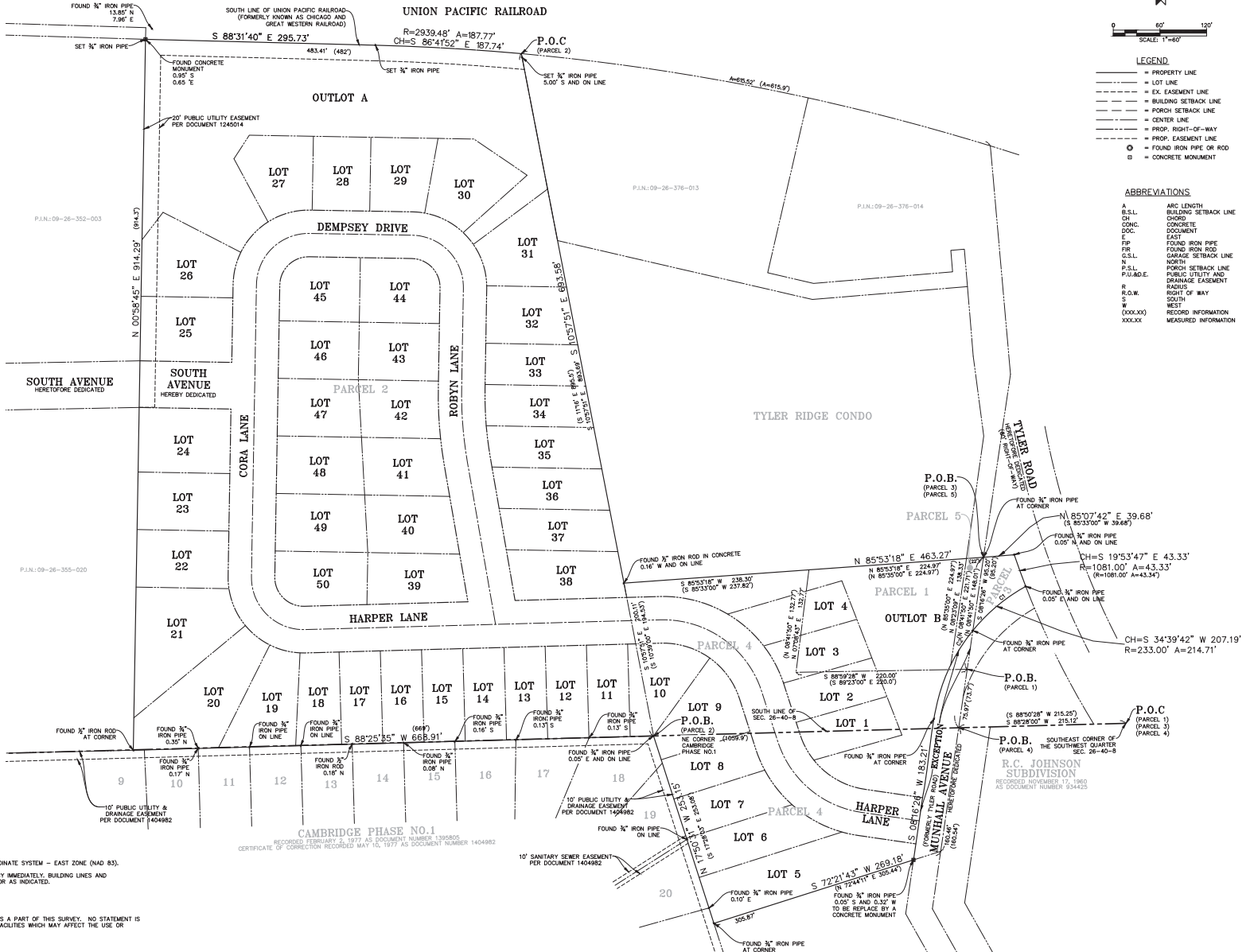


GENERAL NOTES

- THE BEARINGS SHOWN ON THIS PLAT ARE BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM - EAST ZONE (NAD 83).
- CHECK LEGAL DESCRIPTION WITH DEED OR TITLE POLICY AND REPORT ANY DISCREPANCY IMMEDIATELY. BUILDING LINES AND EASEMENTS, IF ANY, SHOWN HEREON ARE AS SHOWN ON THE RECORDED SUBDIVISION OR AS INDICATED.
- ALL AREAS LISTED IN THE AREA SUMMARY TABLE ARE MORE OR LESS.
- ALL DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.
- SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES WHICH MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.
- ALL EASEMENTS SHOWN HEREON ARE HEREBY GRANTED UNLESS OTHERWISE NOTED.

PRELIMINARY PLAT OF SUBDIVISION
 OF
MUNHALL GLEN SUBDIVISION

PART OF THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 40 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, KANE COUNTY, ILLINOIS



- LEGEND**
- = PROPERTY LINE
 - - - = LOT LINE
 - · - · - = EX. EASEMENT LINE
 - · - · - = BUILDING SETBACK LINE
 - · - · - = PORCH SETBACK LINE
 - · - · - = CENTER LINE
 - · - · - = PROP. RIGHT-OF-WAY
 - · - · - = PROP. EASEMENT LINE
 - = FOUND IRON PIPE OR ROD
 - = CONCRETE MONUMENT

- ABBREVIATIONS**
- A = ARC LENGTH
 - B.S.L. = BUILDING SETBACK LINE
 - CH = CHORD
 - CONC. = CONCRETE
 - DOC. = DOCUMENT
 - E = EAST
 - F.P. = FOUND IRON PIPE
 - F.P.R. = FOUND IRON ROD
 - G.S.L. = GARAGE SETBACK LINE
 - N = NORTH
 - P.S.L. = PORCH SETBACK LINE
 - P.U.E. = PUBLIC UTILITY AND DRAINAGE EASEMENT
 - R = RIGHT OF WAY
 - R.O.W. = SOUTH
 - W = WEST
 - (XXX.XXX) = RECORD INFORMATION
 - XXX.XX = MEASURED INFORMATION

ENGINEERING RESOURCE ASSOCIATES
 3300 WEST AVENUE, SUITE 100
 CHICAGO, ILLINOIS 60659
 PHONE (773) 373-3300
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 WWW.ERASSOCIATES.COM

AIRHART CONSTRUCTION
"Building A Better Tomorrow"

AIRHART CONSTRUCTION

MUNHALL GLEN SUBDIVISION
 ST. CHARLES, IL

PREPARED FOR: PROJECT: DESCRIBTION: DATE: 07/25/2020 PRODUCT #: 190726.00 DRAWN BY: C. OMB CHECKED BY: BIM APPROVED BY: C. CCG

PRELIMINARY PLAT OF SUBDIVISION

SHEET 1 of 4

Prepared For:
Airhart Construction
500 E Roosevelt Rd.
West Chicago, IL 60185

Munhall Glen Subdivision – Tree Inventory and Preservation Plan

The existing project site is approximately 15.39 acres and contains a mixture of residential, agricultural, wetland and woodland areas. This report will break down the dense woodland areas by zones and will provide general information of each zone. Per discussion with staff and due to dense invasive undergrowth, specific information was provided for trees greater than 6" Diameter at Breast Height (DBH) (species, size and condition) in the residential zone. The rest of the zones have a dense brush layer, typical to invasive tree species making access challenging. If a more detailed analysis will be required, a significant amount of brush will need to be removed to inventory these areas.

The tree preservation zones are as follows:

- Residential Zone – Individual Trees identified
- South Zone Abutting Residential – General Community Composition
- West Zone Abutting Yard – General Community Composition
- East Zone Abutting Commercial – General Community Composition
- Wetland / Drainage Swale – General Community Composition

Below is a table with a list of the tree species found on-site. Included in this table is each species each species' Coefficient of Conservatism (C Value) and native/invasive status. C Values range from 0 - 10 and represent an estimated probability that a plant is likely to occur in a landscape relatively unaltered from what is believed to be pre-European settlement condition. For example, a C of 0, is given to plants such as *Acer negundo*, Box Elder, that have demonstrated little fidelity to any remnant natural community (i.e. may be found almost anywhere). Similarly, a C of 10 is applied to plants that are almost always restricted to a pre-settlement remnant (i.e. a high-quality natural area). Invasive (non-native) species are assigned a C-value of 0 and are considered invasive.

SPECIES NAME (NWPL/ MOHLENBROCK)	COMMON NAME	C VALUE	NATIVITY
<i>Acer negundo</i>	Box Elder	0	Native
<i>Acer saccharinum</i>	Silver Maple	1	Native
<i>Juglans nigra</i>	Black Walnut	3	Native
<i>Morus alba</i>	White Mulberry	0	Invasive
<i>Populus deltoides</i>	Eastern Cottonwood	0	Native
<i>Prunus serotina</i>	Black Cherry	0	Native
<i>Quercus alba</i>	Northern White Oak	5	Native

<i>Rhamnus cathartica</i>	European Buckthorn	0	Invasive
<i>Robinia pseudoacacia</i>	Black Locust	0	Invasive
<i>Ulmus pumila</i>	Siberian Elm	0	Invasive

This floristic information was obtained from Herman, B., Sliwinski, R. and S. Whitaker. 2017. Chicago Region FQA (Floristic Quality Assessment) Calculator. U.S. Army Corps of Engineers, Chicago, IL. This version of the calculator has floristic information pertaining to the Chicago Region as originally delineated by the authors of the Floristic Quality Assessment - Swink, F. and Wilhelm, G. 1994. Plants of the Chicago Region, 4th Ed. The Indiana Academy of Science, Morton Arboretum, Lisle, IL. Updated Coefficients of Conservatism (C-value) are based on Flora of the Chicago Region: A Floristic and Ecological Synthesis. Gerould Wilhelm & Laura Rericha. 2017. Indiana Academy of Science. Indianapolis, IN.

Residential Zone

The residential zone is the only zone that an individual tree identification was able to occur. The following table represents the Trees Inventoried and their associated Rating. The rating is based on tree health and structural integrity.

Tree #	DBH	Common Name	Species	Rating	Recommendation
1	15"	Maple	Acer	Good	Protective Fence if possible
2	42"	Oak	Quercus	Good	Protective Fence if possible
3	10"	Maple	Acer	Good	Protective Fence if possible
4	14"	Maple	Acer	Poor	Remove
5	38"	Oak	Quercus	Good	Protective Fence if possible
6	12"	Oak	Quercus	Good	Protective Fence if possible
7	14",14"	Elm	Ulmus	Good	Protective Fence if possible
8	36"	Oak	Quercus	Fair	Protective Fence if possible
9	44"	Oak	Quercus	Good	Protective Fence if possible
10	38"	Oak	Quercus	Good	Protective Fence if possible

South Zone Abutting Residential

The area inventoried along the south edge property line abuts the Cambridge Phase No.1 residential subdivision to the south and is approximately 1.70 acres of woodland. The trees in this area consisted of Buckthorn, Black Locust, mulberry, Cottonwood, Silver Maples, and Boxelder. The majority of the trees in this area are invasive and non-desirable but are in fair to good condition and provide screening from the residential subdivision to the agricultural area. There are several good size Silver Maples in this area that could be considered desirable, though the effects from grade change, due to storm water management requirements and construction would likely cause them to not survive.

Rough Percentages of trees found in this area:

- Acer negundo* (Boxelder): <5%
- Acer saccharinum* (Silver Maple): 40%
- Morus alba* (Mulberry): <5%
- Populus deltoides* (Cottonwood): <5%
- Rhamnus cathartica* (Buckthorn): 40%
- Robinia pseudoacacia* (Black Locust): <5%

West Zone Abutting Yard

The area inventoried along the west edge property line abuts an industrial material yard and is approximately 0.6 acres of woodland. The trees in this area consisted of Buckthorn, Siberian Elm, Cottonwood, Silver Maples, Boxelder, Cherry, and Walnut. The majority of the trees in this area are invasive and non-desirable but are in fair to good condition and provide screening from the industrial yard to the west. There are several Walnut, Silver Maples, Cottonwoods & Siberian Elms in fair condition in this area that could be considered desirable, though the effects from grade change, due storm water management requirements and construction would likely cause them to not survive.

Rough Percentages of trees found in this area:

- Acer negundo* (Boxelder): <5%
- Acer saccharinum* (Silver Maple): 10%
- Juglans nigra* (Walnut) : 15%
- Populus deltoides* (Cottonwood): 10%
- Prunus serotina* (Cherry): <5%
- Rhamnus cathartica* (Buckthorn): 45%
- Ulmus pumila* (Siberian Elm): 10%

East Zone Abutting Commercial

The area inventoried along the east edge property line abuts the Tyler Ridge Condo Subdivision and is approximately 1.1 acres of woodland. The trees in this area consisted of Buckthorn, Siberian Elm, Silver Maples, Boxelder, Cherry, and Mulberry. The majority of the trees in this area are invasive and non-desirable but are in fair to good condition and provide screening from the commercial condos to the east to the agricultural area. There are several

Cottonwoods & Siberian Elms in fair condition in this area that could be considered desirable, though the effects from grade change, storm water management requirements, and construction would likely cause them to not survive.

Rough Percentages of trees found in this area:

Acer negundo (Boxelder):15%
Acer saccharinum (Silver Maple): 5%
Morus alba (Mulberry): 5%
Prunus serotina (Cherry):5%
Rhamnus cathartica (Buckthorn): 65%
Ulmus pumila (Siberian Elm):5%

Wetland / Drainage Swale

The area inventoried along north property line and the area that runs along the drainage swale through the center of the property is approximately 4.3 acres of woodland. The trees in this area consisted of Buckthorn, Siberian Elm, Cottonwood, Silver Maples, Boxelder and Mulberry. The majority of the trees in this area are invasive and non-desirable but are in fair to good condition and provide screening to the neighboring industrial to the west and the old rail lines to the north. There are a few large oaks in the NW corner and several Cottonwoods & Siberian Elms in fair condition in this area that could be considered desirable, though the effects from grade change, due storm water management requirements and construction would like cause them to not survive.

Rough Percentages of trees found in this area:

Acer negundo (Boxelder): 20%
Acer saccharinum (Silver Maple): 5%
Morus alba (Mulberry): 5%
Populus deltoides (Cottonwood): 5%
Rhamnus cathartica (Buckthorn): 60%
Ulmus pumila (Siberian Elm):5%

Recommendations

The majority of the wooded areas on-site consist of invasive trees with intermittent desirable species. The proposed construction will be impacting 100% of the site and due to significant elevation change and storm water management requirements, all trees on site will be affected. In lieu of preservation of existing low quality and invasive trees, a significant landscape plan incorporating 92 high quality front yard parkway trees and 98 high quality backyard trees to be used as screening, and will be more beneficial to the long term health of trees on the site as well as neighboring properties.

If it is possible to keep trees, the following protocols should be used:

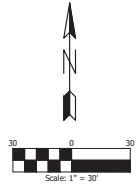
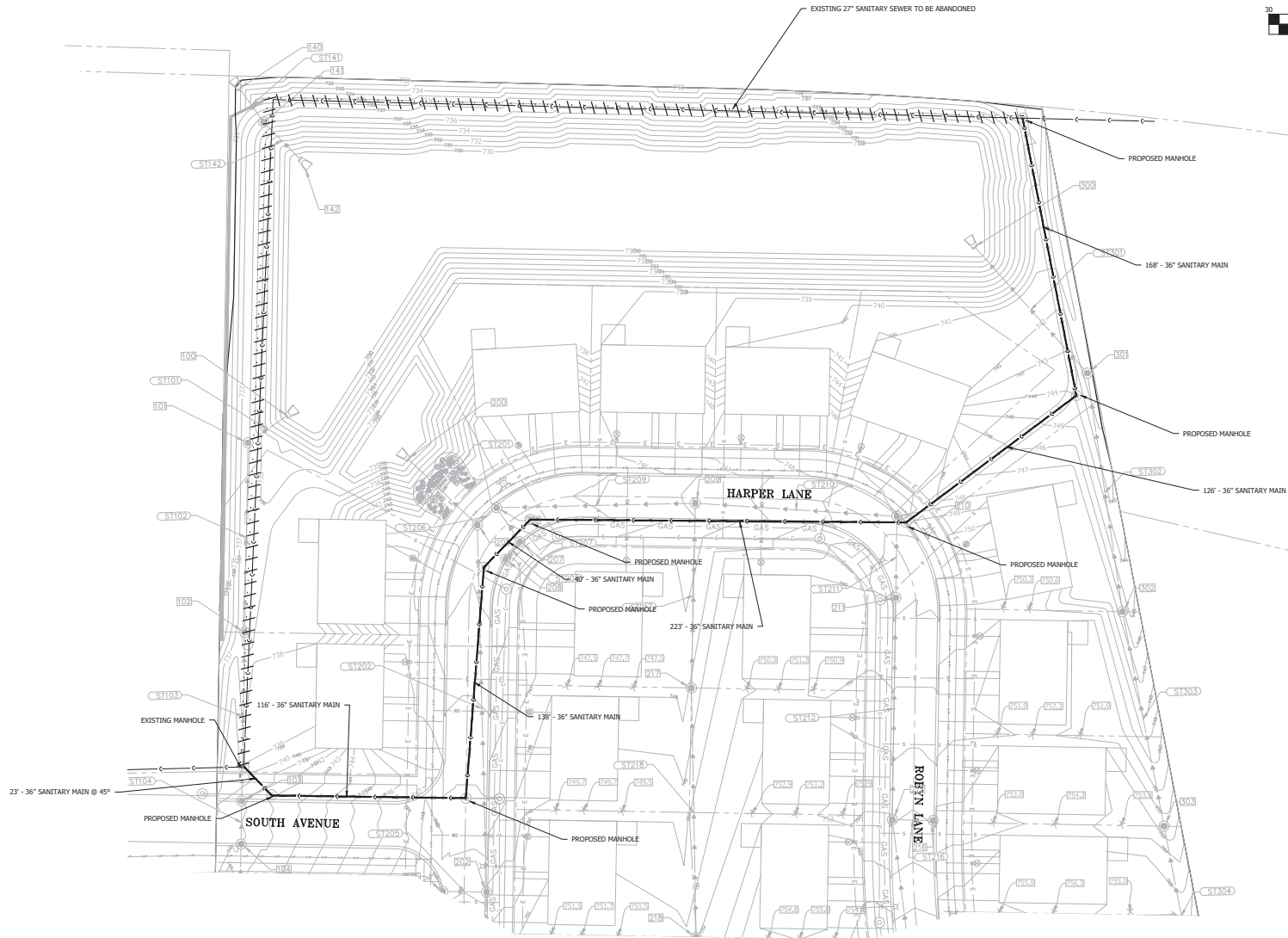
- Install tree protection fence per erosion control plan prior to any construction;
- Fence the public portion (parkways) of the entire tree protection zones with a 6' chain-link fence to prevent wounds to the parkway trees as well as soil compaction prior to any construction activity. Post the fence with a sign stating "Tree Protection Zone - Keep Out";
- At no time shall any equipment, materials, supplies or soil fill be allowed in the tree protection zone;
- The entire tree protection zone should be mulched to improve the growing conditions for tree roots, and minimize the maintenance of the parkway lawn; and
- Tree protection zone is the designated area the encompasses the entire tree canopy.

This tree preservation plan incorporates all reasonable steps necessary to minimize damage to trees on property and adjacent to the property.

The Tree Preservation Plan was performed by Certified Arborist Jay Peters

_____ 7.11.2020

Jay C. Peters; Certified Arborist # IL-1201



**ENGINEERING
RESOURCE ASSOCIATES**
3025 WEST MARINE DRIVE, SUITE 100
MUNSHILL, ILLINOIS 60453-3130
WWW.ERASSOCIATES.COM



**AIRHART
CONSTRUCTION**
"Building A Better Tomorrow"

**AIRHART
CONSTRUCTION**

MUNHALL GLEN
ST. CHARLES, IL
EQ# 190726.CO
190726.CO

DATE	07-24-2020
PROJECT #	190726.CO
DESIGNED BY	TF
DRAWN BY	TF
CHECKED BY	NAV
DESCRIPTION	

36" CITY
SANITARY
SEWER
RELOCATION
PLAN

C-5.X
SHEET

© PROJECTS/Airhart Construction\190726.CO\Munhall St. Charls. Site Rev.DWG\CAD\190726.CO\SHEET\190726.CO SHEET C-5.X\JURY.dwg

EXHIBIT “E”

PUD DEVIATIONS

Table 17.12-2 Residential District Bulk Requirements – RS-4 District	
Minimum Lot Area	6,307 sq. ft. minimum and as shown on the Preliminary Plat of Subdivision
Minimum Lot Width	48 ft. and as shown on the Preliminary Plat of Subdivision
Maximum Building Coverage	37.5%
Minimum Interior Side Yard	Combined width of 12 ft., neither side less than 6 ft.