



Housing Production Plan Town of Reading

Prepared for the Town of Reading

By: Anser Advisory (Nicole Lambert, Project Manager; Andrea Lombardi, Senior Director VP)

With the assistance from the Town of Reading: Fidel Maltez, Town Manager; Jean Delios, Assistant Town Manager; Julie Mercier, Community Development Director; Andrew MacNichol, Senior Planner; Sudeshna Chatterjee, Director of Equity and Inclusion; Kathryn Gallant, Reading Housing Authority Director; Catrina Meyer, Community Planning and Development Commission; Jacqueline McCarthy, Reading Select Board

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Introduction

A Housing Production Plan (HPP), defined in regulations at 760 CMR 56.03 and administered by the Department of Housing and Community Development (DHCD), is a proactive strategy for planning and developing affordable housing. The HPP identifies the housing needs of a community and the goals and strategies it will use to identify and achieve or maintain the 10% Subsidized Housing Inventory (SHI) threshold mandated by M.G.L. Chapter 40B. The Town's status relating to this 10% threshold is documented on the SHI, also administered by DHCD.

This HPP Program enables municipalities to develop a strategy to meet its affordable housing needs in a manner consistent with the MGL Chapter 40B statute, produce housing units in accordance with that plan, and demonstrate progress towards their affordable housing production. By taking a proactive approach in the adoption of a HPP, cities and towns are much more likely to achieve both their affordable housing and community planning goals. HPPs give communities that are under the 10% threshold of Chapter 40B, but are making steady progress in producing affordable housing on an annual basis, more control over comprehensive permit applications for a specified period of time. HPPs give communities over the 10% threshold a framework to maintain the statutory minima in accordance with local needs and community goals.

The Town of Reading places great importance on planning for affordable housing development through the HPP process. The Town of Reading's current Housing Production Plan was approved by DHCD on March 20, 2018 and will expire after a 5-year term on February 13, 2023, and as such, the Town of Reading has updated the Housing Production Plan ("HPP") herein, in accordance with 760 CMR 56.03(4).

Housing Production Plans can create a safe harbor for a community. When a municipality has a certified plan, decisions on comprehensive permit applications by the Zoning Board of Appeals (ZBA) to deny or approve with conditions will be deemed "consistent with local needs" under MGL Chapter 40B.

As of December 2022, Reading has achieved a 10% SHI threshold, as a result of meeting its previously planned production efforts. However, because of the fluidity of the SHI continued efforts are needed to maintain the threshold. As summarized below, a municipality may request that the DHCD certify its compliance with an approved HPP if it has created the required number of SHI Eligible Housing units in a calendar year.

Housing Production Plans are certified by the following process, as identified in the regulations:

- **Prepare the HPP:** In accordance with the regulations, write the plan, including a public process, and have the plan adopted by the Select Board and Community Planning and Development Commission

- DHCD Approval: Submit HPP to DHCD for approval
- Certify the HPP: Communities may seek DHCD certification of the HPP (safe harbor), if in a calendar year, affordable units (AFU's) are created as follows:
 - One-year Safe Harbor: – Create at least 0.5% of the total number of housing units in Reading (50 units for Reading)
 - Two-year safe harbor – Create at least 1.0% of the total number of housing units in Reading (100 units for Reading)
- Renew the HPP: The term of the HPP is five years from approval.

The Town of Reading's Public Services Department updated the Housing Plan with future planned housing, completed projects, census data and other demographic information as required by DHCD. DHCD regulates Housing Production Plans under 760 CMR 56.00, promulgated on February 22, 2008. HPPs are designed to create strategies to meet affordable housing needs that are consistent with Chapter 40B requirements. In order for the HPP to qualify for approval from DHCD, the plan must be comprised of three components: (1) Comprehensive Needs Assessment; (2) Affordable Housing Goals; and (3) Implementation Strategies.

- (1) Comprehensive Needs Assessment – an evaluation of a community's demographics, housing stock, population trends, and housing needs. The assessment will include a review of the development capacity, as well as constraints, to ensure that current and future needs can be met.
- (2) Affordable Housing Goals – defined housing goals consistent with both community character and the local housing market. This section will identify strategies that can be used to produce the required number of annual housing units needed to obtain the 10% statutory minima and safe harbor certification from DHCD.
- (3) Implementation Strategies – recommendations and targeted areas for future development that will enable a community to reach the affordable housing goals. This may include identifying sites for development or redevelopment, investigating re-zoning options to encourage the production of affordable housing units, and establishing other tools such as regional collaborations that can foster the development of affordable housing.

When a community has reached a subsidized housing inventory of at least 10% they achieve safe harbor certification - "safe harbor" keeps a developer from appealing to the state regarding local permits. There are multiple ways for a municipality to be in "safe harbor" — one requires raising the community's subsidized housing inventory at a rate of 0.5% per year. Safe Harbor grants the Town the ability to deny a developer's application for a 40B permit within 15 days of the opening of the local hearing for a Comprehensive Permit application. The Zoning Board of Appeals (ZBA) shall provide written notice to the Applicant, with a copy to DHCD, that a denial of the permit or the imposition of conditions or requirements would be consistent with local needs, the grounds that it believes have been

met, and the factual basis for that position, including any necessary supporting documentation. If the Applicant wishes to challenge the ZBA's assertion, it must do so by providing written notice to the Department, with a copy to the Board, within 15 days of its receipt of the ZBA's notice, including any documentation to support its position. DHCD shall thereupon review the materials provided by both parties and issue a decision within 30 days of its receipt of all materials. The ZBA shall have the burden of proving satisfaction of the grounds for asserting that a denial or approval with conditions would be consistent with local needs, provided, however, that any failure of the DHCD to issue a timely decision shall be deemed a determination in favor of the municipality. This procedure shall pause the requirement to terminate the hearing within 180 days.

Reading encourages the "Friendly 40B Process" in town. A "Friendly 40B" project is a project that has local support because of community engagement in the process and the contribution it can make to the community's need for more diverse housing options, and the contributions the developer agrees to make to local needs (infrastructure, public safety, land protection, etc.).

Affordable Housing Highlights Since 2018 HPP

- Continued lead of the Metro North Regional Housing Services Office to administer affordable requirements, including preserving existing affordable units, along with North Reading, Saugus and Wilmington. The City of Woburn joined the regional collaboration in 2019.
- Downtown Smart Growth District (DSGD) under Chapter 40R: Adopted in 2009 and expanded in 2017, five (5) 40R projects have been completed and occupied resulting in 192 total units, 43 of which (22.4%) are deeded as affordable units. A number of additional 40R development projects continue to go through permitting and construction; see Section 24B below for more information on these projects.
- 40B Project Approvals:
 - In February 2017, the Zoning Board of Appeals (ZBA) approved a 68-unit rental housing project known as the Metropolitan at Reading Station, located next to the Reading Commuter Rail Station downtown. The project was completed and occupied in 2020.
 - In July 2017, the ZBA approved a 20-unit rental housing project outside of the downtown area known as Schoolhouse Commons – an adaptive re-use of the former school building associated with St. Agnes church which includes units deeded at 50% AMI. The project is fully occupied as of 2022.
 - In 2019 the Eaton Lakeview 40B was approved for a combination of 12 ownership units and 74 rental units. The project includes 25% of both the homeownership (3 units) and rental units (19 units) as deeded affordable.
- Through all of its planning efforts, Reading has added 177 units (and 1.77%) to its Subsidized Housing Inventory (SHI) since the 2018 HPP was implemented.

Executive Summary

Reading maintains nearly 10 square miles of land (6,388 acres) and is located in Middlesex County, Massachusetts, just 12.5 miles north of the City of Boston. Local connections to Interstate 93 and 95, along with an MBTA Commuter Rail Station and bus line 137.

The Town of Reading continues to be a desirable place to live and work. It is characterized by a traditional New England center, surrounded by family-oriented neighborhoods. It has evolved over time from largely an outlying community with a strong agricultural presence to a modern residential suburb just north of Boston.

Reading's proximity to Boston has added to its attractiveness. The Town has worked to shape housing and commercial growth that complements the character of the community. The HPP identifies tools for Reading to use that will encourage the development of affordable housing while maintaining the distinct town character.

Summary of Demographic and Housing Characteristics

The following summarizes the notable findings from the need's assessment section of the Housing Production Plan.

The Bottom Line:

Reading has grown slightly since 2010, with increases in population, the number of households, and housing units. In particular, the projected growth of the 65+ population is noted. Reading's median income has risen significantly, however, 33.1% of the population is low-income.

Housing cost burdened is an indicator that a household may be unable to afford other critical and nondiscretionary costs such as health and child care, food, and transportation. Locally, a total of

- 49.4% of Renters at or below 30% Average Median Income (AMI) are Cost Burdened
- 24.5% of Renters between 30% and 50% AMI are Severely Cost Burdened
- 22.7% of Owners at or below 30% AMI are Cost Burdened
- 8.8% of Owners between 30% and 50% AMI are Severely Cost Burdened
- 29.1% of all Reading households are cost burdened.

Population

- As of the 2020 US Census, the population of Reading is 25,510, an increase of 3% since 2010. In 2020, the largest age group of Reading's populations was 35-59 year

old's (35.8% of total population). There was a 5.4% decrease in the 60+ year- old grouping but such is expected to rise in future years as residents in the 35-59 age cohort continue to age.

- The 2020 Census illustrates that 35.7% of Reading's households have children under 18-years old, and 13.5% of households have persons age 65+.
- The median age increased from 41.6 years old in 2010 to 44.1 years old in 2020.
- Racial make-up is predominantly white, at (87.2%) and the largest racial minority group in Reading is the Asian population (5.1%) followed by the Hispanic or Latino population at 2.8%. Only 1.3% of the population identifies as Black or African American.; 0.1% of the population are American Indian/Alaskan Native; .8% of the population identify as other; and 3.5% of the population identifies as Hispanic or Latino.

Income

- The Town of Reading's 2022, median household income was \$133,300; approximately a 25% increase from 2015, and slightly lower than the Boston-Cambridge-Quincy Metro Area (\$140,200) but 10.7% higher than the state as a whole (\$120,400). (HUD)
- An estimated 32.7% of Reading households have incomes at or below 80% of AMI (Low/Moderate Income).
- 3% of Reading's population is below the poverty line (annual income below \$27,750 for a household of 4 based on 2022 FPL Guidelines), much lower than Middlesex County (7.1%) and Massachusetts (9.4%).
- Of the 7,560 of Reading households who own their homes, 22.5% are cost-burdened (spending over 30% of their income on housing), while 49.3% of Reading's renters are cost-burdened. 64.7% of Reading's low-income households are cost-burdened.

Housing Stock, Sales and Prices

- 84.6% of Reading's housing units are owner occupied, with 15.4% renter occupied.
- The Town's housing stock remains primarily single-family at 76.7% of total housing units. The remaining 23.3% is: 6.4% of units are in two to four family buildings, 6.7% of units in 5-19 unit buildings, and 10.5% of units in multi-family buildings with 20 or more units.
- Currently, 10.49% (1,044 units) of Reading's total housing stock (9,952 units) is counted as affordable on the State's Subsidized Housing Inventory (SHI), which falls just above the State's minimum affordability goal of 10% by 74 units.
- Reading's 2022 median sale price of \$815,000 would require an annual income of approximately \$236,260 to not be considered cost-burdened, almost double Reading's median household income of \$133,300.
- The 2022 median price of single-family homes in Reading was \$815,000. The 2022 median price of all homes, including condos, was \$557,500. After a dip in prices during the national recession in the mid-2000's, housing prices have been rising steadily since 2012 and are now the highest they have ever been. Prices have increased by 72.2% since 2016.
- Based on the 2022 median single-family sale price, Reading's ownership affordability gap is \$430,000 for median income households, \$560,000 for low-

- income households, and \$705,000 for very-low-income households.
- Based on current median rents, rental units in Reading are out of reach for low income households. In addition, there are not very many rentals available.

Goals for Affordable Housing Production

~~Reading has identified housing goals that are the most appropriate and most realistic for the community. These goals were developed by reviewing previous studies and documents (including the Reading Housing Plan of 2018), analyzing the current housing situation in Reading, and through public input from town citizens and officials.~~

~~Established goals are categorized into three areas of need and are as follows:~~

~~1. Development and Regulations~~

- ~~a) Increase, diversify and promote a mix of housing options in Reading for low to middle income households.~~
- ~~b) Create and maintain housing that is available and accessible to aging and disabled populations. Support housing development needs for most vulnerable residents.~~
- ~~c) Proactively plan for and manage the integration of housing growth to mitigate impacts and enhance the existing residential character of the Town.~~
- ~~d) Provide equitable access to housing opportunities, public spaces, green spaces and healthy/safe environments.~~
- ~~e) Maintain Reading's Safe Harbor designation by retaining pace of Affordable Housing development in order to remain above 10% on Subsidized Housing Inventory.~~

~~2. Funding and Resources~~

- ~~a) Support vulnerable, low and middle income populations through programming and services.~~
- ~~b) Ensure appropriate maintenance and upkeep of existing affordable housing stock. Continue to look for opportunities to increase affordable units within existing properties.~~
- ~~c) Maintain and see national/state/local designations that provide grant and financial opportunities to develop/maintain/support affordable housing development and residents.~~
- ~~d) Ensure equitable access to financial/support services and programming.~~

~~3. Partnerships, Education and Leadership~~

- ~~a) Initiate and strengthen local and regional relationships. Work in cooperation and collaborate with community partners/organizations to promote enhanced understanding of housing needs and support for creation of housing development.~~
- ~~b) Increase capacity to produce housing through leadership developments, advocacy, staffing, funding, established goals and diverse relationships. Provide education and support to local staff, boards/commissions and public.~~
- ~~c) Ensure access, support, outreach and inclusion to social and vulnerable populations across the Town and region.~~

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SECTION 1: COMPREHENSIVE HOUSING NEEDS ASSESSMENT

Section 1: Comprehensive Housing Needs Assessment

The Housing Needs Assessment examines demographic and population data and trends from available sources such as the Census, regional planning agencies, media, etc., that illustrates the current demographic and housing characteristics for the Town of Reading. Assessing needs will provide the framework for the development of housing production strategies to meet affordable housing goals.

A. Demographic Analysis

The purpose of analyzing demographics is to look at quantitative and qualitative trends and use the data for future planning. This section provides an overview of Reading's demographics and how they have changed over time. As the demographics change in the future, the housing needs of the community can also change. The size and type of families as well as householder age and economic status all influence the needs of the community. The analysis of the Housing Needs Assessment will provide a guide to identify goals and strategies for this plan.

1. Total and Projected Populations:

In the last ten years, the Town of Reading has had a 3% increase in population. Over the next 10 years, the population is expected to experience a slight decline before having a minor increase by 2030 as well as another increase in 2040. The total number of households in Reading has increased and is expected to only have minor increases through 2030 and 2040. Similar to the national trend, Reading's average household size has decreased in the past ten years. In 1999 the average household size was 2.84 and decreased to 2.71 in 2010. In 2020 the average household size was 2.67. Smaller household size is consistent with communities experiencing slow but steady growth.

Table 1: Total and Projected Populations: 2000-2040

Year	Population	% Change	Households	% Change
2000	23,708	5%	8,688	10%
2010	24,747	4.4%	9,305	7.0%
2020	25,510	3%	9,374	.7%
2030	26,222	2.7%	10,806	8.7%
2040	28,139	6.8%	11,221	3.84%

Source: 2020 US Census and MAPC MetroFuture 2050

Update, January 2014, May 2022, Donahue Institute at UMASS

2. Household Types:

There were a total of 9,952 households in Reading in 2020, with 70.7% family households, and 28% non-family households in Reading. The non-family households include single person households or persons living in the same household who are not related. The presence of a mix of family and non-family households indicates that there is likely a need for a variety of housing types that may not fit the traditional single-family home model. The data reflects 2,789 non-family households. This may suggest a need for affordability options for non-family households who may have special housing needs.

Table 2: Household Types: 2020

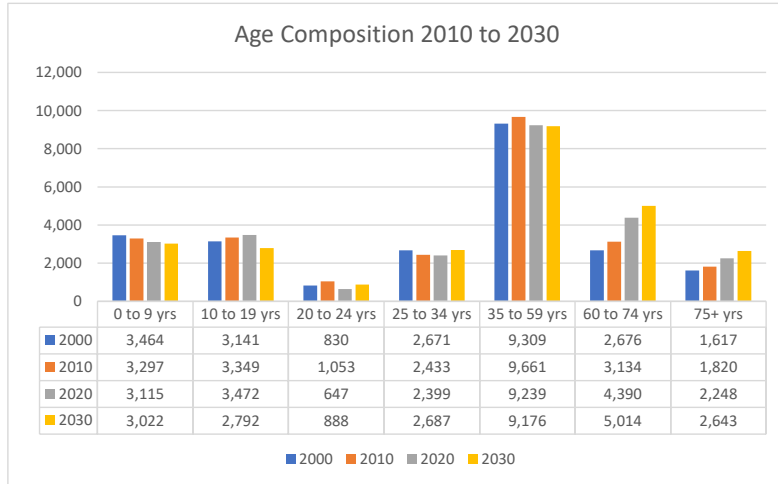
Household Type	2020	Percentage
Family Households:	7,032	70.7%
With own Children under 18 years	6,187	62.2%
Married, Husband-wife family:	5,580	56.1%
With own children under 18	5,560	55.9%
Male householder, no wife present	89	.9%
With own children under 18 years	31	.3%
Female householder, no husband present	365	3.7%
With own children under 18 years	341	3.4%
Nonfamily households:		
Householder living alone	2,789	28%
Householder 65 and over living alone	1,263	12.7%
Average household size	2.67	
Average family size	3.16	
Total Households	9,952	

Source: 2020 US Census

Other important factors to consider when assessing housing needs are household size and the age composition of residents. Household size is an important factor as it can help determine the demand for certain types of housing. Similarly, analyzing the age composition of a community over time can help develop trends for housing needs. For example, established families with children living at home have different housing needs than an empty nester and or someone who is over 65.

MetroFuture is a regional plan developed by the Metropolitan Area Planning Council (MAPC) that addresses future growth in the Boston metropolitan region until 2030. Figure 1 summarizes Reading’s age composition from 2020 and includes MetroFuture projections until 2030. Table 3 illustrates this in more detail.

Figure 1: Age Composition of Residents, 2000 – 2030



Source: 2020 US Census and MAPC MetroFuture 2050 Update, January 2014, May 2022, Donahue Institute at UMASS

Table 3: Current and Projected Age Distribution of Residents: 2000-2030

Age Cohorts	2000		2010			2020			2030			% Change from 2000-2030
	Number	%	Number	%	% Change	Number	%	% Change	Number	%	% Change	
0 to 9 years	3,464	14.6	3,297	13.3	-4.8	3,115	12.3	-5.5	3,022	11.5	-3.0	-12.8
10 to 19 years	3,141	13.2	3,349	13.5	6.2	3,472	13.8	10.5	2,792	10.6	-19.6	-11.1
20 to 24 years	830	3.5	1,053	4.3	26.9	647	2.6	-22.0	888	3.4	37.2	7.0
25 to 34 years	2,671	11.3	2,433	9.8	-9.0	2,399	9.4	-11.0	2,687	10.2	13.1	.6
35 to 59 years	9,309	39.3	9,661	39.0	3.8	9,239	36.2	-1.8	9,176	35.1	.4	-1.4
60 to 74 years	2,676	11.3	3,134	12.7	17.1	4,390	17.2	62.2	5,014	19.1	15.5	87.4
75+ years	1,617	6.8	1,820	7.4	12.6	2,248	8.5	32.8	2,643	10.1	23.0	63.5
Total Population	23,708	100	24,747	100		25,510	100		26,222	100		

Source: 2020 US Census and MAPC MetroFuture 2050 Update, January 2014, May 2022, Donahue Institute at UMASS

MAPC’s MetroFuture plan suggests that Reading’s population will have a minor increase in overall population for the next 10-20 years. However, it is anticipated that a significant change in the composition of the age groups will occur. Based on the MetroFuture projections, the youngest age groups are expected to continue to decline by 2030; ages 0-9 (-3%), and ages 10-19 (-19.6%). The age groups from 20-24 and 25-34 are expected to increase by (37.2%) and (13.1%) respectively. However, the 35-59 age group is expected to remain the largest age group in Reading and is projected to comprise 35.1% of the population in 2030, with the 60-75+ age group following close behind at approximately 29.2% of Reading’s population in 2030.

In 2020 the largest age cohort in Reading was those aged 35-59 (36.2%). People in this age group are likely to be in an established family household with a larger home than the younger age groups. The next concentration of residents was the next age group; those aged 60-74 years (17.2%) and those aged 10-19 years (13.8%) made up the third largest age cohort. The following age groups experienced a decline in 2020: 0-9 years, 20-24 years, and 25-34 year old’s between 2010 and 2020. The elderly population also increased from 2010 to 2020. Persons aged 60-74 experienced a population increase of 17.2% and those aged 75+ increased by 8.5%.

The data shows that the second largest age group in 2030 will be those aged 60-74 with an increase of 60% from 2010 to 2030. Even though the childhood age groups of 0-9 and 10-19 are expected to decrease by 2030, collectively they will make up almost one-fourth of the population (22.2%). Adults who will be aged 25-34 are expected to grow slowly by 2030, only increasing by .6%.

By contrast, the elderly population (ages 75+) which comprises 8.5% of Reading residents is expected to increase by 23% in the next 10 years. When combined with the 60-74 age group (29.2%), the 60-75+ age group will consist of approximately 38.5% of Reading's population. This is not surprising as the "baby-boomer" population is contained within this age group. It is important to be aware of this trend as this population tends to prefer smaller housing units with less upkeep. Elderly residents could have special housing needs such as nursing homes and assisted living facilities.

Adults aged 20 to 24 years and 25 to 34 years are expected to make up approximately 13.6% of the population in 2030. These age groups are more likely to make up younger families who will purchase a starter home that is smaller and more affordable. In the next twenty years, as the 35-59 age group moves into the next age group, the stock of larger traditional family homes (detached, single-family units) may become more available. This may allow the younger population to trade up or take advantage of the larger homes.

The analysis of population projections is vital for planning and determining future housing needs. With the expected increase in the older population, planning efforts should consider the need for smaller housing units with less maintenance, senior housing or assisted living facilities. As the middle-age population shifts into the older age groups the demand for larger, traditional family housing units will be reduced and will increase the opportunity for younger families looking to trade-up to more of those homes now available.

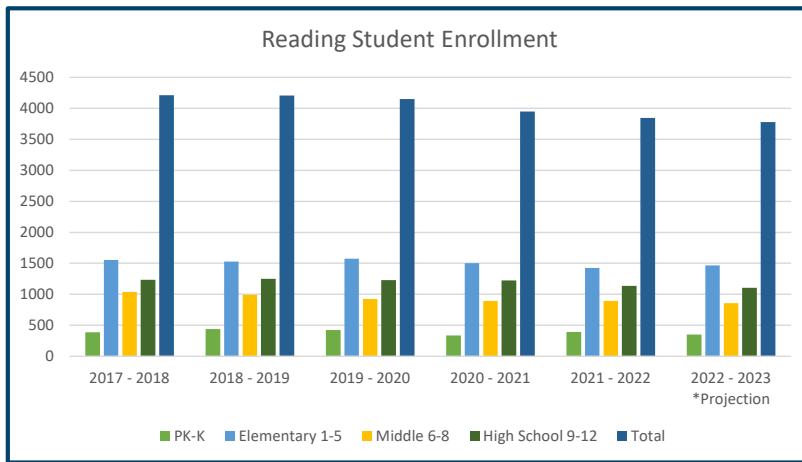
3. School Enrollment and Projections

The 2018 HPP included projections on enrollment which were available at that time. Figure 2 provides six years of enrollment data which is the only data that is available for inclusion in the updated 2023 HPP.

Figure 2 illustrates public school enrollments from 2017 through 2023* (*projection for the current school year). Overall, Reading school enrollment numbers have remained somewhat stable in recent years with an overall decrease of 10.3% since 2017. Although total population projections predict a continuing decrease in school aged children by the year 2030, this age group will still comprise 22.2% of the total population.

Figure 2: Reading Student Enrollment

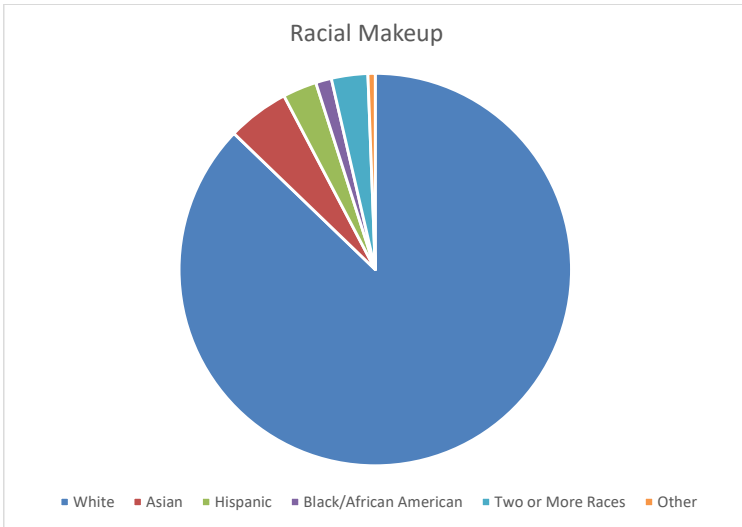
School Year	PK-K	Elementary 1-5	Middle 6-8	High School 9-12	Total
2017 - 2018	387	1,552	1,039	1,235	4213
2018 - 2019	440	1,529	990	1,251	4210
2019 - 2020	423	1,574	924	1,230	4151
2020 - 2021	335	1,500	894	1,222	3951
2021 - 2022	393	1,427	891	1,135	3846
2022 - 2023 *Projection	352	1,465	859	1,102	3778
% Change	-9%	-5.60%	-17.30%	-10.8%	



Source: Reading School Committee yearly School Budgets and FY 2022 School Budget
 *Reading School Department as of 8/16/2022

4. Race and Ethnicity:

- According to the 2020 U.S. Census, the majority of Reading residents are white (87.2%) and the largest racial minority group in Reading is the Asian population (5.1%) followed by the Hispanic or Latino population at 2.8%. Only 1.3% of the population identifies as Black or African American.
- 0.1% of the population are American Indian/Alaskan Native; .8% of the population identify as other; and 3.5% of the population identifies as Hispanic or Latino.



5. Residents with Disabilities

According to the 2014-2018 American Community Survey, 3,026 people in Reading reported living with a long duration condition or disability. Of those people, approximately 73.1% were aged 65 and older. As this population continues to increase, it is assumed that the number of disabled individuals within this age group will also rise. Many disabled residents require special housing needs, including certain accommodations for housing design (physical accessibility) and reasonable access to goods and services. Consideration for these types of housing options is necessary, as the demand will continue to increase.

Table 5: Residents with Disabilities

Age	Number	Percent of All Disabled Residents
5-17	350	11.6
18-64	464	15.3
65 +	2,212	73.1
Total Population of Disabled Residents	3,026	100

Source: 2014-2018 American Community Survey

6 Income Analysis:

1. Median Household Income:

In 2022 Reading's median household income of \$133,300 represented an increase of 42.4% from 2010. Median household income in Reading was one of the highest among adjacent neighboring communities and exceeded the median for the Boston-Cambridge-Quincy Metro area, as well as the median for the Commonwealth of Massachusetts and the US. All the adjacent neighboring communities also experienced significant increases in household income from 2010.

Table 6: Median Household Income: 2010-2022

Town	2010	2015	2022	% Increase 2010-2022
Reading	77,059	106,764	133,300	42.2%
North Reading	76,962	145,366	138,237	44.3%
Wilmington	70,652	116,155	114,394	38.3%
Woburn	54,897	78,242	97,895	43.9%
Stoneham	56,650	80,703	102,542	44.8%
Wakefield	66,117	85,097	107,898	38.7%
Lynnfield	80,626	120,680	143,661	43.9%
Boston-Cambridge-Quincy, MA Metro Area ¹	62,700	98,500	140,200	55.3%
Massachusetts	50,502	87,300	120,400	58.1%
US	41,994	56,516	67,521	37.8%

Source: 2020 US Census & 2014-2018 American Community Survey [FY 2022 Income Limits Documentation System -- Summary for Reading town, Massachusetts \(huduser.gov\)](#), Policy Map

2. Median Income of Senior Households:

Although Reading's overall population has experienced a large increase in income in the past 12 years and is earning in line with the surrounding communities (as displayed in Table 6 above), Reading's 65+ households are not doing nearly as well. Unfortunately, in 2022 we see that Reading's senior households have significantly lower incomes than households overall. As displayed in Table 7 below, Reading senior households earn less than all of the surrounding communities and just slightly more than Massachusetts and the country overall. In fact, households earning the median senior income of \$56,276 would qualify for certain affordable housing based on the income limit guidelines described in Section 4 below, "Area Median Income." This data makes clear that affordable housing for the senior population will be a significant need in the coming years due to the projected increase in the senior

population in Reading as demonstrated in Figure 1 and Table 3 above, and due to the limited income of this group.

Table 7: Median Income of 65+ Households: 2020

Town	2020
Reading	56,276
North Reading	66,321
Wilmington	69,825
Woburn	58,447
Wakefield	71,537
Lynnfield	70,859
Massachusetts	52,973
US	46,360

Source: 2020 Census

3. Income Distribution:

Table 8 identifies and compares the distribution of Reading household incomes from 2010 and 2020. In 2010, nearly half of all households (48.2%) earned less than the household median of \$77,059. In 2020, 41.2% of households earned less than the household median of \$133,300. Of the households earning over the median income in 2020, 64.2% of households earned more than \$100,000 in 2020. Reading households earned much more in 2020. Approximately 46.5% earned more than \$150,000 which was over the 2020 median income of \$133,300. Of those earning more than \$100,000 approximately 29.7% are earning more than \$200,000, a 100.2% increase from 2010. By 2020, the number of households in the highest income brackets have increased, with those making between 150,000 - \$199,999 increasing by 17.7% since 2010. However, there have been significant decreases in the lower income brackets (\$15,000-\$24,999, \$25,000-\$34,999, and \$35,000-\$49,999) between 2010 and 2020. Approximately 1,520 Reading households (16.3% of all households) earned less than \$50,000 in 2020.

Table 8: Income Distribution: 2010, 2015, 2020

Income Category	2010		2015		2020		% Change 2010-2020
	# of Households	Percent	# of Households	Percent	# of Households	Percent	
Less than \$10,000	231	2.4	218	2.4	67	.7	-71.0%
\$10,000 to \$14,999	251	2.8	224	2.4	30	.3	-88.0%
\$15,000 to \$24,999	386	4.3	446	4.9	369	4.1	-4.4%
\$25,000 to \$34,999	470	5.3	553	6.0	219	2.3	-53.4%
\$35,000 to \$49,999	620	7.0	623	6.8	835	8.9	-34.7%
\$50,000 to \$74,999	1,214	13.7	974	10.6	1039	11.1	-14.4%
\$75,000 to \$99,999	1,327	15.0	1,158	12.6	783	8.4	-41.0%
\$100,00 to \$149,999	2,158	24.3	2,250	24.5	1653	17.7	-27.6%
\$150,000 to \$199,999	1,086	12.2	1,345	14.7	1583	16.8	17.7%
\$200,000 or more	1,157	13.0	1,377	15.0	2757	29.7	100.2%
Total Households	8,882	100.0	9,168	100.0	9,335	100.0	

Source: 2020 and 2010 US Census, 2014-2018 American Community Survey

4. Area Median Income

One way to determine the need for affordable housing is to evaluate the number of households that qualify as low/moderate income by the U.S. Department of Housing and Urban Development (HUD). The Area Median Income (AMI) is a number that is determined by the median family income of a Metropolitan Statistical Area (MSA) and thresholds established by HUD are a percentage of AMIs. Reading is included in the Boston-Cambridge-Quincy Metropolitan Fair Market Rent (FMR) area. FMRs are gross rent estimates that include the rent plus the cost of tenant-paid utilities². Section 8 of the United States Housing Act of 1937 authorizes housing assistance to lower income families and the cost of rental homes are restricted by the FMR thresholds established by HUD.

Commented [MA4]: ² U.S. Department of Housing & Urban Development Office of Policy Development & Research July 2007 (rev.)

Typically, thresholds are 80%, 50% and 30% of AMI and vary depending on the household size. HUD defines low/moderate income as follows:

- “low income” - households earning below 80% of AMI;
- “very low income” – households earning below 50% of AMI;
- “extremely low income” - households earning lower than 30% of AMI.

Table 9: Income Limits by Household Size, Boston-Cambridge-Quincy, Reading:2022

Income Limit Area	Median Income	Income Limit Category	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person
Boston-Cambridge-Quincy Metropolitan MSA	\$140,200	Low (80%) Income Limit	\$78,300	\$89,500	\$100,700	\$111,850	\$120,800	\$129,750
		Very Low (50%) Income Limit	\$49,100	\$56,100	\$63,100	\$70,100	\$75,750	\$81,350
		Extremely Low (30%) Income Limit	\$29,450	\$33,650	\$37,850	\$42,050	\$45,450	\$48,800

Source: U.S. Department of Housing and Urban Development <http://www.huduser.org/portal/>

As shown in Table 9, the AMI for the Boston-Cambridge-Quincy FMR area, effective April 18, 2022, is \$140,200. Using this number, the income thresholds for various household sizes were determined. For a 3-person household, household incomes lower than \$37,850 are considered extremely low income, household incomes lower than \$63,100 are considered very low income, and household incomes lower than \$100,700 are considered low income. The Reading income category data presented in Table 8 is not available by household size, but assuming a 3-person household, as of the 2018 ACS, there were probably about 3,000, or almost one-third of households, that were likely eligible for subsidized housing according to HUD.

⁸ AMI data for 2022 was used in this plan to compare to 2014-2018 ACS income data. AMI data for 2022 can be found at: www.huduser.org/portaldatasets

Commented [MA5]: Need to find where this goes.

Housing Stock Analysis

1. Housing Units and Types

The predominant housing type in Reading continues to be single-family homes. In 2015, there were approximately 9,653 total housing units, 70.7% of which were 1-unit, detached homes (single-family homes). Only 10.6% of housing structures contained 20 or more units; however, this type of housing was the second largest in Reading in 2015. Similarly, in 2020 single unit detached homes remained the predominant housing type, though the percentage of total homes dropped a bit. Meanwhile, the number of housing units in structures with 20 or more units dipped from 1,027 units (10.6% of total units) in 2015 to 1,007 units (10.5% of total units) in 2020.

Table 10: Total Number of Housing Units by Structure: 2015 and 2020

Housing Units Per Structure	2015		2020	
	Number	Percent	Number	Percent
1-unit, detached	6,827	70.7	7,217	72.5
1-unit, attached	395	4.1	248	2.5
2 units	535	5.5	341	3.4
3 or 4 units	192	2.0	279	2.8
5 to 9 units	280	2.9	290	2.9
10 to 19 units	397	4.1	350	3.5
20 or more units	1,027	10.6	1,227	12.4
Mobile Home	0	0	0	0
Total	9,653	100.0	9,952	100.0

Source: 2020 US Census and 2014-2018 American Community Survey

2. Housing Tenure

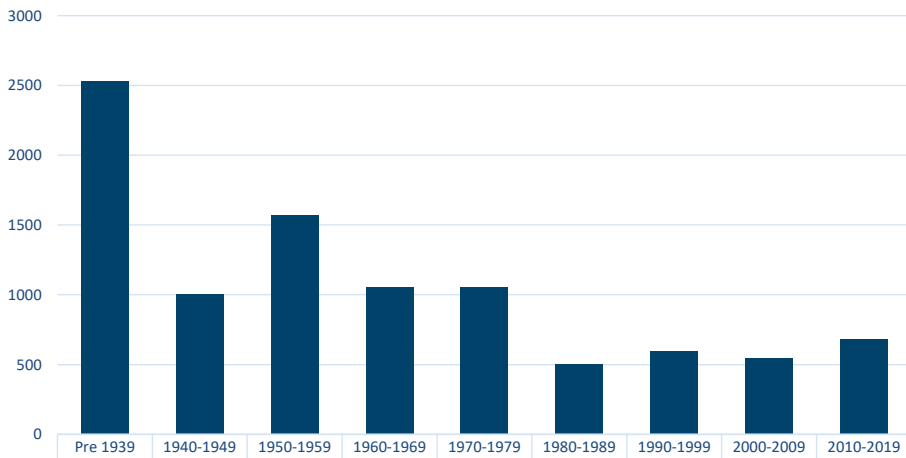
According to the 2020 US Census, there were a total of 9,584 occupied housing units, 84.6% of which were owner-occupied, and 15.4% of which were renter-occupied. By 2020, the percentage of owner-occupied housing units increased to 6.4% above the 2015 numbers, and the percentage of renter-occupied housing units have decreased by 6.4% to 15.4%. Section B of this HPP discusses household types and the prevalence of non-family households in Reading. In particular, ACS and 2020 Census data shows that non-family households, specifically elderly, non-family households are growing in number. The data also show that non-family households are more likely to be renters, so these demographic changes could provide some of the reason for the recent increase in renter-occupied units. The demand for rental housing is likely to continue increasing as the population continues aging and this aging population is likely to include many who are looking to down-size or spend less on housing related costs.

3. Age of Housing Stock

Reading has a large stock of older and historic homes. Over half of the housing units were constructed prior to 1960 and of that 33% were constructed prior to 1940. The production numbers have been on a steady decline since 1970, there was a small increase between 2000-2009 and have dipped again after the housing market crash of 2008. As these homes contribute to the town's character, many of them are also in need of repairs and renovations. Multi-generational living is now an easier option due to recently adopted zoning changes that facilitate creating accessory dwelling units in single-family homes.

Figure 3: Age of Housing Stock

Age of Housing Stock

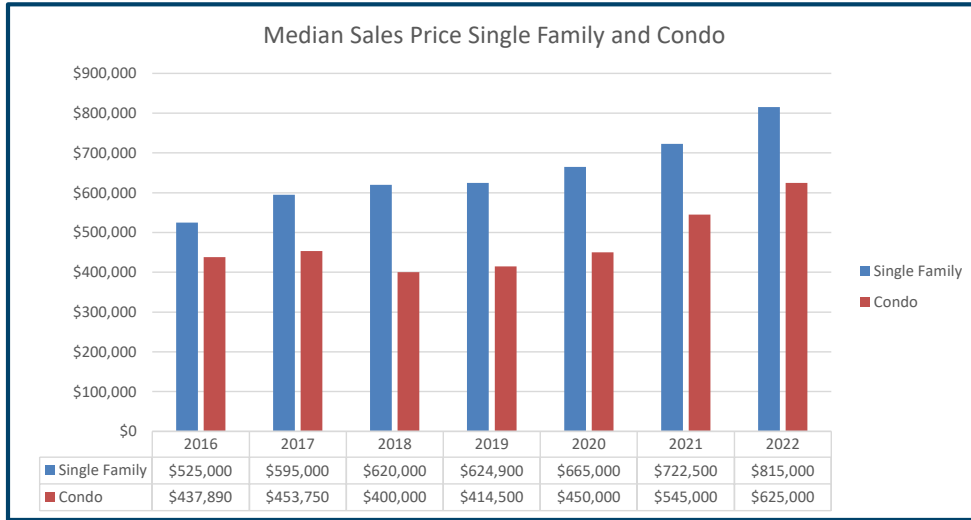


■ Housing Units Constructed

Source: 2020 US Census

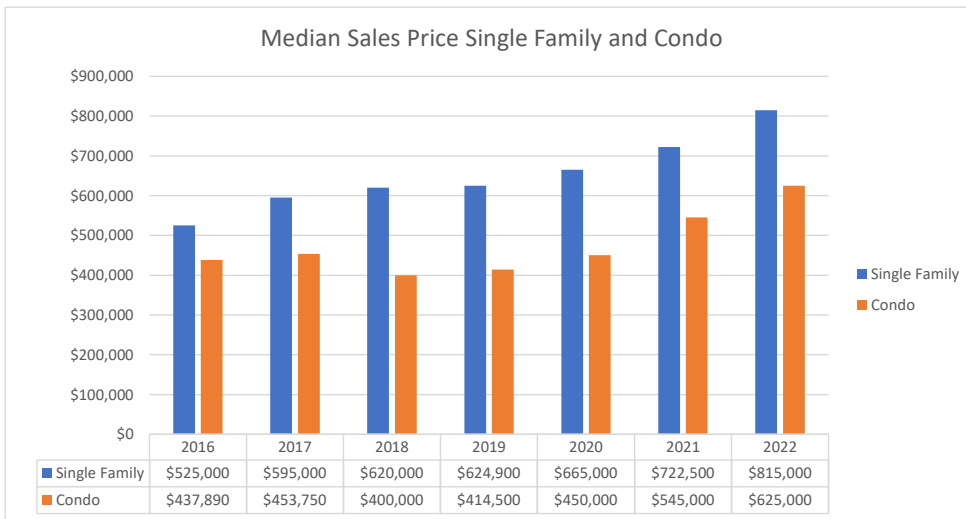
4. Housing Market Conditions:

a. Median Selling Prices



Since 2012 Reading has seen a steady rise in sales prices. Figure 4 indicates the median single-family home price in 2016 was \$525,000. Prices have steadily increased year over year since 2016. In 2020 the median single-family sales price was \$665,000, in 2022 the median sales price had skyrocketed to \$815,000. This is an increase of 24.4% since 2020. Condominium sales followed a similar pattern with a few years of lower prices followed by a steady increase in prices beginning in 2012. In 2020 the median condominium sales price was \$450,000, in 2022 the median sales price as of December 31, 2022, was \$625,000. Condominium sales increased by 38.9% from 2020 to 2022.

Figure 4: Median Sales Price of Single-family Homes and Condos 2016-2022

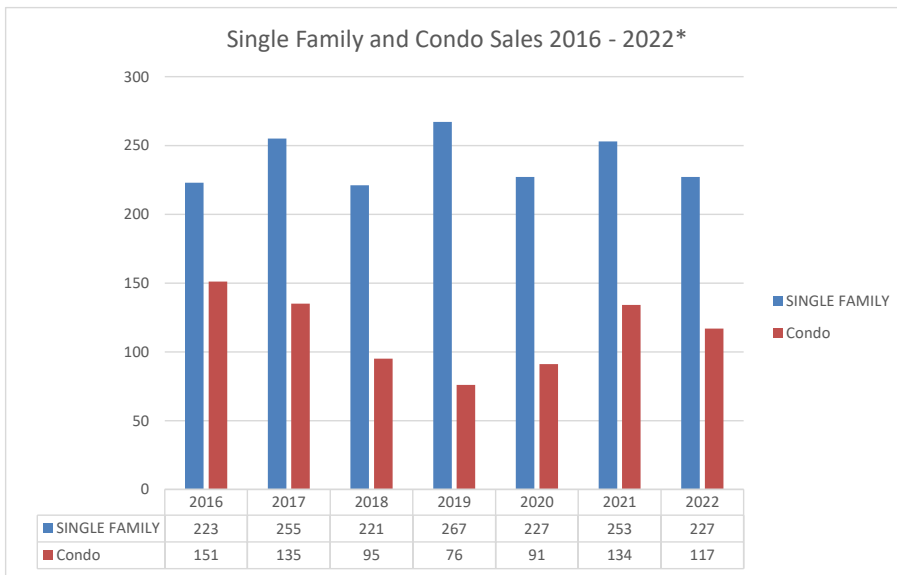


Source: Massachusetts Association of Realtors – As of 12/31/2022

b. Home Sales

As shown in Figure 5 below, Reading home sale numbers of both single-family homes and condominiums have held steady since 2016. Then, in 2018, the number of sales began to increase at the same time that prices began to increase. The number of condo sales have decreased consistently since 2016.

Figure 5: Total Number of Single-family Home and Condo Sales 2016-2022



Source: Massachusetts Association of Realtors - * As of 12/31/2022

c. Rental Prices:

The cost of rental units is an important factor to consider when evaluating the housing market. Back in 2010 the median rent in Reading was \$1,032, the second lowest of all the neighboring communities that abut Reading. By 2020, median rent increased by 32.1% to \$1,363, the second highest increase amongst neighboring communities. One possible reason for the substantial rent increase may be due to the increase in the population group more likely to rent, creating more demand for rental units. High home prices may also force more households to rent. This trend is seen in the neighboring communities as well as all experienced substantial increases in median rent between 2010 and 2020.

Table 11: HUD Fair Market Rent and Median Rent 2010, 2015, 2020 for Reading and Neighboring Communities

Final FY 2023 FMRs By Unit Bedrooms				
Efficiency	One-Bedroom	Two-Bedroom	Three-Bedroom	Four-Bedroom
\$2,025	\$2,198	\$2,635	\$3,207	\$3,540

Median Rent (\$)	2010	2015	2020	% Change, 2010 to 2020
Reading	1,032	1,282	1,363	32.1%
North Reading	1,289	1,482	1,696	24.0%
Wilmington	1,567	1,624	2,009	22.0%
Woburn	1,187	1,331	1,763	32.7%
Stoneham	1,161	1,289	1,522	23.7%
Wakefield	1,042	1,203	1,513	31.1%
Lynnfield	623	1,443	1,742	279.1%

Source: 2020 US Census, 2011-2015 and 2014-2018 American Community Survey

5. Housing Affordability Analysis:

1. Cost Burden

One way to evaluate housing affordability is to examine the ability of households to pay mortgage or rent as a percentage of annual income. Households who pay 30% or more of their annual income on housing costs are considered to be housing cost-burdened. Households who pay 50% or more of their income on housing costs are considered severely burdened. This analysis may help determine how “affordable” it is to live in a particular community.

The US Census Bureau prepares custom tabulations of American Community Survey (ACS) data that demonstrate the extent of housing problems and housing needs.

Commented [MA6]: ⁵ Costs for homes with a mortgage include all forms of debt including deeds of trust, land contracts, home equity loans, insurance, utilities, real estate taxes, etc. Source: US. Census

These data tabs are known as the Comprehensive Housing Affordability Strategy or CHAS data. Table 13 below uses CHAS data to show housing cost burden for renters and homeowners. Approximately 22.5% of owner-occupied households, and 50.3% of renter households, in Reading are paying more than 30% or more of their annual household income on housing related costs. Therefore, a total of 2,510 of 9,956 households (26.9%) in Reading may have difficulty paying their housing-related costs and are considered moderately to severely housing cost-burdened. However, through the community engagement process and update census data there are approximately 29.1% households in the Town of Reading that are moderately to severely cost burdened.

Table 12: Monthly Housing Cost as a Percentage of Annual Household Income

	Households in Reading	<= 30% of income spent on housing		>30% to <=50% of income spent on housing		>50% of income spent on housing	
		Number	Percent	Number	Percent	Number	Percent
Owners	7,560	5,830	77.1%	1,055	14.0%	675	8.5%
Renters	1,550	760	49.0%	385	24.8%	395	25.5%

Source: 2014-2018 CHAS data

CHAS data also shows how rent burden impacts households at different income levels. Table 13 below shows a greater percentage of low-income households are housing cost-burdened than higher income households. 3,065 of 6,070 (50.5%) households who earn less than 80% AMI are housing cost-burdened. However, in comparison 760 of 6,070 (12.5%) households who earn more than 100% AMI are housing cost-burdened. This indicates a need for more housing in Reading that is affordable to low-income households, so they do not experience such a substantial level of cost burden.

Table 13: Housing Cost Burden According to Income Level

Household Income Level	Spending >30% of income on housing costs	Spending >50% of income on housing costs	Total Households
<=30% AMI	670	535	1,260
>30% - <=50% AMI	630	275	905
>50% - <=80% AMI	410	155	900
>80% - <=100% AMI	270	25	655
>100% AMI	760	35	6,070
Total	2,740	1,025	9,374

Source: 2014-2018 CHAS data

2. Home Ownership Affordability – Gap Analysis

Another way to measure the affordability of a community is to assess the affordability of home ownership. To do so, the income of the buyer must be evaluated against the sales price of the home. The gap between the sales price and the purchasing ability of a potential home buyer is called the “gap analysis”.

As mentioned, the median sales price of a single-family home in Reading in 2022 was \$815,000. A household would have to earn approximately \$236,260 to afford such a home, using the assumptions from table 14 below, without being cost burdened. This income almost double Reading’s median household income of \$133,300 for 2022, and higher than the area median income (Boston-Cambridge) of \$140,200 by over \$96,060. A household looking to purchase a condo would still need to earn approximately \$190,506, using the assumptions from table 14 below, to afford the 2022 median sales price of \$625,000.

A household earning the 2022 median income of Reading of \$133,300 can afford a single-family home priced at about \$385,000, using the assumptions from table 14 below, resulting in an “affordability gap” of \$430,000. The gap widens for low-income households. A 3-person household earning 80% of AMI or \$100,700 can afford a home costing no more than \$255,000. A 3-person household earning 50% of AMI at \$63,100 could afford a home costing no more than \$110,000. Table 15 shows the affordability gap in Reading for households at different income levels.

Table 14: Gap Analysis – Single-Family Home

Income Level	Income	Affordable Purchase Price	Estimated Monthly Payment	Gap +/- from Median Sales Price	2022 Median Sales Price	Estimated Monthly Mortgage Payment for Median Priced Home
Reading Median Income	\$133,300	\$385,000	\$3,473	\$430,000	\$815,000	\$6,234
Low Income (80 AMI%) (3-person HH)	\$100,700	\$255,000	\$2,638	\$560,000		
Very Low Income (50 AMI%) (3-person HH)	\$63,100	\$110,000	\$1,706	\$705,000		

Affordable Purchase Price Calculation Assumptions

Interest Rate – 6.375%

Down payment – 3.5% down

Taxes - \$10,000

Includes PMI @ .5%

Insurance - \$2,000 year

**For illustrative purposes only, affordability can change dependent upon interest rate and debt to income ratio.*

Source for income limits: U.S. Department of Housing and Urban Development

<http://www.huduser.org/portal/> Median Sales price used from 2022 MAR data - \$815,000

Housing affordability continues to be a major roadblock for market participants, with mortgage rates more than double compared to this time last year. Buyers are delaying home purchases in hopes rates will drop, while many sellers are holding off on listing their homes due to weakening buyer demand, unwilling to trade in their current lower rates for significantly higher borrowing costs on their next property. As a result, existing-home and pending home sales have continued to slow as we move into 2023.

With home sales down, nationwide housing inventory was at 3.3 months' supply heading into November, up from 2.4 months from this time last year, according to the National Association of REALTORS®. Although buyers have more options to choose from, home prices remain high, and soaring borrowing costs have caused monthly payments to increase significantly, with the average homebuyer paying 77% more on their loan per month compared to the same period a year ago, according to Realtor.com.

3. Rent

Another measure of housing affordability is whether local rent exceeds HUD-determined Fair Market Rents (FMR) which were established as guidelines for Section 8 voucher holders. HUD does not permit voucher holders to rent apartments above the FMR because HUD has determined the FMR to be a fair and reasonable price for the geographic area. Table 16 below identifies the FY22 FMRs for the Boston-Cambridge-Quincy, MA-NH HUD Metro FMR Area. As Table 11 above shows, the median rent paid by Reading households in 2020 as reported by the Census was \$1,363, indicating that households are paying less than the FMR for the Boston-Cambridge-Quincy area (assuming a 1-bedroom). However, the 2020 Census indicates that 44.2% of renters in Reading were paying \$1,500 or more in monthly rent, of that number 16.4% of renters were paying more than \$2,000 in monthly rent.

Through the Town's community engagement process the Town conducted an analysis of what hourly wages someone would need to earn in order to afford the fair market rent in Reading. The results of that analysis are below in table 16 A.

⁶ Figures derived using a Mortgage Calculator, including a 5% down payment, 30-year fixed mortgage at 4.1% interest rate, and Reading's 2021 tax rate.

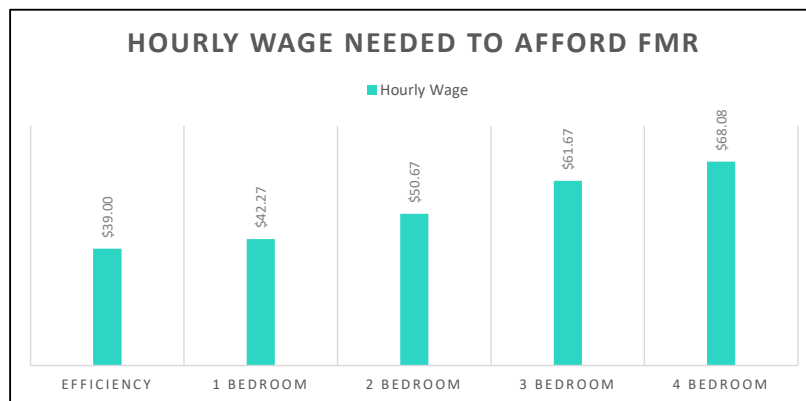
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Table 16: Fair Market Rents, Boston-Cambridge Quincy, MA-NH HUD Metro Area

	Efficiency	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom
Fair Market Rent 2018	\$1,253	\$1,421	\$1,740	\$2,182	\$2,370
Fair Market Rent 2023	\$2,025	\$2,198	\$2,635	\$3,207	\$3,540
% Change 2018 vs. 2023	61.6%	54.7%	51.4%	47%	49.4%

Source: U.S. Department of Housing and Urban Development, <http://www.huduser.org/portal/>

Table 16A: Hourly Wage needed to afford FMR:



ACS data looks at all current renters, including some who may have been renting for a long time without a rent increase, they do not necessarily paint an accurate picture of the current rental market. An examination of rental listings on Trulia on August 31, 2022, gives a more accurate assessment. Based on these listings in Table 17 below, we can see that there is not much available rental housing – there were only 14 listings on Trulia on August 31st, 2022. In addition, the median rents of homes currently listed are slightly higher than the median rent reported by ACS, and also slightly higher than the HUD FMRs for 1, 2, and 3-bedroom units.

Table 17 Reading Units listed for rent on Trulia.com, 8/31/2022

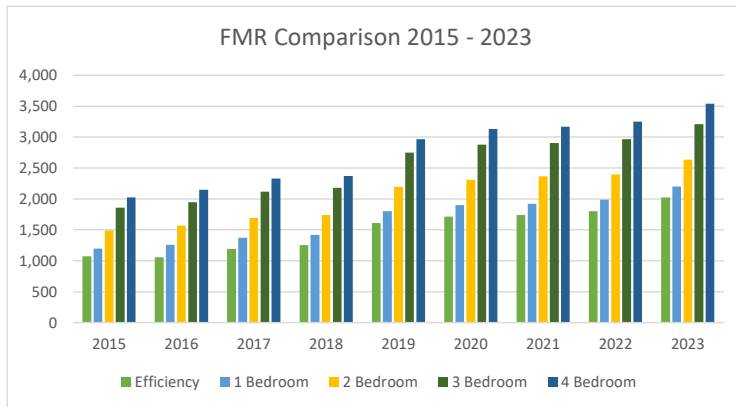
Bedroom size	Median Rent
1-bedroom units (1 listings)	\$2,667
2-bedroom units (7 listings)	\$3,300
3-bedroom units (6 listings)	\$4,000

Source: Trulia.com, August 31, 2022

Reading households would have to earn over \$78,000 to afford the 2022 FMR rent in Reading according to HUD. However, using the current rental listings from Trulia.com, a household would have to earn at least \$105,000 to afford a one-bedroom at the median price. Therefore, a 3-person low-income household earning \$100,700 would not even be able to afford a one-bedroom rental at the median price without cost burden based on the recent listings.

Another measure of housing affordability is whether local rent exceeds HUD-determined Fair Market Rents (FMR) that were established as guidelines for Section 8 voucher holders. HUD does not permit voucher holders to rent apartment units above the FMR because HUD has determined the FMR to be a fair and reasonable price for the geographic area. In Figure 7 below, the upward trend reflects the annual adjustment factor intended to account for rental housing market demands. Given the constraints on the Greater Boston rental housing market, rising FMR's are unsurprising and point to the need for more rental housing at multiple price points. Although HUD determines a certain level of rent in an area to be fair, FMR's do not take into account household income, so even an apartment at the FMR is not necessarily affordable to people at all levels of income.

Figure 7: Fair Market Rent Comparison 2015-2023



6. M.G.L. Chapter 40B Subsidized Housing Inventory

Under M.G.L. Chapter 40B, affordable housing units are defined as housing that is developed or operated by a public or private entity and reserved by deed restriction for income-eligible households earning at or below 80% of the AMI. In addition, all marketing and placement efforts follow Affirmative Fair Housing Marketing guidelines per the Massachusetts Department of Housing and Community Development (DHCD). Housing that meets these requirements, if approved by DHCD, is added to the subsidized housing inventory (SHI). Chapter 40B allows developers of low- and moderate-income housing to obtain a comprehensive permit to override local zoning and other restrictions if a community has less than 10% of its housing stock included on the SHI.

A municipality's SHI fluctuates with new development of both affordable and market-rate housing. The percentage is determined by dividing the number of affordable units by the total number of year-round housing units according to the most recent decennial Census. As the denominator increases, or if affordable units are lost, more affordable units must be produced to reach, maintain, or exceed the 10% threshold.

Within the past 5 years, Reading has continued to make progress with increasing the number of affordable units within the Town. According to the state's Subsidized Housing Inventory (SHI), approximately 10.5% of year-round housing units in Reading are included on the SHI as of December 2022.

Table 18 illustrates the status of subsidized housing in Reading from December 2017 to December 2021.

Table 18: Reading SHI Units

Time Period	Total SHI Units	Difference in Units from Previous Period	Percent Affordable
March 2004	682	NA	7.74%
June 2011	684	2	7.14%
December 2017	896	212	9.35%
December 2020	1,004	108	10.48%

The increase of 108 units is comprised of:

- Eaton Lakeview 40B: 77 units
- Rise475 40R: 31 units

Table 19 compares the number of SHI units with neighboring communities that abut Reading.

As identified in the table, Reading has a percentage of affordable housing units that is higher than all but one neighboring community.

Table 19: Total Subsidized Housing Units for Reading and Neighboring Communities

Community	Year Around Housing Units 2020	Total Subsidized Housing Units			Percent SHI Units	
		Dec 2017	Dec 2020	Percent Change	Dec 2017	Dec 2020
Reading	9,952	896	1,004	12%	7.74%	10.5%
North Reading	5,875	540	538	-.37%	1.72%	9.2%
Saugus	11,303	732	756	3.28%	6.47%	6.7%
Wilmington	8,320	799	766	-4.13%	8.61%	9.2%
Woburn	17,540	1419	1,706	20.23%	9.72%	9.7%
Stoneham	10,159	495	498	.61%	5.35%	4.9%
Wakefield	11,305	758	703	-7.3%	7.35%	6.2%
Lynnfield	4,773	495	494	-2.0%	1.84%	10.3%

Source: 2020 Census, and Department of Housing and Community Development, Chapter 40B Subsidized Housing Inventory (SHI)

5. Existing Subsidized Housing Stock

Table 20 below identifies the existing subsidized housing units currently included on the SHI list (through December 2020). This information is regularly gathered and reported by the Department of Housing and Community Development (DHCD). The properties are listed by property type (not chronological).

Table 20: Reading Subsidized Housing Inventory Properties

Development Name	SHI Units	Property Type	Subsidizing Agency	Zoning Permit	Affrd End
RHA: Senior housing	80	Age Restricted Rental	DHCD/PHA	Local	Perp
RHA: Family Scattered Site	12	Family Rental	DHCD/PHA	Local	Perp
RHA: Scattered Site	6	Family Rental	DHCD/PHA	40B	Perp
RHA: Pleasant Street	2	Family Rental	FHLBB	Local	2020
RHA: Wilson Street	2	Family Rental	FHLBB	Local	2021
EMARC Reading	12	Supportive Housing	HUD	Local	2036
Reading Community Residence	3	Supportive Housing	HUD	Local	2037
Hopkins Street Residence	4	Supportive Housing	HUD	Local	2042
DDS / DMH Group Homes	52	Supportive Housing	DDS	Local	NA
Cedar Glen	114	Age Restricted Rental	MassHousing	40B	Perp
Peter Sanborn Place	74	Age Restricted Rental	MassHousing	40B	Perp
Residences at Pearl	86	Assisted Living	MassHousing	Local	2046
Reading Commons (Archstone)	204	Family Rental	FHLBB	40B	Perp
Oaktree	11	Family Rental	DHCD/40R	40R	Perp
Reading Village	68	Family Rental	MassHousing	40B	Perp
Schoolhouse Commons	20	Family Rental	MHP	40B	Perp
20-24 Gould Street	55	Family Rental	DHCD/40R	40R	Perp
Sumner/Cheney	1	Ownership	FHLBB	40B	Perp
George Street	3	Ownership	MassHousing	40B	Perp
Maplewood Village	9	Ownership	DHCD/LIP	40B	2054
Governor's Drive	2	Ownership	DHCD/LIP	40B	2103
Johnson Woods	11	Ownership	DHCD/LIP	Local	Perp
Johnson Woods Phase II	12	Ownership	DHCD/LIP	Local	Perp
Reading Woods	43	Ownership	DHCD/40R	40R	Perp

Postmark Square	10	Ownership	DHCD/40R	40R	Perp
Eaton Lakeview	77	Mix	Mass Housing	40B	Perp
Rise 475	31	Rental	DHCD	Local	Perp
TOTALS	1004				
Census 2020 Units	10.48%				

Key to Subsidizing Agency:

- MHP – Massachusetts Housing Partnership
- DHCD/PHA: Department of Housing and Community Development, Public Housing Authority
- DHCD/LIP: Department of Housing and Community Development, Local Initiative Program

- DHCD/40R: Department of Housing and Community Development, 40R DDS: Department of Developmental Services
- FHLBB: Federal Home Loan Bank of Boston
- HUD: Federal Housing and Urban Development Public Housing Authority

SECTION 2: ZONING and AFFORDABLE HOUSING EFFORTS

B. Affordable Housing Efforts

Reading has pursued a proactive planning-based strategy in an effort to increase the supply of affordable housing and meet the 10% minimum statutory requirement. The Town has made strides towards meeting that goal through adopting zoning changes and utilizing current planning best practices. The Town's 2018 HPP created a roadmap to follow as the Town worked towards meeting its affordable housing goals.

Safe Harbor — As reported earlier, in 2020 the Town achieved a 10% stock on the Subsidized Housing Inventory (SHI), the inventory used by the Commonwealth of Massachusetts to monitor the affordable housing statutory requirements. As a result, the Town secured a safe harbor designation. The Town should continue to monitor units that may fall off of the SHI due to permitting timelines and if applicable re-seek Safe Harbor designation as needed.

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Zoning Efforts

1. Adoption of Smart Growth Districts (40R)

Gateway Smart Growth District (GSGD)

In December 2007, Reading adopted the Gateway Smart Growth District under MGL Chapter 40R and 760 CMR 59.05(4). The overlay district is located at the southern town line, near Interstate 95/Route 128 and Route 28 (Reading's Main Street). The 424 unit Reading Woods project is currently completed and fully occupied. The GSGD zone includes 200 of the 424 units. Of those 200 units, 43 are affordable and are included on the SHI. This site was formerly a commercial use owned by the Addison Wesley Corporation.



Downtown Smart Growth District (DSGD)

In November 2009, Reading adopted the Downtown Smart Growth District (DSGD) under MGL Chapter 40R and 760 CMR 59.05(4). This zoning change was also a response to the 2007 Housing Plan which identified downtown as an area for future housing opportunities. At that time, the DSGD overlay district did not encompass the downtown in its entirety and allowed for 203



additional housing units by right. The first project that was permitted and occupied within the DSGD was the Oaktree Development located at the former Atlantic Market site on Haven Street. This project is a mixed-use development with retail uses on the ground floor and 53 residential units above. At 53 units, this project exceeded the maximum density allowed, but was granted a waiver from the CPDC for a density of 73 units per acre. A total of 11 (20%) units are affordable and are listed on the SHI.

Expanded Downtown Smart Growth District (DSGD)

In April of 2017, Town Meeting adopted and the AG’s office approved, an expansion of the DSGD to include approximately 21 additional acres, with a potential for 113 new by-right residential units. At this time Town Meeting also adopted, and the AG’s office approved, increasing the affordable housing requirement from 20% to 25% for rental projects within the DSGD. Pursuant to MGL Chapter 40B, the increase to 25% allows the Town to count all of the units in a rental project versus only the actual number of affordable units.

In September 2017, Postmark Square, an adaptive re-use of the historic Reading Post Office, received 40R Plan Review approval from the Reading Community Planning and Development Commission (CPDC). Postmark Square is a mixed-use project with 50 ownership residential units, 10 of which are affordable units, and 3 commercial spaces.



In November 2017, 20-24 Gould Street, a redevelopment of the former EMARC site received 40R Plan Review approval from the Reading Community Planning and Development Commission (CPDC). Completed in 2021 the mixed-use project includes ground floor commercial spaces and 55 residential units, 14 of which are deed restricted affordable. As a rental project for which at least 25% of the units are affordable, all 55 units qualified for listing on the SHI.



Another mixed-use 40R redevelopment project was approved for the redevelopment of the former Sunoco station property along Main Street. This 31-unit rental project is currently fully occupied and as a rental project for which at least 25% (8) of the units are affordable, the total number of units in the project qualify for listing on the SHI.

In 2022 the CPDC approved a mixed-use, 29-rental unit development at the property 6-16 Chute Street. The development will include 8 deed restricted affordable units, though all 29 units will qualify for the SHI.

A number of additional 40R development projects have been approved, though they did not trigger the affordability threshold of 13 units or more. This includes the 3-unit townhouse development along Chapin Avenue; the 7-unit re-development of the Reading Chronicle building at 531 Main Street; and the 6-unit development at 18 Woburn Street.

Environmental Justice District:

Reading has adopted an Environmental Justice District created by Federal Executive Order 12898. DEP (Department of Environmental Protection) defines an EJ Area as any census tract where 20 percent or more individuals live at or below the federal poverty line, and/or 30 percent or more of the population identifies as a non-white minority, based on data from the U.S. Census Bureau and the federal guidelines for poverty. An environmental justice district is defined by the Environmental Protection Agency as: the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This goal will be achieved when everyone enjoys:

- The same degree of protection from environmental and health hazards, and
- Equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.

Meaningful involvement:

- People have an opportunity to participate in decisions about activities that may affect their environment and/or health;
- The public's contribution can influence the regulatory agency's decision;
- Community concerns will be considered in the decision making process; and
- Decision makers will seek out and facilitate the involvement of those potentially affected.

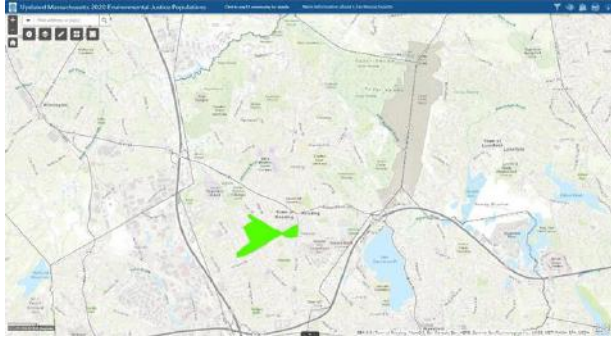
The approach is both collaborative and strategic – working with partners to create holistic solutions that make a difference in communities through better policies, tools, and application of resources. Areas of focus include:

- Strengthening and expanding governmental partnerships, particularly focused on the proactive efforts of state, tribal, and local governments to advance environmental justice.
- Implementation and use of the tools and guidance created previously in a way that is measurable and significant.
- Demonstrate measurable progress on significant issues, including reducing disparities in childhood blood lead levels and working to ensure that all people served by small community and tribal water systems have drinking water that meets applicable health-based standards.

2020 census tract data has resulted in the designation of an Environmental Justice population in Census Block Group 3, Tract 3342 in Middlesex County, MA. This Block Group was designated an Environmental Justice tract due to findings that the area maintains at least 25% of households having a median household income of 65% or less than the state median household income. This tract was found to house an estimated population of 841 peoples in 491 households. The median income of the tract was found to be \$53,606, or 62.4% of the MA median household income. 4.6% of the tract's population was found to be minority populations and 1.4% were found to be language isolated.

The EJ tract is located within a portion of Downtown Reading and to the south/west of the downtown area. It maintains a number of multi-family, affordable and public housing developments.

The highlighted area on the Environment Justice Area Map shows the area within Town that falls under this protection. The goal of the EJA program is for EPA to advance environmental justice through its programs, policies and activities, and support cross-agency strategy on making a visible difference in environmentally overburdened, underserved, and economically distressed communities. The Office of Environmental Justice's mission is to facilitate Agency efforts to protect environment and public health in minority, low-income, tribal and other vulnerable communities by integrating environmental justice in all programs, policies and activities.



Environmental Justice Area Map

Planning Efforts

2016-2022 Economic Development Action Plan (EDAP) - The EDAP recommendations include expanding housing and mixed use in identified Priority Development Area's across the Town. A key recommendation was to expand the DSGD and allow mixed-use development in areas around Town. A future plan update is under consideration. The 2015-2022 EDAP link can be found on the Town's Economic Development webpage at readingma.gov.

Metro North Regional Housing Office (MNRHSO) – In 2015, Reading established the MNRHSO comprised of the towns of Reading, North Reading, Wilmington, and Saugus. The City of Woburn joined the regional group in 2019. The MNRHSO now shares the expenses of a full-time housing consultant agency (Anser Advisory, 2022) who monitors existing affordable housing stock across the municipalities and provides expertise related to affordable housing development and needs. Massachusetts has only a handful of RHSO's and Reading is proud to have developed this for the Metro North region.

Comprehensive Update/Accessory Apartments Update to the Reading Zoning Bylaw (ZBL) – In 2014, the ZBL was updated to clarify, simplify, and modernize zoning for ease of use by developers. Some development of Accessory Apartments we made "by-right" if performance standards are met and if the unit is located in an existing single-family structure. A special permit is required for accessory apartments in detached structures or involving increases in gross floor area through new construction. Permitting checklists have been developed to further simplify the zoning.

Mixed-use Bylaw addition to Reading ZBL – In 2019 the Town proposed and adopted a Mixed-Use Bylaw for its Business-A Zoning District. The Mixed-Use Bylaw allows mixed-use development through a Special Permit granted by the CPDC and requires certain amounts of commercial floor area. Affordable dwellings units are required for projects 10-units and more at 10% of the total units and required for at least 80% AMI.

40R Zoning Amendments to Reading ZBL – In 2021-22 Town Meeting requested by Instructional Motion that the CPDC and Town Staff review the existing DSGD 40R Bylaw for improvement. Reading contracted with the Metro Area Planning Council (MAPC) to help lead public engagement around 40R and to learn what was working and what was not. Found desired improvements included requiring open space, additional design criteria, reduced density, setbacks and parking solutions. The CPDC proposed a series of holistic changes to address the needs and developed a ‘tiered schedule for density waiver requests’ – requiring certain improvements and amenities for higher density projects. The Bylaw amendments were approved at April 2022 Town Meeting.

2. Challenges and Constraints to the Development of Affordable Housing

a. Existing Housing Allowances

The Reading Zoning Map illustrates residential uses taken from the Reading Zoning Bylaw effective as of November 2021. The tables below identify which types of residential and business uses are allowed in each zoning district. “YES” indicates uses allowed by right. “SPP” means the use requires a Special Permit from the Community Planning and Development Commission and “SPA” means the use requires a Special permit from the Zoning Board of Appeals. “No” denotes a use that is not allowed.

Table 21: Uses for Residential Districts

Principal Uses	RES S-15 S-20 S-40	RES A-40	RES A-80	PRD-G PRD- M	PUD-R
Residential Uses					
Single Family Dwelling	Yes	Yes	No	SPP	SPP
Two Family Dwelling	No (1)	Yes	No	SPP	SPP
Multi-Family Dwelling	No	Yes	Yes	SPP	SPP
Age Restricted Multi-Family Dwelling	No	SPP	SPP	SPP	SPP
Boarding House	No	Yes	No	No	No

Table 22: Uses for Business and Industrial Districts

Principal Uses	Bus A	Bus B	Bus C	IND	PUD-B Overlay	PUD-I Overlay
Residential Uses						
Single Family Dwelling	Yes	No	No	No	No	No
Two Family Dwelling	Yes	No	No	No	No	No
Multi-Family Dwelling	Yes	No	Yes (1)	No	No	No
Age Restricted Multi-Family Dwelling	No	No	Yes	No	No	No
Boarding House	No	No	No	No	No	No
Other Uses						
Mixed-Use	SPP	No	SPP	No	No	No

Source: Town of Reading Zoning By-Law, Tables 5.3.1 and 5.3.2, Table of Uses, September, 2017

Although Reading is primarily zoned for single family homes, other zoning districts including A-40, A-80 and Business A allow for other forms of residential development such as apartments or multi-unit homes. Additional zoning overlay districts such as PUD, PRD, and Smart-growth 40R also allowed for multi-family and/or mixed-use development. Table 23 below identifies the base and overlay zoning districts in Reading.

Table 23: Reading Base Zoning Districts

Zoning District	Short Name	Area (sq miles)	Acreage	Percent
Single Family 15 District	S-15	3.3	2,120.1	33.2%
Single Family 20 District	S-20	4.1	2,643.2	41.3%
Single Family 40 District	S-40	1.9	1,235.1	19.3%
Apartment 40 District	A-40	0.0	30.8	0.5%
Apartment 80 District	A-80	0.0	12.8	0.2%
Business A	BUS A	0.1	48.4	0.8%
Business B	BUS B	0.1	55.2	0.9%
Business C	BUS C	0.1	38.8	0.6%
Industrial	Ind	0.3	209.1	3.3%
	Totals	10.0	6393.4	100.0%

Source: Town of Reading Zoning By-Law, April 2017

In addition to the base zoning districts, Reading has several overlay districts. Table 24 on the following page is a comprehensive list of all the zoning districts, including overlays within the Town of Reading.

Table 24: Town of Reading Zoning and Overlay Districts

Type	Full Name	Short Name
Residence	Single Family 15 District	S-15
Residence	Single Family 20 District	S-20
Residence	Single Family 40 District	S-40
Residence	Apartment 40 District	A-40
Residence	Apartment 80 District	A-80
Business	Business A District	Bus. A
Business	Business B District	Bus. B
Business	Business C District	Bus. C
Industrial	Industrial	Ind.
Overlay	Aquifer Protection District	AQ
Overlay	Municipal Building Reuse	MR
Overlay	Planned Residential Development General	PRD-G
Overlay	Planned Residential Development Municipal	PRD-M
Overlay	Planned Unit Development Business	PUD-B
Overlay	Planned Unit Development Industrial	PUD-I
Overlay	Planned Unit Development Residential	PUD-R
Overlay	Gateway Smart Growth District	GSGD
Overlay	Downtown Smart Growth District	DSGD
Overlay	Planned Unit Development - Residential Corona	PUD-R-C
Overlay	National Flood Insurance Flood Management Dist.	NF
Overlay	Flood Plain District	F

Source: Town of Reading Zoning By-Law, April 2022

b. Development Capacity and Constraints:

Residential development is constrained by many factors including availability of land, land use regulations, natural resources such as wetlands and threatened and endangered species, and limitations on infrastructure capacity. In order to evaluate the potential development capacity, the availability of land must be evaluated against potential development constraints.

Available Land: The Town of Reading is approximately 10 square miles in size and contains 6,388 acres of land. Using a GIS analysis, it was estimated that 1,756 acres (27.5%) of land in Reading is undeveloped or Chapter 61 Land. Of that, 372 acres are potentially developable, and only 139 acres of developable land remain after regulatory constraints⁷ are applied. This results in approximately 262 buildable lots based on the minimum lot size of 15,000 square feet required in the S-15 residential zoning district. However, this build-out is for undeveloped land and does not take into account previously developed land that could be subdivided to yield more homes. Using the same GIS analysis and regulatory constraints, it is estimated that a potential of 513 new homes could be built on currently developed land.

However, the actual number is likely to be significantly less when considering infrastructure costs, lot shape, or other geological conditions, as well as particular zoning district (specifically S-20 or S-40).

As identified above, Reading has several overlay districts. Overlay districts are zoning districts which may be placed over the underlying districts. The provisions for the overlay district may be more stringent or flexible based on the purpose of the particular overlay. The following are overlay districts that relate to housing development and the provision of affordable housing in Reading. Some of the overlays allow for other forms of development, increased density in development, and may have requirements for affordable housing.

Planned Unit Development – Residential

Denoted as PUD-R this overlay district allows, by a Special Permit from the CPDC, single family, two family, apartments, elderly housing, among other uses. At least ten percent of all residential units in the PUD-R must be affordable. The affordable percentage requirement increases to 15% for property within 300-feet of a municipal boundary. It should also be noted that the Planned Unit Development – Industrial (PUD-I) overlay district also allows residential development when the proposed development is within 200-feet of another residential district.

Planned Residential Development (PRD)

A PRD district is an overlay zoning district which may be applied to parcels within the S-15, S-20, S-40 and A-80 residential zoning districts and must be approved through Town Meeting. Upon approval of the overlay, the CPDC may issue a Special Permit for residential development. In Reading, there are two types of PRD districts; General (PRD-G) and Municipal (PRD-M). The PRD-G requires a minimum lot size of 60,000 square feet and encourages affordable unit development. PRD-M development is allowed on current or former municipally-owned land of at least eight acres and requires a certain percentage of affordable units.

⁷ Only residentially-zoned parcels were included in the analysis. Constraints include FEMA 100 year flood zones, 100' buffers around wetlands, streams, and vernal pools, and 200' buffers around perennial streams. Aquifer protection district and slope were not included as constraints. Infrastructure needs were not considered in calculating potential lots.

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Municipal Building Reuse District

The Municipal Building Reuse District is an overlay district that allows for the redevelopment or reuse of surplus municipal buildings. At least ten percent of the residential units must be affordable.

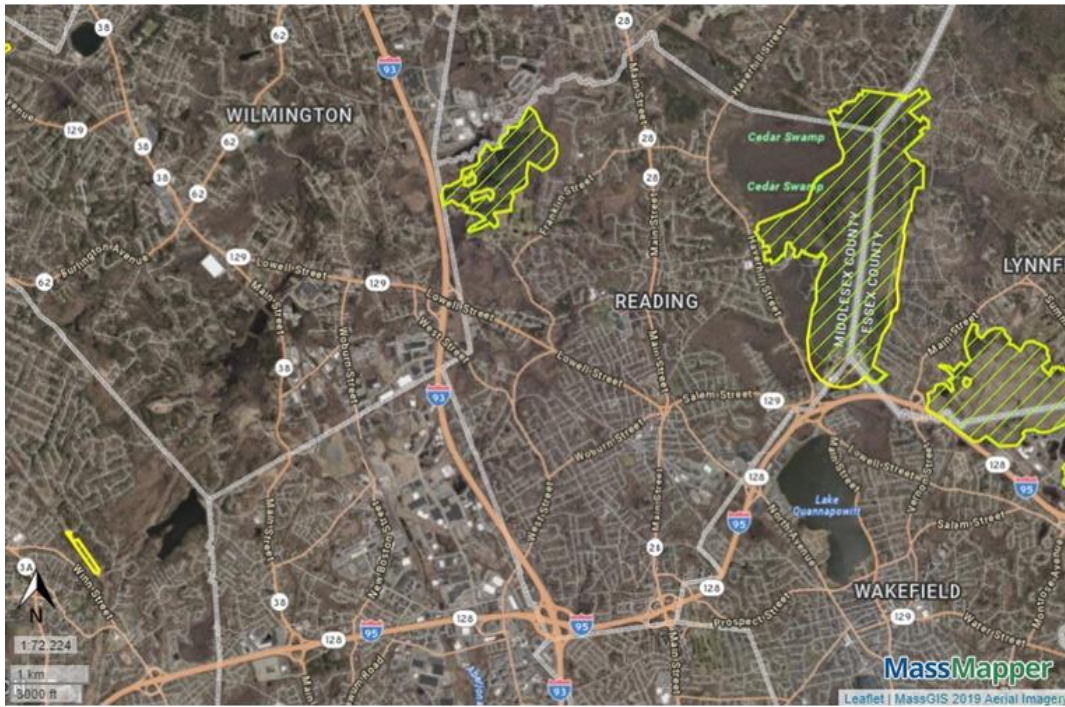
Smart Growth Districts (40R)

As previously mentioned, Reading has adopted two Smart Growth 40R Districts. The Downtown Smart Growth (DSGD) District is an overlay district that allows for mixed-use or multi-family residential within the downtown area via plan approval by the Community Planning and Development Commission. This overlay district requires a minimum of 20% affordable units (homeownership projects) and a minimum of 25% affordable units if the development is rental or limited to occupancy by elderly residents. As described above the DSGD has seen a number of success in revitalizing the downtown area with both new commercial space and residential growth.

The Gateway Smart Growth District (GSGD) is also an overlay district located at the intersection of Route 28 (Main Street) and Interstate 128/95. This district is fully developed with one 424-unit project (200 of the units are technically within the GSGD) and includes 43 affordable units (10%).

Natural Resource Limitations: Wetlands and other natural resources such as endangered species habitats can place constraints on development. As mentioned above, many lots are considered unbuildable due to the presence of some of these resources. Almost one-fourth of the land in Reading is considered wetland or within the jurisdictional buffer zones of resource areas. Another 6% of land is within the 100-year flood zone. Reading is located within the Aberjona, Ipswich and Saugus river watersheds and many of Reading's wetland areas are located in associated floodplains.

Rare and Endangered Species: There are three areas in Reading which contain rare or endangered species. These areas are protected under the Massachusetts Endangered Species Act and the Massachusetts Wetlands Protection Act. Any development within these areas is subject to review by the Massachusetts Natural Heritage and Endangered Species Program (NHESP). The three areas of designation include a large tract of land within the western side of the Town Forest and two separate tracts of land within the Cedar Swamp near the Burbank Ice Arena located on the eastern side of the town.



NHESP Estimated Habitats of Rare Wildlife



NHESP Priority Habitats of Rare Species



Map Features for Imagery

c. Infrastructure

Public Water: The Town of Reading's water distribution system is comprised of 110 miles of distribution main, 2 water booster stations and 2 storage facilities; one 0.75 M gallon elevated tank located at Auburn Street and one 1.0 M gallon standpipe located at Bear Hill. Since 2006 Reading purchases all of its drinking water from the Massachusetts Water Resource Authority (MWRA) which is supplied into the Town's distribution system via a 20" water main located on Border Road. Construction of a second 36" redundant supply pipe line was completed by the MWRA which provides a second supply source to the Town's distribution system at Leech Park on Hopkins Street. The Town also has 5 emergency water connections with 3 of the bordering communities.

Prior to purchasing water from the MWRA, Reading operated a water treatment plant adjacent to the Town Forest which drew water from nine wells within the Town Forest and Revay Swamp, all contained within the Ipswich River Watershed. Following the temporary closure of wells as a precautionary measure to avoid contamination from an overturned petroleum vehicle on Rte. 93 and to aid in relieving stress to the Ipswich River aquifer, the Town decommissioned the treatment plant in 2006 and began purchasing 100% of the Town's drinking water from the MWRA. Reading continues to maintain the wells as a backup water supply until the redundant MWRA water supply source is on-line.

Reading has established a strong water conservation program offering residents rebates for the installation of low flow fixtures and appliances, irrigation sensors and rain barrels. The program has been extremely successful and has lowered water consumption by 10% over a 10-year period. In 2016 the average daily water consumption equaled 1.7 MGD with a maximum daily demand of 2.2MGD.

All water purchased from the MWRA is metered at the supply mains through meters owned by the MWRA and the Town of Reading. Residential and Commercial meter reading is modern and efficient, with an automatic system that uses radio transmitters for optimal accuracy and efficiency. Water rate changes are established by the Board of Selectmen based on recommendations from staff.

Reading's water distribution system is maintained on a GIS mapping and database system. The operation of the water system is overseen by the Department of Public Works, and is on an enterprise basis, through which the full costs of operations are borne by the water users, and not paid for by local property taxes. Water supply is considered adequate for any new development, and it no longer impacts the Ipswich River resource.

Public Sewer: The sewer system is owned and operated by the Town and serves approximately 98% of all properties within the Town. While 149 individual properties throughout the Town are not yet connected to available public sewer, the only major unsewered areas are portions of Main Street north of Mill Street, and the westerly portion of Longwood Road. The system consists of 107 miles of sewer main, 12 wastewater pump or lift stations, and approximately 7,800 local service connections.

All sewage from the Town's system discharges into the MWRA's regional collection system through 2 major outfalls; one along Rte. 93 in the west adjacent to Arnold Avenue, and one at the end of Summer Avenue in the south. An isolated collection system servicing Border Road and a small portion of the West Street area discharges into the regional sewerage system via the City of Woburn. The regional sewerage system is operated by the MWRA, with principal treatment at Deer Island facility.

Water usage meters measure outfall flows and discharges. Sewer rate changes are established by the Board of Selectmen based on recommendations from staff. The Town's connection policy requires all new development to tie into the public sewer system and requires conversion to public sewer when residential septic systems fail. In addition, the Town sewer connection policy requires that all new developments perform system Inflow/Infiltration improvements or that equivalent contributions of twice the new flow multiplied by \$4.00 are made to the Town.

Reading's sewer system is maintained on a GIS mapping and database system. The operation of the sewer system is overseen by the Department of Public Works, and is on an enterprise basis, through which the full costs of operations are borne by the sewer users, and not paid for by local property taxes.

Stormwater System: Reading is located in the upper reaches of three (3) separate drainage basins; the Ipswich River basin to the north, Saugus River basin to the southeast, and Aberjona River basin to the southwest. All stormwater is collected through a series of approximately 3,400 catch basins, 80 miles of piped system, numerous open water bodies and 450 outfalls. The GIS mapping of the stormwater system was updated in 2016.

The town has evaluated problematic areas of the Aberjona and Saugus River basins and has developed a capital plan for the improvements. The system is operated and maintained by the Department of Public Works and is funded partially through local property taxes and the balance through enterprise funds. Following the authorization of the MS4 permit program by the EPA in 2003, the Town established a stormwater enterprise in 2006 to fund the additional operation and maintenance of the stormwater system mandated by the MS4 permit. The enterprise funding is apportioned based on the

extent of impervious area within the parcel.

Through the policies established under the Town's MS4 permit program, all new developments are required to install and maintain stormwater management systems. Each system must include a long-term operation and maintenance plan which includes annual reporting to the Town.

Roadway Network: Reading contains approximately 102 miles of streets and roads; however, the Town only maintains approximately 92.7 miles. The remainder of roadways not maintained by the Town are state-owned or privately-owned roadways. The Town is bordered by Interstate Highway 95 (also known as state Route 128) on the south and southeast, and Interstate Highway 93 on the west.

Reading's roadway system consists of several arterial, collector and local roadways. Arterial streets, carrying large traffic volumes and serving as principal local routes as well as regional routes, include: Main Street (Route 28), and Salem Street and Lowell Street (Route 129). These three main arterials intersect at the Common in the middle of Town, and are lined with commercial and densely developed residential uses.

Minor arterial streets include: Haverhill Street (residential), Walkers Brook Drive (commercial and industrial), Washington Street (residential), Woburn Street (commercial through Downtown and otherwise residential) and West Street (almost entirely residential).

Collector streets, serving traffic from neighborhood streets and feeding into the arterial streets in Town, include: Franklin Street, Grove Street, Forest Street, Charles Street, Washington Street, High Street, Summer Avenue, South Street, Hopkins Street, and Willow Street.

Since 2000, Reading has utilized a computerized pavement management system to assist in developing a roadway capital improvement plan. In 2011 the system was converted to a GIS based management system. The system enables the Town to reliably develop cost effective roadway maintenance plans. Based on roadway inspections, each roadway is given a pavement condition index (PCI) that is used to identify the overall condition of the roadways. PCI values range from 0 to 100 and the 2016 average PCI of all roadways was 77. Every 3-4 years, each roadway is physically inspected to update the database for pavement distresses factors, which are used to determine pavement longevity in the program. Through the use of the computerized program, state Chapter 90 roadway funds and the general operating funds (which is a result of a proposition 2 ½ override), the Town's planned annual expenditure of roadway maintenance will insure an overall increase in the roadways PCI value for the next 10 to 15 years.

Commuter Rail: Reading is served by the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail system. The current MBTA schedule has 19 commuter rail trains each weekday inbound to North Station in downtown Boston. A total of 23 commuter trains travel outbound to Reading each weekday from North Station and of those 13 continue on to the final destination of Haverhill. The Reading train station is located in the heart of downtown at the “Depot”. There is a mix of MBTA/Town parking available at the Depot. The 113 MBTA-owned spaces are available for a rate of \$6.00/weekday, \$2.00/weekend day or \$105 for a monthly pass. There are also several Town-owned parking spaces limited to resident permit only from 6:00AM-9:30AM, for an annual fee of \$150. The town-owned spaces are unregulated after 9:30AM and open to any user.

The most current ridership data available is contained in the MBTA “Blue Book” dated Spring, 2018. The 2018 Blue Book statistics show a typical weekday station boarding (inbound) at Reading station as of Spring 2018 was 855 commuters. The average boarding count for the period 2012-2018 for Reading Station (inbound) was 834. The ridership has remained stable during the 2012-2018 time period. It is expected that the next “Blue Book” will capture data showing changes during the pandemic and rising fuel prices.

Bus Service: The MBTA operates one bus route from Reading to the Malden Center Orange Line subway station through Bus 137. Bus 137 travels from the Reading Depot, continues along Woburn Street and Salem Street where it then travels south through Wakefield and continues south through Melrose on Main Street and terminates at the Malden Center subway station. The entire route from Reading to Malden takes approximately 40-45 minutes.

Electrical – Reading Municipal Light Department (RMLD): In 1891, the Massachusetts Legislature passed a law enabling cities and towns to operate their own gas and electric plants. Following several years of study and Special Town Meetings, Reading began producing electricity for 47 streetlights and 1,000 incandescent lamps on September 26, 1895. Special legislation was enacted on April 8, 1908 authorizing the Town of Reading to sell and distribute electricity to Lynnfield, North Reading and Wilmington. As a result, RMLD began delivering power to Lynnfield Center on December 10, 1909; to North Reading in 1910 and to Wilmington in 1912.

There have been decades of advancement and achievement since those early days of electricity, but some things have remained constant. After more than 125 years, RMLD is still committed to reliable service at competitive rates, but maintaining that commitment requires astute planning, innovative ideas and close attention to detail.

The GAW substation on Causeway Road in Reading was constructed in 1969-1970 allowing RMLD to connect to the grid and purchase power from almost anywhere on the northeast power pool. In June 2000, construction was completed on a distribution substation connected to 115,000-volt transmission lines in North Reading in order to accommodate growth and enhance the entire system's efficiency and reliability. To ensure reliability, RMLD has an ongoing preventative maintenance program aimed at solving problems before they occur.

Today, RMLD serves more than 70,000 customers in its four-town service area. A professional staff of 75+ employees bring a broad scope of utility experience to RMLD's daily operation, including an up-to-date understanding of the evolving energy market. With its peak demand for electricity at more than 156 megawatts, RMLD purchases electricity from a number of different sources through long-and-short-term contracts. Recent technological advances at RMLD include a fiber optic cable network that links all substations for state-of-the-art system monitoring and control. Computer systems are also state-of-the-art, and now include a sophisticated website. Meter reading is modern and efficient, with an automatic system that uses radio transmitters for optimal accuracy and efficiency.

RMLD supports in-lieu-of-tax payments, community development and energy education programs. This includes energy efficiency programs, energy conservation programs, school safety projects, school-to-work partnerships, outreach to senior groups, community support, and active memberships in local civic groups.

Infrastructure Capacity for Planned Production: Reading's overall infrastructure contains adequate capacity and capital facilities for existing build out and anticipated future development. The Town also periodically reviews and assesses its 10-year Capital Plan to ensure that infrastructure will be maintained and sustained for projected growth. The Town expects to continue the policy and practice of requiring mitigation from developers, financial or otherwise, for the impacts of their proposed projects, including infrastructure improvements. Therefore, as needs are identified through staff level and consultant review of individual permitting applications, the Town expects to require - as conditions for approval - adequate improvements and upgrades to systems, resources and capacity to allow for development under this Housing Production Plan, while protecting and enhancing natural, cultural and historical assets consistent with the 2005 Master Plan.

SECTION 3: AFFORDABLE HOUSING GOALS & STRATEGIES

Section 3: Affordable Housing Goals and Strategies

The housing goals and strategies included in this section are aimed primarily at creating more housing choice and affordable housing in Reading. The goals and their related strategies also support the Town's ability to achieve other interrelated community goals, including goals for economic development as well as protecting quality of life and community character.

Housing Goals and Strategies

In reviewing the previous Reading Housing Plan of 2018, other Reading related documents, analyzing the current housing situation in Reading, and in discussing housing issues with town citizens and officials, the Town has identified three priority areas to establish overarching goals that are the most appropriate and most realistic for the community. Each of the three priority areas includes a series of strategies to help achieve the vision. The goals and strategies are listed immediately below and discussed in more detail on the following pages.

1. Development and Regulatory

Goals

- a) Increase, diversify and promote a mix of housing options in Reading for low- to middle-income households.
- b) Create and maintain housing that is available and accessible to aging and disabled populations. Support housing development needs for most vulnerable residents.
- c) Proactively plan for and manage the integration of housing growth to mitigate impacts and enhance the existing residential character of the Town.
- d) Provide equitable access to housing opportunities, public spaces, green spaces and healthy/safe environments.
- e) Maintain Reading's Safe Harbor designation by retaining pace of Affordable Housing development in order to remain above 10% on Subsidized Housing Inventory.

Strategies

1. Adopt/Amend Zoning to comply with MBTA Communities legislation
2. Identify Zoning Districts/Geographies in which current regulations can be modified to allow the development of SHI eligible housing units, including previously identified Priority Development Area's (PDA's).
3. Adopt and/or Strengthen Inclusionary Zoning bylaw
4. Amend the Zoning Bylaw to explicitly permit and define Congregate Housing
5. Identify existing houses with potential for conversion to congregate housing.
6. Review and amend zoning requirements as necessary for pre-existing non-conforming residential uses.
7. Consider zoning amendments to allow Accessory Dwelling Units (ADU's) by-right and/or lessen restrictions on such.
8. Continue to provide necessary support for 40R, 40B/Comprehensive and Local Permit applications.
9. Preserve existing affordable housing stock to ensure they remain affordable and qualify for SHI.
10. Maintain Safe Harbor designation by maintaining, tracking and continuing pace of affordable housing development to exceed 10% SHI target.
11. Preserve/protect/enhance existing parks, open space and conservation land for long-term accessibility and use by residents. Require open space, trails and/or path connection (sidewalk, bike path, trails, transit-oriented improvements) in new residential, multi-family and mixed-use developments.
12. Ensure future Net Zero and energy efficiency requirements/standards are met in new development that provide cost savings to end users (residents).

2. Funding and Resources

Goals

- a) Support vulnerable, low- and middle-income populations through programming and services.
- b) Ensure appropriate maintenance and upkeep of existing affordable housing stock. Continue to look for opportunities to increase affordable units within existing properties.
- c) Maintain and see national/state/local designations that provide grant and financial opportunities to develop/maintain/support affordable housing development and residents.
- d) Ensure equitable access to financial/support services and programming.

Strategies

- 1) Strategize use of Affordable Housing Trust Fund (AHTF) and look to increase revenue sources dedicated to the AHTF
- 2) Explore creation of a First Time Homebuyer Program
- 3) Seeking sources to create a local aging in place program.
- 4) Investigate opportunities to provide or increase Veterans Affairs Supportive Housing Vouchers
- 5) Build support for adoption of Community Preservation Act (CPA)
- 6) Maintain Housing Choice Initiative (HCI) designation for future grant and

- funding opportunities.
- 7) Consider implementing Commercial Linkage Fees to help support affordable housing needs
 - 8) Develop strategy for locally-initiated development of affordable housing
 - 9) Continue to catalog, prioritize and target tax-foreclosed, and surplus public properties with development potential
 - 10) Consider tax incentives for inclusion of deeply (i.e. 50% AMI) affordable housing units
 - 11) Plan for cases of emergency housing needs

3. Partnerships, Education and Leadership

Goals

- a) Initiate and strengthen local and regional relationships. Work in cooperation and collaborate with community partners/organizations to promote enhanced understanding of housing needs and support for creation of housing development.
- b) Partner with Community Housing Development Organizations (CHDO's) and developers to raise awareness about available affordable housing opportunities, programs and housing related services.
- c) Increase capacity to produce housing through leadership developments, advocacy, staffing, funding, established goals and diverse relationships. Provide education and support to local staff, boards/commissions and public.
- d) Ensure access, support, outreach and inclusion to social and vulnerable populations across the Town and region.

Strategies

1. Foster partnership initiatives with landlords to upgrade existing apartment complexes and convert to affordable apartments.
2. Seek proposals from private developers or property owners to upgrade developments or units in return for long-term affordability restrictions.
3. Maintain and continue to build Interested Buyers List
4. Work in cooperation with community partners to promote enhanced public understanding of housing needs and creation of affordable housing opportunities
5. Continue to support the work of the Metro North Regional Housing Services Office
6. Continue public engagement and education on regional/local housing needs.

Housing Strategies

This section includes deeper descriptions of the strategies listed above, all of which are intended to assist the Town of Reading in meeting its affordable housing goals above.

Reaching and Maintaining 10%

The Housing Production Plan guidelines require that the HPP set an annual goal for housing production, pursuant to which there is an increase in the municipality’s number of SHI Eligible Housing units by at least 0.50% of its total units during every calendar year included in the HPP, until the overall percentage exceeds the 10% Statutory Minimum.

There should be a direct link between the setting of these goals and the results of the needs assessment. The numerical goal should be based on the total year-round number of housing units. The total year-round housing units is the total number of units for the community in the latest U.S. Census including any changes due to demolition or new construction.

The Table below projects the Town of Reading SHI. Note that the unit counts for projects on the first three lines are forecast. The denominator of Year-round housing units will be updated by the Census and then reported by DHCD in 2023. These projections are not included in this update, but will be included in the future updates.

	FY18	FY19	FY20	FY21	FY22	FY23
Johnson Woods			7			
Eaton Lakeview 40B				120		
467 Main Street 40R			31			
SHI Units Created	896	0	38	120	0	0
Cumulative SHI Units	896	896	934	1004	1044	1044
Year Round Units (2010 Census)	9584	9584	9952	9952	9952	9952
SHI %	9.35%	9.35%	9.75%	10.08%	10.48%	10.48%
10% Requirement	958.40	958.40	958.40	958.40	996	996
+/- 10%	-62.4	-62.4	-24.4	95.6	95.6	95.6

DEVELOPMENT & REGULATORY STRATEGIES

Development and Regulatory Strategies

Regulatory strategies refer to recommendations that entail amendments to local zoning bylaws or other local development regulations to help encourage development of more housing options including affordable housing.

⁸ More information about MassHousing's Housing Production Program: www.masshousing.com/portal/server.pt/community/planning_programs/207/planning_for_housing_production

Strategy 1: Adopt/Amend Zoning to comply with MBTA Communities legislation

MBTA Communities legislation is the requirement codified as Section 3A of Massachusetts General Law (MGL) Ch. 40A. The law requires designated MBTA Communities to have at least one zoning district of reasonable size in which multi-family housing is permitted as of right and meets other criteria set forth in the statute, including but not limited to: a minimum gross density of 15 units per acre, locations not more than 0.5 miles from a MBTA station, no age restrictions and zoning suitable for families with children.

On August 10, 2022 DHCD issued the final guidelines to determine if an MBTA Community is in compliance with the Section 3A language. In total, 175 MBTA Communities are subject to the new requirements. More information and resources are available at

<https://www.mass.gov/info-details/multi-family-zoning-requirement-for-mbta-communities>.

Locally, Reading is designated as a Commuter Rail Community. Based on its designation (and other local factors) the Town must zone to allow the Unit Capacity of 1,493 multi-family units across a Reasonable District Size of 43 acres of area. It also requires that 40% of the Unit Capacity and District Area be located within 0.5 miles of the local Reading Train Depot (598 units and 17.3 acres respectively).

There are potentially many paths to compliance with the legislation, but new zoning adoption or amendment of existing zoning districts will be needed, that much is certain. Reading will have until December 31, 2024, to comply with the requirements or it may face impacts to funding as described in Section 3A.

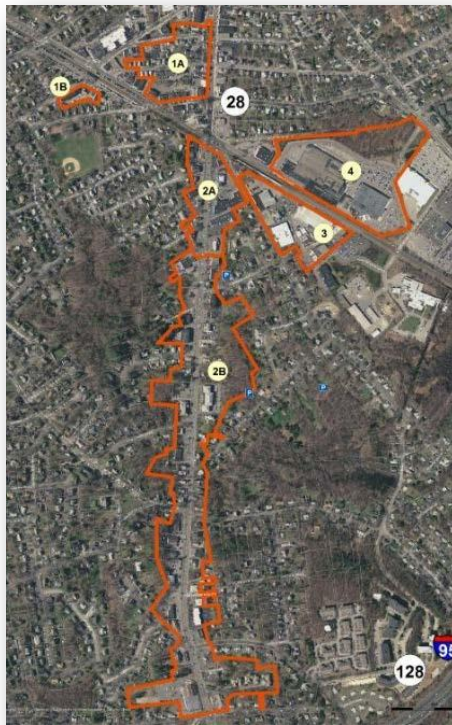
The Town should engage its leaders and community as a whole to determine a method of compliance that addresses and meets the local need without dramatically changing the existing character of the community. Technical

Assistance should be sought and steps to achieve compliance be planned. Compliance would help address shortfalls identified in this HPP update and identified for the region.

Strategy 2: Identify Zoning Districts/Geographies in which current regulations can be modified to allow the development of SHI eligible housing units, including previously identified Priority Development Area's (PDA's).

As part of the Reading Economic Development Action Plan 2016-2022 (EDA Plan), the town identified four regionally-significant Priority Development Areas (PDAs). As described in the EDA Plan, redevelopment in these areas will help meet projected regional demands for housing and commercial uses and strengthen existing places by improving the mix of development types in areas where development already exists. The PDAs are sited in areas defined as having major growth potential and near existing transportation resources including public transit, bike, and trail facilities, thus contributing to the creation of more walkable communities.

The four PDAs are described below, as excerpted from the EDA Plan.



Reading Priority Development Areas
Source: EDA Plan

PDA #1 - Downtown

Reading. PDA #1 is a nine-acre area consisting of 46 parcels – the Town's 40R Smart Growth Overlay District was expanded to include a portion of this area (PDA #1A) in April 2017. PDA #1A is bounded by Haven

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Street, Main Street, Washington Street, and High Street and includes mixed use, commercial, and residential development. Since the EDAP was adopted in 2015 the Ace Flats 40R (24 Gould Street), located in PDA #1A, has reached completion. PDA #1B is adjacent to the Commuter Rail and is bounded by Lincoln and Prescott streets and includes commercial and residential development – this property is the location of an approved and completed Comprehensive Permit project – The Metropolitan at Reading Village.

PDA #2 – South Main Street. PDA #2 is a 26-acre area consisting of 82 parcels located south of the downtown on South Main Street. PDA #2A presently contains primarily low-density commercial development and underutilized parcels. PDA #2B consists primarily of low-density residential development. The Town is interested in facilitating more retail and mixed-use development and implement streetscape and road reconfigurations that will enhance safety and the street’s overall connectivity to downtown. In 2019 the Town proposed and adopted a Mixed-Use Bylaw in the Business-A Zoning District, included in PDA #2A and #2B. The Mixed-Use Bylaw allows a mixed-use development through a Special Permit granted by the CPDC and requires both commercial floor area and affordable units for projects 10 units or more. Affordable units are required for 10% of the project units and required for at least 80% AMI.

PDA #3 – New Crossing Road Redevelopment District and Ash Street Parcels. PDA #3 consists of the five-acre New Crossing Road Redevelopment District, which consists of four parcels and includes vacant lots, derelict buildings, sites with industrial uses, and adjacent parcels on Ash Street. In 2019 the Town used an awarded Massachusetts Downtown Initiative (MDI) Grant to facilitate conversation around future uses and development in this priority area. Gamble Associates was contracted with and proposed visioning renderings for the area designated as ‘The Eastern Gateway/The Yard’. Numerous public engagements, workshops and discussions were held. Desired vibrant uses and pedestrian improvements/connections were noted – and while mixed-use development can facilitate improvements concerns of losing too much commercial area were noted. Future zoning additions or amendments should look to address the need for vibrant commercial uses without limiting the market for development.

PDA #4, - 1 General Way. PDA #4 is one large 20-acre parcel with a mix of single-story commercial uses and ample parking. The Town is interested in facilitating a

more vibrant mix of uses and structures of different densities in this area. Conceptual improvements extended and derived from the Eastern Gateway Initiative described above may be extended to this parcel in future discussions.

Consider zoning changes to promote more compact, mixed-use development

As noted, the Smartgrowth 40R Zoning and the local Mixed-Use Bylaw allows for mixed-use development. The Mixed-Use includes commercial space requirements to maintain a level of commercial development on the Town’s main corridor; parking requirements for residential and commercial uses; and, dimensional controls. However, it also allows the ability to apply for a waiver of these dimensional requirements to promote design flexibility and to achieve appropriate densities. The Bylaw has not been utilized since its inception, though important to note that the Covid-19 pandemic and economic stress occurred in the subsequent years after adoption. Future improvements to the bylaw may be considered to further promote development and reduce constraints.

Consider zoning changes to parking requirements to promote more compact, mixed-use and/or multi-family development

In accordance with the recommendations of the Reading Economic Development Action Plan 2016-2022, the Town should evaluate parking requirements and consider zoning amendments to make parking requirements consistent with best practices.

Strategy 3: Adopt and/or Strengthen Inclusionary Zoning bylaw

The purpose of inclusionary zoning bylaws (IZ) is to ensure that production of affordable housing units keeps pace with construction of new dwelling units. IZ mandates that developers provide affordable housing units in addition to market-rate housing. Section 9 of the Zoning Act authorizes communities to adopt bylaws that require a developer to provide a certain portion of affordable units (usually 10% to 25%) within an overall development. To help offset the cost of providing these units, the bylaw may offer an incentive, most commonly a density bonus. Other incentives include a waiver of zoning requirements or permit fees, fast-track permitting, local tax abatements, and subsidized infrastructure.⁹

Many variations of inclusionary zoning provisions have been adopted in Massachusetts communities with varying levels of success at producing affordable units. IZ provisions include:

- a unit threshold that triggers the affordable unit requirements
- minimum percentage of affordable units required
- maximum household income targets (e.g., at or below 80 percent of the areamedian income)
- eligibility for the state’s Subsidized Housing Inventory
- density bonuses, if applicable

For example, density bonuses are sometimes offered to encourage deeper affordability of units (e.g., units affordable to extremely low-income households) or a higher percentage of affordable units.

The Town may consider including language in its IZ to allow for financial contributions to or development of off-site units, and/or donated buildable land as an alternative in lieu of construction of affordable units. The monetary payments and donated buildable land could be allocated to the Reading Affordable Housing Trust to create or preserve affordable housing.

It will be important to examine the most current information regarding best practices for Inclusionary Zoning provisions and to customize/improve Reading bylaws to ensure a successful outcome.

Strategy 4: Amend the Zoning Bylaw to explicitly permit and define Congregate Housing

Congregate housing is a shared living environment designed to integrate the housing and services needs of elders and disabled individuals. The goal of congregate housing is to increase self-sufficiency through the provision of supportive services in a residential setting. Some types of congregate housing are often in converted single-family homes; however, the Reading zoning bylaw restricts dwelling units to “families” of not more than four unrelated individuals, and this restriction may pose an issue in certain situations for congregate housing, which will often house up to 16 people.

⁹ Excerpted from the Housing Toolbox for Massachusetts Communities: <https://www.housingtoolbox.org/zoning-and-land-use/adaptive-reuse>

In addition, congregate housing sometimes provides small kitchen facilities in each private unit in addition to the shared common facilities, which may constitute multi-family housing under the current bylaw’s use regulations and thus be prohibited in certain residence districts (S-15, S-20, and S-40).

Reading’s zoning bylaw does not appear to explicitly define or permit congregate housing (a.k.a. group homes), which can be an important housing choice to accommodate later life stages for an older population and provide supportive housing for individuals with disabilities.

The Reading zoning bylaw provides the below definition for “family,” which presents Fair Housing considerations. Policies that require relations by blood/marriage and/or have a limit of unrelated adults in a household may be considered discriminatory if they have an adverse impact on a protected class including people with disabilities. For example, limiting the number of unrelated persons in a dwelling can impact group home uses, foster families, or other alternative household composition.

Family: One or more persons living together in one dwelling unit as a single housekeeping unit; provided, however, that a group of more than
Town of Reading Housing Production Plan, 2023 Renewal Page 68

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four individuals who are not related by blood, marriage, or legal adoption shall not be deemed to constitute a family.

Dwelling, single family: A detached dwelling unit arranged, intended or designed to be occupied by only one family.

However, it is important to note that despite these limiting definitions and lack of zoning provisions for congregate housing or group homes, the Dover Amendment exempts educational uses from local zoning and programs and services that provide support, training, and skill building for persons with disabilities have been found to be educational in nature.

Many congregate living and group home facilities provide such services to residents and would qualify as educational in nature. In addition, federal laws prohibit municipalities from discriminating against persons with disabilities through their land use and zoning policies.¹⁰

The zoning bylaw should be amended to ensure consistency with these laws and to explicitly permit congregate housing in all residential districts. This strategy would help to support the local initiative Strategy 5 to identify existing houses with potential for conversion to congregate housing.

Commented [MA13]: ¹⁰ Federal laws referenced here includes Section 504 of the Rehabilitation Act of 1973, the Fair Housing Amendments Act of 1988, and the American with Disabilities Act of 1990.

Commented [NL14R13]: Footnote

Strategy 5: Identify existing houses with potential for conversion to congregate housing.

Congregate housing, a shared living environment designed to integrate the housing and services needs of elders and disabled individuals, is often created by converting larger single-family homes to house up to 16 residents with private bedrooms and shared common areas including kitchen, living, dining, and outdoor space. Congregate housing will often also have a resident manager with a small (accessory) apartment within the house or in an outbuilding on site. In addition, it is often beneficial for congregate housing to be in a walkable neighborhood that is close to community services, shops, and public transportation including bus and commuter rail.

The town, perhaps working through the AHTF and in conjunction with community partners, should inventory existing single-family properties to identify potential for conversion to congregate housing. AHTF funds could support acquisition and/or rehabilitation costs of community partners to facilitate such conversions.

Strategy 6: Review and amend zoning requirements as necessary for pre-existing non-conforming residential uses.

Reading Zoning Bylaw Section 7.0 regulates non-conforming lots, uses, buildings and structures, as provided in Section 6 of Chapter 40A of the Massachusetts General Laws. This Bylaw relates heavily to non-conforming single- and two-family uses/structures and how to regulate them, most commonly through a

Special Permit granted by the local Zoning Board of Appeals (ZBA). The Bylaw does not clearly articulate how to allow for the improvement or re-development of pre-existing non-conforming multi-family uses in the single-family zoning district and thus a Special Permit process is required. There are a number of three-, four- or greater unit structures in the single-family districts. Many of these dwellings were developed prior to the current zoning requirements. It has been noted that the Special Permit process is a deterrent to owners who look to rehabilitate the outdated structures. And in many cases the development would simultaneously require a Site Plan Review process through the Community Planning and Development Commission (CPDC).

The Town may wish to consider more directly addressing these “other non-conforming uses” in Section 7.0 and provide opportunity for by-right improvements on pre-existing multi-family structures.

Strategy 7: Consider zoning amendments to allow Accessory Dwelling Units (ADU's) by-right and/or lessen restrictions on such.

Section 5.4.7 of the Reading Zoning Bylaw provides the terms and limitations on the establishment of Accessory Apartments across Reading. Reading adopted the ADU bylaw in 1983 (revised 2017) and has continued to promote the development of such units to offer a means of increasing housing options without adverse impacts on community character. Reading allows for both attached and detached accessory apartments on single-family dwellings. Section 5.4.7.3 includes ‘performance standards’ each ADU is subject to, including maximum square footage, number of occupants allowed, a requirement that the homeowner reside in the principal dwelling or ADU, and more. [Since 2017 the Town has permitted 26 Accessory Apartments.](#)

While ADU’s within (attached) principal dwellings that require no increase in Gross Floor Area are allowed by-right, many other variants require a Special Permit process through the Reading Zoning Board of Appeals. Accessory apartments that require new Gross Floor Area, or those within existing accessory buildings, trigger the Special Permit process. During many of the public hearings for such it has been noted by applicants (generally homeowners and/or their designers) that the process is time consuming and delays contracting the work. Many ADU’s are originally proposed to support small family needs and the public has asked to make the process less cumbersome. However, it is important to note that the public hearing/special permit process allows for the notice of such uses and for discussion/education on concerns such as use as short-term rentals, parking needs, design, etc. It also allows for the conditioning of approvals as needed.

The Town may consider reviewing the bylaw for potential improvements for local homeowners.

Strategy 8: Continue to provide necessary support for 40R, 40B/Comprehensive and Local Permit applications.

The Town has had multiple development proposals in recent years that can help to create a more diverse housing stock including affordable and mixed-income units. The Town should continue to provide technical and political support for appropriate projects that further the Town’s housing and economic development goals. These projects could be developments in 40R Smart Growth Districts, 40B Comprehensive Permit applications, or local permit applications. Currently the Town has 115 units awaiting permitting or under construction that will include at least 30 affordable units.

Strategy 9: Preserve existing affordable housing stock to ensure they remain affordable and qualify for SHI.

Explore partnership opportunities with the Reading Housing Authority to create and preserve public housing units

The Reading Housing Authority (RHA) was established in 1963 and has been developing and operating housing for low-income elderly/handicapped persons, families, and people with special needs throughout the Town of Reading. The Authority owns and manages public housing units for both families and seniors.

The RHA operates 100 units of housing between 3 locations. -The RHA unit count consists of units located at the following developments: 80 at Tanner, 10 State, 6 at Waverly, 4 at Parker.

The Housing Authority owns property on Waverly Road, which could have some potential for development of additional units. In addition to exploring the development potential of the Housing Authority’s existing properties, the Town plans to work collaboratively with the Housing Authority to identify other properties for possible expansion of the public housing inventory—possibly through the development or redevelopment of tax- foreclosed, foreclosed, and/or surplus public properties, as described above. Town-owned land along Oakland Road has been under consideration for the development of affordable housing; however further public engagement around the site and use is recommended.

Strategy 10: Maintain Safe Harbor designation by maintaining, tracking and continuing pace of affordable housing development to exceed 10% SHI target.

The Subsidized Housing Inventory (SHI) is a fluid number that is subject to constant change. This is because units on the SHI may fall off of the list if a unit’s deed restriction ~~is not continued~~ expires, if building permits have not been received in a timely manner since approval, or if occupancy is not reached one-

year after building permit. Units on the SHI should continue to be tracked to ensure they do not relinquish their status on the inventory and request for new units should be submitted as soon as projects become eligible.

Strategy 11: Preserve/protect/enhance existing parks, open space and conservation land for long-term accessibility and use by residents. Require open space, trails and/or path connection (sidewalk, bike path, trails, transit-oriented improvements) in new residential, multi-family and mixed-use developments.

The Town recently adopted an updated Open Space and Recreation Plan in 2022, which includes a series of recommendations for the preservation, acquisition and/or development of open space. And while the plan covers open space and recreation in a broader sense across the entire Town, it also includes the recommendation for connecting open space to new development(s).

During the 40R Bylaw update in 2022 it was strongly expressed that the downtown 40R and nearby 40B developments need more green space, open space and/or shading. Efforts were made to require open space in future 40R application in a flexible manner to achieve a mix of desired improvements. Open space may be considered public or private; may be green space or urban space to allow for uses such as outdoor dining; or, may include sidewalk and path connections to heavily utilized areas nearby. It should also be noted that private amenity space such as balconies, courtyards and shared terraces are a desirable 'open to the air' use in urban developments.

Reading also looks to encourage Low Impact Design (LID) and the use of green infrastructure to manage stormwater impacts of housing and urban developments. Green infrastructure, such as bioswales and raingardens, as well as strategies to reduce development footprint on the environment, are strongly encouraged but not always explicitly required.

Regulatory documents can require such open space improvements or LID infrastructure and the Town should review the Zoning Bylaw and Subdivision Regulations to ensure the desired standards are included. The local Stormwater Bylaw and Regulations were updated in 2021-22.

Strategy 12: Ensure future Net Zero and energy efficiency requirements/standards are met in new development that provide cost savings to end users (residents).

The Town plans to undergo a Net Zero Plan process during 2023 to effectively strategize greenhouse gas reduction across a number of sectors (i.e. transportation, building, waste, etc.). The Net Zero Plan would help align the Town with State initiatives and requirements. The Town should expect recommendations on how to include energy efficiency and renewable infrastructure requirements for new development. The Net Zero Plan should also target strategies to improve existing homes and affordable unit efficiency.

Many State and local resources are available to homeowners and developers such as Mass Save, Passive House and more. The Town should highlight these programs for residents and review local building and energy codes for potential updates. Partnering with the local Reading Municipal Light Department (RMLD) can greatly expand energy efficiency and improvement practices and awareness.

Funding and Resources Strategies

Funding and Resources Strategies

Local initiative strategies refer to recommendations that the town can undertake to foster the creation of more housing options, especially affordable housing. These initiatives are not regulatory in nature – they deal with allocation of town resources including staff time, funding, and property.

Strategy 1: Strategize use of Affordable Housing Trust Fund (AHTF) and look to increase revenue sources dedicated to AHTF.

The town originally adopted the Reading Affordable Housing Trust (AHTF) through a special act in 2001. In 2001 the Reading Town Meeting passed a warrant article which authorized the Selectmen-Select Board to petition the Massachusetts General Court to establish an Affordable Housing Trust Fund for creation and preservation of affordable housing. The State legislature approved the special legislation. The Board of Selectmen act as the Trustees of the Trust.¹²

However, in 2022 the Town found its Trust Fund to be too restrictive in use and looked to update to the state's model bylaw. An Instructional Motion was made asking the Select Board and Town leaders to investigate the creation of a permanent committee to oversee the Affordable Housing Trust and identify opportunities to expand the trust for future utilization. The Town then pursued the idea of creating an Affordable Housing Trust Fund committee in accordance with Mass General Law Chapter 44 Section 55C. The new committee will have five (5) members, including at least one member from both the Select Board and Housing Authority. The new Housing Trust language was adopted at November 2022 Town Meeting and is expected to be approved in calendar year 2023. It is also expected that the Town will locally seek to approve its Affordable Housing Trust Fund Allocation Plan at Town Meeting in 2023 to ensure compliance with Chapter 140 of the Acts of 2001.

~~The AHTF is required to submit an allocation plan to Town Meeting annually indicating how Trust funds will be utilized in the coming year and accounting for how the prior year's funds were allocated. The AHTF requires a majority vote of the full combined membership of the Board of Selectmen and Housing Authority for all expenditures.~~

Secure additional funding for the AHTF

Adoption of an Inclusionary Zoning bylaw with provisions for cash payments in lieu of units can provide a source of revenue for the AHTF, in addition to other potential sources (see side bar above). The current balance of the AHTF is approximately \$457,716. The AHTF's past funding sources included the buy-out of an affordable unit at Sumner Cheney and the sale of surplus lands. No Town-generated funds have been allocated to the AHTF.

Collaboration with Community Partners

The AHTF funds can be leveraged by working in collaboration with community partners including non-profit housing organizations to create and preserve affordable housing. The AHTF funds could support a first-time

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Commented [MA17]:¹² Mitchell, Robert P., FAICP, *Affordable Housing Trust Funds: A Report to the Town of Reading, MA. 2013.*

Commented [MA18R17]: Partial List of Potential Funding Sources for Affordable Housing Trusts

Inclusionary Zoning payments, including 40R incentive payments

Payments in lieu of providing affordable units

- Voluntary developer payments
- Proceeds from sales of surplus municipal or tax-foreclosed properties
- Private donations
- Revenue from the lease of municipal land for cell towers
- Proceeds from resale of affordable units

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homebuyer program (see below), locally- initiated developments, or other local initiative strategies.

Strategy 2: Explore Creation of a First-Time Homebuyer Program

AHTF funds can be used to support the programmatic and administration costs of homeownership assistance programs, which assist low- to moderate-income households to purchase a home. The programs can be designed in a variety of ways including the following three examples:

1) Down Payment Assistance: Down payment assistance programs provide financial support to assist with down payment and closing costs. This assistance is provided in the form of deferred payment loans with recapture provisions. However, this type of program does not create units that would count on the state's Subsidized Housing Inventory because the subsidy provided is modest and would not create a deed-restricted unit—therefore, Reading would benefit from considering alternative models, as described below.

2) Purchase/Rehab Model: In this model, the sponsoring entity, such as the AHTF or a non- profit organization, acquires property, rehabilitates it as necessary, and sells it to a qualified buyer for an affordable price with a deed restriction to secure ongoing affordability. It is important to determine an acceptable level of rehabilitation for the subject properties which stays within the program's budget and does not place unreasonable repair costs on the new homebuyer. These units may be eligible for inclusion on the state's Subsidized Housing Inventory.

3) Subsidy Model: In this model, the sponsoring entity, such as the AHTF or a non-profit organization (Community Housing Development Organization or CHDO), qualifies potential buyers, who then locate a market rate home to purchase with the help of a subsidy from the sponsoring entity which buys-down the cost of the mortgage to an affordable price. A permanent deed restriction is then executed for the property to secure ongoing affordability. It is critical to set program parameters, including maximum subsidy per unit, maximum property acquisition cost, and minimum property condition/rehabilitation needs with quality standards, at the start of the process to ensure the sustainability of the program. These units may also be eligible for inclusion on the state's Subsidized Housing Inventory.

In all of these homeowner assistance models, the sponsoring entity must create a transparent, fair, and affirmative process to market the program and select qualified buyers to ensure compliance with federal Fair Housing laws and the Massachusetts Anti- Discrimination Act.

For the units to count on the state's Subsidized Housing Inventory, the program guidelines and marketing plan must meet with the requirements of the Department of Housing and Community Development (DHCD) under the state's ~~Local Action Unit program. Units must have a permanent deed restriction, be~~

affirmatively and fairly-marketed, and comply with DHCD’s resident selection criteria.

Strategy 3: Seeking sources to create a local aging-in-place program.

To help low-income seniors afford to stay in their home as they age, it can be helpful to fund small repairs and safety improvements including handicap accessibility improvements. The town could fund such a program. There are many models. It will be important to design a model program that has limited administrative needs, due to limited staff capacity.

As an example, the town of Agawam applied for \$85,000 in federal Community Development Funds to create the Agawam Aging in Place Program (AIP Program).¹³ The AIP Program would provide grants up to \$5,000 per qualified senior household to complete non-structural modifications to increase the health and safety of the occupants. To be eligible, owner occupants must be 65 years of age or older, meet HUD income guidelines for low/moderate- income persons, and have home safety needs that fall under the purview of the program.

Funding per unit would vary from a few hundred dollars to the maximum \$5,000 to support improvements to the health and safety of participants’ homes allowing seniors to remain living independently in their own homes. Specific improvements will include the installation of grab bars, door levers, slip resistant stair treads, dead-bolts, peep holes, smoke and/or carbon monoxide detectors, the cleaning of furnaces and chimneys or other similar work and activities.

Commented [MA21]: ¹³ Although Agawam did not receive the award of federal funds in FY2018, the city is applying again for FY2019.

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Strategy 4: Investigate opportunities to provide/increase Veteran’s Affairs Supportive Housing vouchers.

The Veteran’s Affairs Supportive Housing (VASH) supportive housing vouchers are available through the local housing authority. The Town will engage the Reading Housing Authority and the local VA to explore opportunities to obtain additional vouchers for veterans residing in Reading.

HUD-VASH is a collaborative program which pairs HUD’s Housing Choice Voucher (HCV) rental assistance with VA case management and supportive services for homeless Veterans. These services are designed to help homeless Veterans and their families find and sustain permanent housing and access the health care, mental health treatment, substance use counseling, and other supports necessary to help them in their recovery process and with their ability to maintain housing in the community.

Another opportunity to bolster housing for Reading veterans is through congregate housing. Veterans are a unique population with a variety of needs.

The Town can partner with a local veteran’s agency to investigate opportunities

around congregate housing with supportive services for local veterans.

Strategy 5: Build support for Community Preservation Act (CPA) adoption

Through the community engagement and public forum process it was determined as a goal that the Town should adopt the Community Preservation Act (CPA), which is a smart growth tool that helps communities preserve open space and historic sites, create affordable housing, and develop outdoor recreational facilities. CPA also helps strengthen the state and local economies by expanding housing opportunities and construction jobs for the Commonwealth's workforce, and by supporting the tourism industry through preservation of the Commonwealth's historic and natural resources.

Through this act the Town can create a [local Community Preservation Fund](#) for open space protection, historic preservation, affordable housing and outdoor recreation.

Community preservation monies are raised locally through the imposition of a surcharge of not more than 3% of the tax levy against real property, and municipalities must adopt CPA by ballot referendum.

The CPA statute also creates a statewide Community Preservation Trust Fund, administered by the Department of Revenue (DOR), which provides distributions each year to communities that have adopted CPA. These annual disbursements serve as an incentive for communities to pass CPA. Each CPA community creates a local Community Preservation Committee (CPC) upon adoption of the Act, and this five-to-nine member board makes recommendations on CPA projects to the community's legislative body.

Building support for CPA can be accomplished through community outreach, public forums, illustrating the impacts of CPA on other communities in Massachusetts, and project & plans that can be accomplished through adopting CPA.

A community can adopt CPA through two ways, through Legislative Body Action or Ballot Question Petition.

Ballot Question Process:

CPA can be adopted through passage of a ballot question at the voting booth. There are two ways that the question to adopt CPA can be placed on the ballot:

- The first method, used by roughly 2/3 of the current CPA communities, is a vote by the municipality's legislative body (Town Meeting or City or Town Council) to put the adoption question on the ballot.

- The second method requires a petition to be signed by at least 5 percent of the community's registered voters, requesting that the question be placed on the ballot.
- In either case, CPA must subsequently be approved by a simple majority of the voters in the community.

Legislative Body Action:

- This method of CPA adoption requires the municipal legislative body (Town Meeting or City or Town Council) to accept, by a simple majority, the provisions of the Community Preservation Act.
- The acts of the Town Meeting/City or Town Council are then referred for voter approval at the next regularly scheduled municipal election or general state election (November of even-numbered years), whichever comes first.
 - A CPA vote may not be scheduled for a special election.

CPA Accomplishments To-Date

- 194 communities have adopted CPA (55% of the Commonwealth's cities and towns)
- Of the total number of adopted communities, 35 are cities and 159 are towns
- 70% of Massachusetts residents live in a CPA community
- Over \$3.15 billion has been raised to date for community preservation funding statewide
- 15,069 CPA projects have been approved by local legislative bodies
- More than 10,000 affordable housing units have been created with an additional 16,000 units supported
- 34,204 acres of open space have been preserved
- Over 6,700 appropriations have been made for historic preservation projects
- Over 3,300 outdoor recreation projects have been initiated

Strategy 6: Maintain Housing Choice Initiative (HCI) designation for future grant and funding opportunities.

Housing Choice Designation is designed to be simple, flexible and achievable for municipalities. There are currently 85 communities that have achieved the designation. Municipalities participating in the Housing Choice Designation program are able to take advantage of new financial resources, including exclusive access to the Housing Choice Community Grants, and preferential treatment for many state grant and capital funding programs, including State Revolving Fund for Water and Sewer infrastructure, MassWorks, Complete

Streets, MassDOT capital projects, and PARC and LAND grants.

The Housing Choice Initiative works with local governments to expand housing production by providing new grants, coordinating technical assistance across various housing agencies, and promoting regulatory innovation.

The Housing Choice Initiative Addresses the following barriers:

- Inadequate housing production
- Skyrocketing housing costs in the metropolitan Boston area where rent prices rank among the highest in the country.
- Construction of a more diverse housing stock to support the growing economy and to provide our changing population with housing choices.
- Encourages municipalities to drive affordable housing to be built by utilizing their role in zoning and permitting. Cities and towns must be partners if the Commonwealth is to successfully overcome these housing challenges.
- Encourage adoption of best practices and zoning that support sustainable housing production that will reinforce our environmental agenda.
- Utilize the Housing Choice Initiative; as a multi-pronged effort to align resources and data to create a single point of entry for communities seeking assistance in increasing their supply housing.

The most crucial part of Housing Choice Initiative is the Housing Choice designation and grant program. The Administration has identified simple, flexible standards that are achievable (yet aspirational) to all municipalities. If a municipality qualifies for designation as a Housing Choice Community, it will get exclusive access to a grant program open only to Housing Choice Communities and get bonus points or other considerations to certain Commonwealth programs.

The application and guidelines can be found at the following website: [Housing Choice Designation Application | Mass.gov](#)

The Housing Choice Designation application opens each year in January and stays open for approximately 6 to 8 weeks, and the designation is valid for 5 years from the date of approval.

[Reading has maintained a Housing Choice designation and its current designation is valid until 2025.](#)

Strategy 7: Consider implementing Commercial Linkage Fees to help support affordable housing needs.

Commercial linkage fees are based on the link between new commercial development and the housing required to support new lower-income employees working in that new space. Revenue from linkage fees would then go to a fund to build affordable housing. These programs typically have different tiers based on the type of commercial development, each with a defined fee per square foot.

Commercial linkage fees work best in towns, cities or counties that are experiencing, or expect to experience, substantial commercial or residential growth. The fee is often justified as a way to meet the demand for housing caused by newly created jobs associated with this growth.

Linkage fees can be assessed on all new non-residential development, including retail centers, industrial or manufacturing facilities, and other commercial projects. These facilities stimulate the creation of jobs, but ordinarily do not include an affordable housing component for workers in low-wage jobs.

The need to meet the demand for affordable housing created by new growth provides the legal justification for charging linkage fees, which are used to preserve or create affordable housing near the jobs that are created. The fee amount is typically based on the square footage of the building, with proceeds deposited in a [housing trust fund](#) for disbursement in accordance with local needs and priorities.

Affordable housing impact fees function like linkage fees but are assessed on market-rate or luxury residential development on the assumption that an influx of new residents will generate increased demand for services and, in turn, low-wage jobs to fulfill that demand. The revenue from affordable housing impact fees can then be used to help provide housing affordable to these workers. Affordable housing impact fees may be assessed on a per-unit or per-square foot basis, typically with different rates for different housing types (single-family homes, townhomes or condominiums, rental apartments). The affordable housing impact fees and linkage fees can apply to all residential or commercial development, or only to certain development types.

For example: fees on residential development may be limited to homeownership units and not assessed on rentals. (Below-market developments are commonly exempt from affordable housing impact fees.)

- Municipalities can establish a minimum size threshold (e.g., 10,000 square feet for commercial developments or 15 units for residential projects) for new projects subject to the fee.
- Communities can choose to provide more targeted exemptions from fee liability, including the exclusion of certain types of space or certain neighborhoods.

Communities that assess linkage fees and affordable housing impact fees often deposit fee revenue in a new or existing affordable housing trust fund. In this case, the guidelines that govern trust fund allocations will determine eligible activities and how the proceeds are used. Depending on local goals, communities may also wish to establish other guidelines for how fee revenue is spent. Linkage fees are intended to help mitigate the mismatch between where people work and where they can afford to live, so local jurisdictions may require the revenue to be spent within a certain distance from the commercial development, or in areas with frequent public transit service.

Commercial linkage fees are best suited for areas with very strong development markets. Even where they are appropriate, calculating the fee requires careful market analysis.

Strategy 8: Develop strategy for locally-initiated development of affordable housing.

The Town will explore participation in the Local Initiative Program (LIP) to engage local developers to guarantee production of affordable housing units. Eligible applicants can be for-profit and/or non-profit developers working in concert with a city or town, as the town and developer jointly submit the application. Applications are submitted to the Department of Housing and Community Development (DHCD) following the process outlined on their website [Local Initiative Program | Mass.gov](https://www.mass.gov/local-initiative-program).

The LIP program encourages the creation of affordable housing by providing technical assistance to communities and developers who are working together to create affordable rental opportunities. This strategy would assist the Town with technical assistance and support in working with developers seeking to build single or multi-family homes, condos, or apartments where a certain percentage of the units are proposed to be affordable work with town officials to obtain approval. Such units must serve households below 80% of the area median income; the units must be subject to use restrictions to ensure that they remain in a community's affordable housing stock and must be sold or rented on a fair and open basis.

To maintain affordability LIP projects are subject to profit limitations. For homeownership projects, profit and developer fees to all partners and owners are limited to no more than 20 percent (20%) of the total development costs. For rental and cooperative housing projects, the LIP regulatory agreement, signed by the community, developer, and DHCD, limits distribution of return to all partners and legal or beneficial owners to a maximum of 10 percent (10%) equity per year during the time when the affordability restrictions are in place.

Strategy 9: Continue to catalogue, prioritize and target tax-foreclosed, foreclosed, and surplus public properties with development potential

Tax-foreclosed, foreclosed, and underutilized surplus public properties can have negative impacts on neighborhoods and municipal finance. These properties can be developed or reused as affordable, mixed-income housing and/or mixed-use development and can present opportunities for neighborhood improvement.

The Town has been tracking such properties and should continue to do so to identify properties with development potential for town acquisition and/or or a cooperative effort with non-profit partners.

In addition, the Town should adopt a tax title disposition plan or policy that lays out a process for town officials, including the Treasurer, to work collaboratively to foster development/reuse for affordable housing of appropriate properties. Property acquired in tax title foreclosure can be disposed of under Chapter 60 by auction or under Chapter 30B when the tax title custodian transfers the property to another municipal agency (including an Affordable Housing Trust). Such a property disposition through Chapter 30B can specify that the property be developed within a time frame and for a specific purpose, including affordable housing.¹¹

~~Current Tax Title Inventory: As of October 2017, the town had three tax title properties with existing single family houses that could have potential for conversion to affordable units (9 Swan Road, 179 Pearl Street, and Brook Street/Redfield Road).~~

Public Property: There are roughly 332 acres of state land including Camp Curtis Guild (25 River Road) with 291 acres (part of which ~~is underwas~~ previously consideration considered for use as a new DPW garage). ~~The property will require further study to determine if there are environmental constraints or contamination.~~ State land also includes a property at 9 Causeway Road (lot 31-9) with 4.7 acres. In addition, the Town declared an approximately 4.3-acre parcel on Oakland Road (near the Reading High School) as surplus in April 2017 and has proposed a concept of a combination of Affordable and Senior housing on-site. The ~~Board of Selectmen~~ Select Board will establish a fully public process to help determine the future disposition of the land; many options for development or use of this parcel are possible.

Commented [MA23]:¹¹ Source: CHAPA, *Back on the Roll in Massachusetts: A Report on Strategies to Return Tax Title Properties to Productive Use*, 2000.

Commented [MA24]: Assessing prefers we do not go to this level of detail as it is a bit more complicated. There are numerous tax title properties but not foreclosed.

Strategy 10

Consider tax incentives for inclusion of deeply (i.e. 50% AMI) affordable units.

The Town will explore what other communities in the region have done or existing programs that have been created to incentivize developers to include deeply affordable units as part of new or existing housing developments. The Town will engage other municipalities to inquire about best practices and to develop the framework for a plan for Reading. The Town could offer an array of incentives such as:

Tax Increment Financing (TIF): a public financing method that is used as a subsidy for redevelopment, infrastructure, and other community-improvement projects. The intent of a TIF program is to stimulate private investment in an area that has been designated to be in need of development or revitalization. Through the use of TIF, municipalities typically divert future property tax revenue increases from a defined area or district toward an economic development project or public improvement project in the community. TIF subsidies are not appropriated directly from a municipalities budget, but the municipality incurs loss through forgone tax revenue.

District Improvement Financing (DIF): The town can establish a funding stream for economic development activities that is linked to, and derived from, the results of economic development. DIF is a locally enacted tool that enables a municipality to identify and capture incremental tax revenues from new private investment in a specific area and direct them toward public improvement and economic development projects. DIF is not a new tax or special assessment, and it does not increase a municipality's tax rate.

A DIF Guide and accompanying resources have been created to help towns and cities in Massachusetts evaluate whether DIF is an appropriate tool for their economic development goals.

These resources provide further information, examples, and technical advice about assembling a DIF and creating a path to adoption and implementation and are available on Mass Developments website: [District Improvement Financing \(massdevelopment.com\)](https://www.massdevelopment.com).

Affordable Housing Tax Rate: The Town could also explore a special affordable housing tax rate where affordable housing properties would be taxed at a set percentage of the project's gross rental income from the previous year, a stabilization mechanism that paves the way for long-term affordability.

Strategy 11: Plan for cases of emergency housing needs.

In recent years there have been several instances where emergency housing has been severely needed in Reading. Through these emergencies the Town recognized how scarce emergency

housing resources and units are. In those situations the Town was able to mobilize fairly quickly and rally up a team of partners to assist affected residents. The Town would like to create a more permanent Emergency Housing Task Force that would provide residents who have been displaced in emergency situations i.e., fire, flood, utility malfunctions that would render their unit uninhabitable with temporary housing and support services. The Town will engage community partners such as local lenders, Salvation Army and other community groups to set aside funds and locations to assist individuals who have lost their housing.

Leadership, Partnership & Education Strategies

Leadership, Partnership & Education Strategies

Strategy 1: Foster partnership initiatives with landlords to upgrade existing apartment complexes and convert to affordable apartments.

Reading has a significant stock of rental units in older, mid-size to larger rental complexes of 20+ units. About 40 percent (777) of rental units are in buildings with 20+ units.¹⁴ Of these units, about 38 percent are in older buildings that were constructed prior to 1980.¹⁵ Community workshop participants supported upgrading older apartment complexes and converting more market-rate rental units to affordable units that would count on the SHI. The Town could work to foster and support private landlords to upgrade and convert some of their existing units to affordable apartments.

The Town could target local funds (e.g., AHTF) to work with private partners to purchase, upgrade, and convert. The Town could release a Notice of Fund Availability (NOFA) or Request for Proposals (RFP), in accordance with MGL c.30B, to seek proposals from private developers or existing property owners to upgrade the complex and units in return for long-term affordability restrictions.

In addition, the Town/AHTF could work collaboratively with property owners and non-profit organizations to encourage use of the state's new Donation Tax Credit for property donations to non-profit organizations to convert existing buildings to affordable units. As part of the [Act Relative to Job Creation and Workforce Development \(H.4569\)](#), the state created the Donation Tax Credit that provides a credit against Massachusetts income tax liability for property owners who donate existing housing properties or other structures for the conversion of housing to qualified non-profits that commit to long-term affordability. The credit is worth 50 percent of the donated value but may be increased to 65 percent by DHCD. Perhaps in Reading this tax credit could help to encourage conversion of market-rate apartment complexes to affordable units.

Strategy 2: Seek proposals from private developers or property owners to upgrade developments or units in return for long-term affordability restrictions.

The Town may issue an RFP open to developers and property owners to provide incentives in exchange for long-term affordability on units. The Town can explore ways to provide funding or a tax incentive to developers and property owners in order to guarantee long term affordability. The owner or developer would sign a recorded document upon receipt of funding or a tax incentive that would enforce the affordability restriction and the period of affordability on such units.

Strategy 3: Maintain and continue to build Interested Buyers List

The MNRHSO currently tracks and maintains a list of buyers interested in purchasing affordable ownership units in its five member communities. Inquiries come in through a variety of channels, phone calls, e-mail messages, walk-ins, and website inquiries to

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Commented [MA27]: ¹⁵ 2012-2016 ACS, B25127: Tenure by Year Structure.

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name a few. Many of the interested buyers are open to units in any of these communities when available. This tracking also includes whether or not the potential buyer has been pre-approved by a lender. When a unit becomes available or there is an upcoming lottery buyers on the waiting list are notified of the opportunity and asked about their interest in the property. If a buyer is interested their contact information is then shared with the lottery agent for that development to begin the application process. MNRHSO intends to continue to maintain this list and refer interested buyers to down payment assistance programs, mortgage lenders and homebuyer education classes.

Strategy 4: Work in cooperation with community partners to promote enhanced public understanding of housing needs and creation of affordable housing opportunities

The Town, working with community partners, will create a plan to expand community outreach and education efforts by initiating a public awareness campaign to build and maintain support for local affordable housing initiatives. Towards that end, the Metro North Regional Housing Services Office could help with this effort by clearly articulating the unmet local housing needs, perhaps through creation of infographics to include in brochures, posters, and online.

In addition, the Town could solicit the assistance of other organizations to help with this effort, such as the Reading Clergy Associations or other groups invested in issues related to affordable housing.

As part of this effort, the Town and Metro North Regional Housing Services Office could consult a variety of publications exploring a variety of concerns and debunking myths related to multifamily housing development and density. For example, the Massachusetts Housing Toolbox may provide ideas to help gain support and address fears of new development, specifically around affordable housing initiatives, including strategies for community engagement and dispelling misperceptions: <https://www.housingtoolbox.org/>

There are multiple organizations working to create or preserve affordable housing and to provide needed services in Reading and the region such as Habitat for Humanity and Mystic Valley Elder Services. The Town has established strong dialogue with these organizations and should continue to have regular dialogue with non-profit entities to promote the creation of affordable housing opportunities, possibly in combination with fostering local initiative projects, as described earlier in this section.

Strategy 5: Continue to support the work of the Metro North Regional Housing Services Office

The Town of Reading is the host town for the Metro North Regional Housing Services Office (MNRHSO). The MNRHSO includes the towns of Reading, North Reading, Wilmington, Woburn and Saugus. The MNRHSO provides affordable housing support and information to

Commented [NL29]: Are there any other local housing developers/providers that we can also partner with?

member communities and citizens looking to live in our region. Its primary task is monitoring the more than 3,800 units in the five-member towns with the mission of expanding low- and moderate-income housing options and ensuring that owners of affordable properties are in compliance with their restrictions.

The MNRHSO maintains a website with useful information for current and future residents of the member towns including housing opportunities, refinancing instructions, and current inventory presentations. Their website is www.mnrhso.org.

Strategy 6: Continue public engagement and education on regional/local housing needs.

By expanding community outreach and education practices the Town can better help residents understand the regional housing need and how such impacts the local area. Initiating a public awareness campaign to build and maintain support for local affordable housing initiatives, whether locally initiated or private development, is recommended. By clearly articulating the unmet housing needs through infographics, brochures, online information, etc. support can be built. Improved outreach practices to vulnerable residents and geographies should be planned for and prepared. This may include specific working group meetings, language translation services and opportunities to partner with local and regional organizations should also be sought to help. For example, the Citizen’s Housing and Planning Association (CHAPA) programs the **Municipal Engagement Initiative (MEI) Lite Community Program** to build support for affordable housing production across the State.

Commented [MA30]: <https://www.chapa.org/about/programs/municipal-engagement-initiative>

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The Table below shows the relationship between the Goals and Strategies. Some strategies address multiple goals. All goals are addressed by at least one strategy.

	Goal 1: Create SHI Units	Goal 2: Support Residents	Goal 3: Preserve Units	Goal 4 Manage Growth	Goal 5: Rental Support	Goal 6: Education and Relationships
Strategy 1: Encourage mixed-use development in the Priority Development Areas by considering adoption of various regulatory tools	*			*		
Strategy 2: Adopt an Inclusionary Zoning bylaw	*			*		
Strategy 3: Amend the Zoning Bylaw to explicitly permit congregate housing	*	*				
Strategy 4: Provide necessary support for 40R, 40B/Comprehensive and Local Permit applications.	*					
Strategy 5: Seek opportunities for locally-initiated development of affordable housing	*			*		*
Strategy 6: Strengthen the Affordable Housing Trust with additional sources of revenue and further collaboration	*	*	*		*	*
Strategy 7: Explore creation of a First-Time Homebuyer Program	*					
Strategy 8: Identify existing houses with potential for conversion to congregate housing	*	*				*
Strategy 9: Seek funding to create a local aging-in-place program		*				
Strategy 10: Foster partnership initiatives with landlords to upgrade existing apartment complexes and convert to affordable apartments	*				*	*
Strategy 11: Work in cooperation with community partners to promote enhanced public understanding of housing needs and promote creation of affordable housing	*					*
Strategy 12: Continue to support the work of the Metro North Regional Housing Services Office						*

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Action Plan

The Reading Public Services Department, specifically the Planning Division, having spearheaded this planning effort, will be the natural entity to oversee all aspects of its implementation and to provide regular updates on progress to the Board of Selectmen and Community Planning and Development Commission. The matrix below provides more specific assignment of responsible entity, supporting entity, and timeframe to implement the housing strategies.

Housing Strategies					Responsible Entity	Supporting Entities
	FY2018	FY2019	FY2020	FY2021		
Strategy 1: Encourage mixed-use development in the Priority Development Areas by considering adoption of various regulatory tools					CPDC Town Meeting	Planning Division
Strategy 2: Adopt an Inclusionary Zoning bylaw					CPDC Town Meeting	Planning Division
Strategy 3: Amend the Zoning Bylaw to explicitly permit congregate housing					CPDC Town Meeting	Planning Division
Strategy 4: Provide necessary support for 40R, 40B/Comprehensive and Local Permit applications.					Planning Division	Boards, Committees & Commissions
Strategy 5: Seek opportunities for locally initiated development of affordable housing					BOS RHA	Planning Division
Strategy 6: Strengthen the Affordable Housing Trust Fund with additional sources of revenue and further collaboration					BOS Town Meeting Town Manager	RHA
Strategy 7: Explore creation of a First Time Homebuyer Program					Planning Division	Local banks
Strategy 8: Identify existing houses with potential for conversion to congregate housing					Planning Division	State
Strategy 9: Seek funding to create a local aging in place program					Planning Division Human Elder Services Division	BOS Council on Aging
Strategy 10: Foster partnership initiatives with landlords to upgrade existing apartment complexes and convert to affordable apartments					Planning Division Town Manager	State
Strategy 11: Work in cooperation with community partners to promote enhanced public understanding of housing needs and promote creation of affordable housing					Planning Division	Community Partners
Strategy 12: Continue to support the work of the Metro-North Regional Housing Services Office					Planning Division Town Manager	Town Meeting BOS

AHT= Affordable Housing Trust
 CPDC= Community Planning and Development Commission
 BOS = Board of Selectmen

Appendices

Housing Profile

Reading, MA Housing Profile

Summary of Housing Needs & Demand

POPULATION & HOUSEHOLDS (Census)

- As of the 2010 US Census, the population of Reading is 24,747, an increase of 4.4% since 2000.
- In 2010, the largest age group of Reading's population was 35-54 year olds (35% of total population).
- Between 2000-2010, population change by age groups was:
 - 0-9 years old decreased by 4.8%
 - 10-19 years old increased by 6.6%
 - 20-24 years old increased by 26.9%
 - 25-34 years old decreased by 8.9%
 - 35-59 years old increased by 3.8%
 - 60-74 increased by 17.1%
 - 75+ increased by 12.6%
- As of the 2010 Census, 35.9% of Reading's 9,305 households (a household consists of all those occupying one housing unit), have children under 18 years old, and 26.3% have persons age 65+.
- The median age increased from 39.1 years old in 2000 to 41.6 years old in 2010.
- Racial make-up is predominantly white, with 93.5% of the population; 4.2% of the population is Asian; 1.5% of the population is Hispanic or Latino.
- 9% of Reading's total population and 37.2% of Reading's 65+ population reports having one or more disabilities.

HOUSEHOLD INCOME & COST OF HOUSING

- In 2015, Reading's median household income was \$107,654; a 39.7% increase from 1999, and significantly more than the Boston-Cambridge-Quincy Metro Area (\$98,500) or the state as a whole (\$68,563). (ACS)
- An estimated 26.3% of Reading households have incomes at or below 80% of AMI. (CHAS)
- 2.8% of Reading's population is below the poverty line (annual income below \$24,600 for a household of 4), much lower than Middlesex County (8.4%) and Massachusetts (11.6%). (ACS)
- The 2016 median price of single family homes in Reading was \$525,000. The 2016 median price of all homes, including condos, was \$479,600. After a dip in prices during the national recession in the mid-2000's, housing prices have been rising steadily since 2012 and are now the highest they have ever been. (Warren Group)
- Of the 7,405 of Reading households who own their homes, 29.4% are cost-burdened (spending over 30% of their income on housing), while 33.1% of Reading's renters cost-burdened. 71% of Reading's low-income households are cost-burdened. (CHAS)
- A recent survey of available rentals on Trulia.com shows a median rent in Reading of \$2,100. The Census reports a median gross rent in Reading of \$1,282.

HOUSING SUPPLY (Census & ACS)

- The 2011-2015 ACS reports that of Reading's 9,168 occupied housing units, 78.2% are owner occupied and 21.8% renter occupied.
- The number of owner-occupied units increased by 83 while the number of rental units increased by 534 between 2000 and 2010.
- The Town's housing stock remains primarily single-family at 74.8% of total housing units. 7.5% of units are in two to four family buildings, 7% of units in 5-19 unit buildings, and 10.6% of units in multi-family buildings with 20 or more units.

AFFORDABILITY (DHCD Sales Price Calculator, Trulia.com, CHAS)

- 8.78% (841 units) of Reading's total housing stock is counted as affordable on the State's Subsidized Housing Inventory (SHI), which falls short of the State's minimum affordability goal of 10%.
 - A low-income 3-person household earning 80% of the Area Median Income (AMI) could roughly afford a home that costs \$262,000 or a monthly rent of \$1,760. There are 780 Reading households (8.4%) who earn 80%-100% AMI and Trulia.com (as of September 2017) shows that there are 2 homes (both small condos) for sale in Reading under \$300,000. There are 3 rental units at this rent.
 - Reading's 2016 median sale price of \$525,000 requires an annual income of approximately \$140,918, over \$33,000 higher than Reading's median household income of \$107,654.
 - Based on the median sale price, Reading's ownership affordability gap is \$125,000 for median income households, and \$263,000 for low income households. Based on current median rents, Reading rentals are out of reach for low-income households. In addition, there are not very many rentals available.
- ### AFFORDABLE HOUSING STOCK (DHCD SHI & CHAS)
- There are 841 units listed on the SHI, 91 ownership and 750 rental units.
 - Most (87) of the affordable ownership units were built through the Local Initiative Program (LIP) – 34 units, or through Chapter 40R permits as part of smart growth zoning districts – 53 units.
 - Of the 750 rental units on the SHI, 325 are family units, 268 are age-restricted, 71 are supportive housing units for people with disabilities, and 86 are assisted living units.
 - Only 109 of the family rental units are affordable to households earning 80% or less of the AMI; the rest are market-rate units.
 - Approximately 2,445 households (26.3% of total households) are eligible for affordable housing, but there are only 570 housing units in Reading restricted for households at or below 80% of AMI.

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The Bottom Line: Reading has grown since 2018, with increases in population, the number of households, and housing units. In particular, the growth of the 65+ population and is projected to continue. Reading's median income has risen significantly, but nearly 1/4 of the population is low-income, and 29.1% of households are housing cost-burdened. Much of Reading's housing stock is out of reach for lower income households. There is a need for more affordable housing.

Income Limits (2022)

Published Annually by Housing and Urban Development (HUD)

FY 2022 Income Limit Area	Median Family Income Click for More Detail	FY 2022 Income Limit Category	Persons in Family							
			1	2	3	4	5	6	7	8
Boston-Cambridge-Quincy, MA-NH HUD Metro FMR Area	\$140,200	Very Low (50%) Income Limits (\$) Click for More Detail	49,100	56,100	63,100	70,100	75,750	81,350	86,950	92,550
		Extremely Low Income Limits (\$)* Click for More Detail	29,450	33,650	37,850	42,050	45,450	48,800	52,150	55,550
		Low (80%) Income Limits (\$) Click for More Detail	78,300	89,500	100,700	111,850	120,800	129,750	138,700	147,650

Sources:

- 2020 Federal Census (Census)
- 2015-2019 American Community Survey (ACS)
- 2015-2019 Comprehensive Housing Affordability Strategy (CHAS) Data
- Massachusetts Association of Realtors
- Metropolitan Area Planning Council (MAPC) Demographic Profiles
- Zillow, Zillow.com
- The Donahue Institute at University of Massachusetts
- HUD.gov – HUD Exchange

Key to Abbreviations:

- AMI: Area Median Income set by the Federal Department of Housing and Urban Development
- DHCD: MA Department of Housing and Community Development
- SHI: MA Subsidized Housing Inventory

Interagency Policy

INTERAGENCY AGREEMENT

Regarding Housing Opportunities for Families with Children

This Interagency Agreement (this "Agreement") is entered into as of the 17th day of January, 2014 by and between the Commonwealth of Massachusetts, acting by and through its Department of Housing and Community Development ("DHCD"), the Massachusetts Housing Partnership Fund Board ("MHP"), the Massachusetts Housing Finance Agency (in its own right and in its capacity as Project Administrator designated by DHCD under the Guidelines for Housing Programs in Which Funding is Provided By Other Than a State Agency, "MassHousing"), the Massachusetts Development Finance Agency ("MassDevelopment") and the Community Economic Development Assistance Corporation ("CEDAC"). DHCD, MHP, MassHousing, MassDevelopment and CEDAC are each referred to herein as a "State Housing Agency" and collectively as the "State Housing Agencies".

Background

A. DHCD's 2013 Analysis of Impediments to Fair Housing Choice ("AI") includes action steps to improve housing opportunities for families, including families with children, the latter being a protected class pursuant to fair housing laws, including the federal Fair Housing Act, as amended (42 U.S.C. §§ 3601 *et seq.*) and Massachusetts General Laws Chapter 151B. In order to respond to development patterns in the Commonwealth that disparately impact and limit housing options for families with children, such steps include requiring a diversity of bedroom sizes in Affordable Production Developments that are not age-restricted and that are funded, assisted or approved by the State Housing Agencies to ensure that families with children are adequately served.

B. The State Housing Agencies have agreed to conduct their activities in accordance with the action steps set forth in the AI.

C. This Agreement sets forth certain agreements and commitments among the State Housing Agencies with respect to this effort.

Definitions

1) "Affordable" - For the purposes of this Agreement, the term "Affordable" shall mean that the development will have units that meet the eligibility requirements for inclusion on the Subsidized Housing Inventory ("SHI").

2) "Production Development" - For purposes of this Agreement "Production Development" is defined as new construction or adaptive reuse of a non-residential building and shall include rehabilitation projects if the property has been vacant for two (2) or more years or if the property has been condemned or made uninhabitable by fire or other casualty.

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Agreements

NOW, THEREFORE, DHCD, MHP, MassHousing, MassDevelopment and CEDAC agree as follows:

Bedroom Mix Policy

1) Consistent with the AI, it is the intention of the State Housing Agencies that at least ten percent (10%) of the units in Affordable Production Developments funded, assisted or approved by a State Housing Agency shall have three (3) or more bedrooms except as provided herein. To the extent practicable, the three bedroom or larger units shall be distributed proportionately among affordable and market rate units.

2) The Bedroom Mix Policy shall be applied by the State Housing Agency that imposes the affordability restriction that complies with the requirements of the SHI.

3) The Bedroom Mix Policy shall not apply to Affordable Production Developments for age-restricted housing, assisted living, supportive housing for individuals, single room occupancy or other developments in which the policy is not appropriate for the intended residents. In addition, the Bedroom Mix Policy shall not apply to a Production Development where such units:

- (i) are in a location where there is insufficient market demand for such units , as determined in the reasonable discretion of the applicable State Housing Agency; or
- (ii) will render a development infeasible, as determined in the reasonable discretion of the applicable State Housing Agency.

4) Additionally, a State Housing Agency shall have the discretion to waive this policy (a) for small projects that have less than ten (10) units and (b) in limited instances when, in the applicable State Housing Agency's judgment, specific factors applicable to a project and considered in view of the regional need for family housing, make a waiver reasonable.

5) The Bedroom Mix Policy shall be applicable to all Production Developments provided a Subsidy as defined under 760 CMR 56.02 or otherwise subsidized, financed and/or overseen by a State Housing Agency under the M.G.L. Chapter 40B comprehensive permit rules for which a Chapter 40B Project Eligibility letter is issued on or after March 1, 2014. The policy shall be applicable to all other Affordable Production Developments funded, assisted, or approved by a State Housing Agency on or after May 1, 2014.



Town of Reading



Housing Production Plan Public Forum

January 9, 2023

WELCOME!

Opening Remarks & Acknowledgments



Agenda and Objectives

1. What is a Housing Production Plan
2. Where are we in the process
3. Survey Results
4. SHI additions since 2018 plan
4. Closing Remarks + Next Steps



What is a Housing Production Plan

An HPP is a community's proactive strategy for planning and developing affordable housing. An HPP accomplishes the following for a municipality:

- 1) Creates a strategy to enable it to meet its affordable housing goals**
 - 2) Produces housing units in accordance with the HPP.**
 - 3) Each community in Massachusetts is required to meet a goal of 10% of all housing units to be dedicated as affordable to those earning 80% AMI or less**
 - 4) Allows community participation in planning for the future**
 - 5) Must be updated every 5 years**
 - 6) Reviewed and approved by DHCD**
-

An HPP serves as the community's proactive strategy in determining the type and pace of housing growth.

- Identifies housing needs in the community and identifies sites for development, the community will be providing guidance and direction for the types of development most responsive to local conditions;
 - The HPP can serve as the housing element of an overall comprehensive plan (“master plan”) and/or capital improvement plan that may be required as a companion to the HPP in order to attract the types of development and housing opportunities the community needs; and
-

There are many advantages for a community to create an HPP.

It provides an opportunity to understand current housing conditions and then to determine both the projected housing needs of both the current population and the growth/change in composition of the population

(e.g. more families, more elders).



For example:

Are there enough “starter homes” for those forming new households?

Is there adequate workforce housing?

What are the options in the community for empty nesters?

How are the needs of the elderly being met?

Are there options for residents with physical and mental disabilities?

Are there options for both rental and home ownership?

SHI Units Developed Since 2018

	Development	Address	Total # of Units	SHI Affordable Units (80%)	Ownership	Rental
	Reading Village (The Metropolitan)	31-41 Lincoln Street	68	17 (@ 80% AMI)		X
	Schoolhouse Commons	172-180 Woburn Street	20	4 (@ 50% AMI)		X
	Postmark Square (The Postmark)	8 Sanborn Street	10	10 (@ 80% AMI)	X	
	Ace Flats	20-24 Gould Street	55	14 (@80% AMI)		X
	Rise475	467 Main Street	31	8 (@ 80% AMI)		X
<i>construction TBD</i>	<i>Chute Street</i>		29	8 (@ 80% AMI)		X
<i>under construction/permitted</i>	<i>Easton Lakeview</i>		74 Rental	19 (@ 80% AMI)		X
<i>under construction/permitted</i>	<i>Easton Lakeview</i>		12 Owner	3 (@ 80% AMI)	X	
	<i>3 ownership units should be added back to SHI, RNUF has been submitted</i>					
<i>under construction</i>	<i>Johnson Woods Phase II</i>		<i>6 more ownership units to add when Cos issued</i>		X	

Comprehensive Housing Needs Assessment

Demographic and housing stock data & projections

Development constraints & limitations

Capacity for growth & Plan to mitigate development constraints

Affordable Housing Goals

Numerical goal for annual housing production

Assessment of types of housing needed

Implementation Strategies

Identification of specific sites for future development

Identification of zoning and/or policy changes

Public Forums

October 24, 2022 – Hybrid session at
Public Library

November 29, 2022 – Zoom meeting

January 9, 2023 – CPDC Meeting –
Hybrid

January 10, 2023 – Select Board -
Hybrid

Forums are recorded and are available on the Town's
website

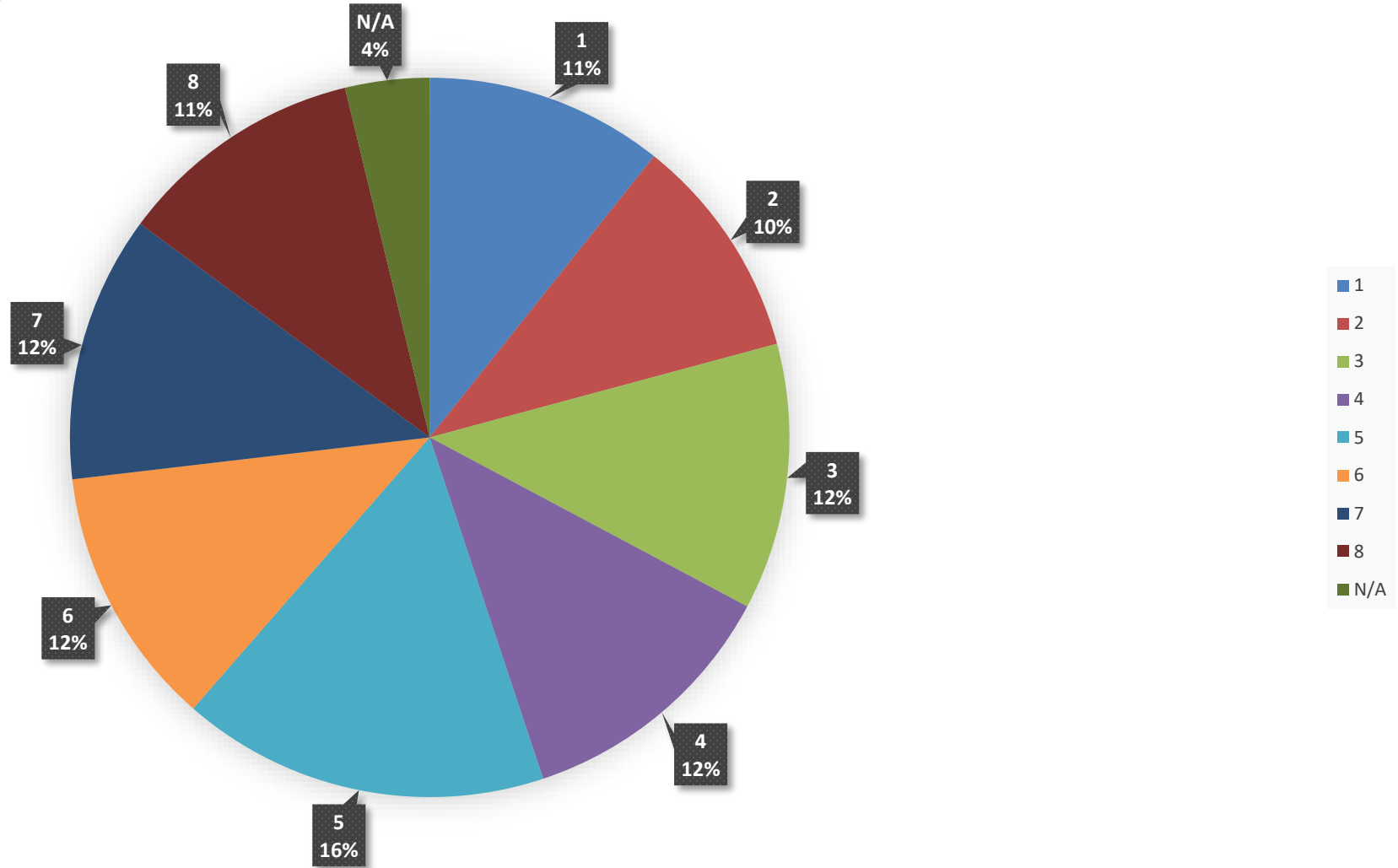
Needs Assessment Findings/Survey & Feedback Takeaways



**Final Survey Results as of
November 18, 2022 5:00 p.m.**

793 Responses

Responses per Precinct



Reading By the Numbers



92.74% of respondents identify as Caucasian

52.4% of respondents identify as Female

54.45% of respondent households make over \$150,000 p/yr

95.8% of respondents are Non-Veterans

89.17% of respondents Own their Home

80.34% of Home-Owners live in Single Family Homes

59.61% of Home-Owners currently have a mortgage

65.78% of respondents plan to stay in their current home as they age

The Most common household sizes were – 2 persons at 35.27% and 4 persons at 23.26%

Out of all 793 Respondents the following information highlights some demographic data

Reading Statics Overview



Total Population: 25,510

Total Households: 9,952



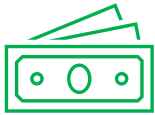
Homeowners: 84.6%

Renters: 15.4%



2 Bedroom FMR: \$2,635

Annual Income Needed to Afford 2 Bedroom
FMR Rent: \$105,400



Median Household Income - \$133,300



Median Single- Family Home Sales Price - \$825,500

Monthly Payment for Median Priced Home - \$4,242

Annual Income Needed to Afford Median Sales Price - \$150,000*

(*to avoid being cost burdened)

Affordable Purchase Price Calculation Assumptions

Interest Rate – 3.5%

Down payment – 3.5% down

Taxes - \$5,000

Debt - \$500 month

Insurance - \$2,000 year

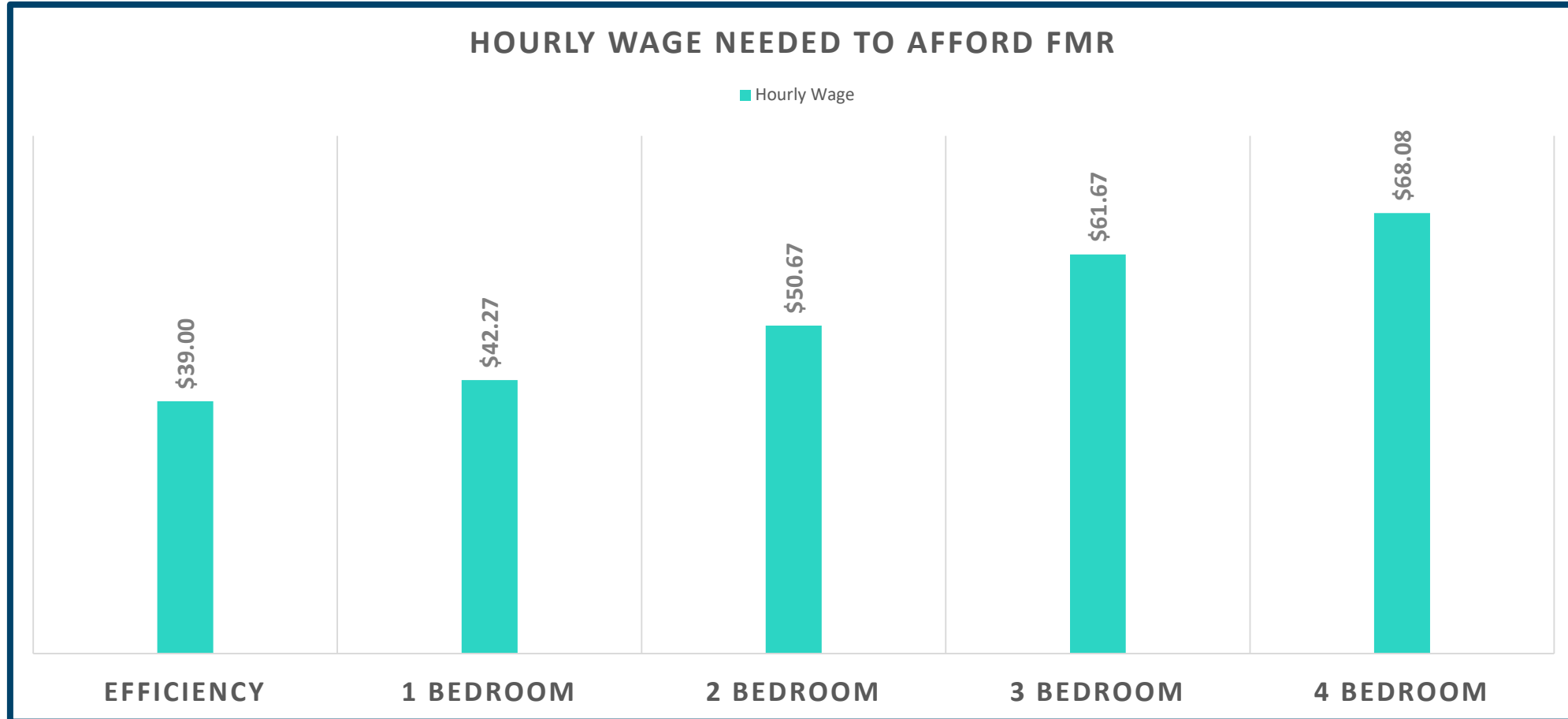
HUD Fair Market Rents (FMR) for 2023:

Final FY 2023 FMRs By Unit Bedrooms				
<u>Efficiency</u>	<u>One-Bedroom</u>	Two-Bedroom	<u>Three-Bedroom</u>	<u>Four-Bedroom</u>
\$2,025	\$2,198	\$2,635	\$3,207	\$3,540

Actual Rents in Reading (based on units listed for rent as of 8/31/2022)

Bedroom size	Median Rent
1-bedroom units (1 listings)	\$2,667
2-bedroom units (7 listings)	\$3,300
3-bedroom units (6 listings)	\$4,000

Hourly Wages Needed to Afford FMR in Reading



Assumptions: HUD Fair Market Rent for each unit size
Does not include utilities
Rent calculated using 30% of income

Affordable Purchase Prices by Income Level

Income Level	Income	Affordable Purchase Price	Estimated Affordable Monthly Payment	Gap +/- from Median Sales Price	2022 Median Sales Price	Estimated Monthly Mortgage Payment for Median Priced Home
Reading Median Income	\$133,300	\$567,002	\$3,018	\$258,498	\$825,500	\$4,242
Low Income (80 AMI%) <small>(3-person HH)</small>	\$100,700	\$431,812	\$2,378	\$393,688		
Very Low Income (50 AMI%) <small>(3-person HH)</small>	\$63,100	\$257,342	\$1,551	\$568,158		

Affordable Purchase Price Calculation Assumptions
Interest Rate – 3.5%
Down payment – 3.5% down
Taxes - \$5,000
Debt - \$500 month
Insurance - \$2,000 year

In General Respondents Support the Following Methods to Develop Affordable Housing:

Rehabilitation of Vacant/Foreclosed Property

Development of Town Owned Land

Development of Mixed-Use Buildings

In General Respondents Support the Following Types of Development:

Single Family Housing

Two-Family Housing

55+ Communities

Assisted Living/Senior Housing

Accessory Dwelling Units/In-Law Apartments





Goals & Strategies

Goals & Strategies

Three Area's of Focus:

- Regulatory and Development
 - Zoning, Regulations, Development Tools, Geography, etc.
 - Funding and Resources
 - Revenue Sources, Support, Incentives, Opportunities/Use, etc.
 - Leaderships, Partnerships and Education
 - Collaborations, Trainings, Inclusivity, Programming, etc.
-

Regulatory and Development Strategies

1

Adopt/Amend zoning that would comply with MBTA Communities legislation

2

Identify Zoning Districts/geographies in which current regulations can be modified to allow the development of SHI eligible housing units

3

Strengthen and expand Inclusionary Zoning to further promote/develop affordable housing opportunities

4

Amend Zoning Bylaw to define and permit congregate housing. Identify existing sites with the potential to convert to congregate housing use.

5

Allow for redevelopment or conversion of pre-existing non-conforming residential uses by-right/make permitting path of such easier

6

Consider zoning amendments to allow Accessory Dwelling Units by-right and/or lessen restrictions

Regulatory and Development Strategies

7. Continue

Continue to provide technical support for 40R, 40B and Local Permit applications

8. Preserve

Preserve existing affordable housing stock to ensure they remain affordable and qualify for SHI.

9. Maintain

Maintain Safe Harbor designation by maintaining, tracking and continuing affordable developments to achieve 10% SHI target.

10. Enhancement

Require through regulations items such as Open Space, connectivity, energy efficiency, transit-oriented development.

Affordable Housing Funding and Resources Strategies

Develop/ Enhance	First-Time Homebuyer Program w/ RHA and local institutions
Strategize	Use of Affordable Housing Trust Fund and how to increase revenue sources
Seek	Funding and opportunities to support local aging-in-place program/support
Investigate	Opportunities to provide/increase Veteran's Affairs Supportive Housing Vouchers



Affordable Housing Funding and Resources Strategies

Build	Build support for Community Preservation Act adoption to strengthen local finances
Maintain	Maintain Housing Choice Initiative status for future grant and funding opportunities
Consider	Consider implementing Commercial Linkage fees to fund affordable housing needs
Develop	Develop strategy to developing additional affordable units off-site
Consider	Consider tax incentives to develop deeply affordable homes
Plan	Plan for cases of emergency housing needs



Leadership, Partnership, & Education Strategies

01

Foster partnership initiatives with landlords to upgrade existing apartment complexes and convert to affordable apartments

02

Seek proposals from private developers or property owners to upgrade developments or units in return for long-term affordability restrictions.

03

Maintain and continue to build Interested Buyers List

Leadership, Partnership, & Education Strategies

4. Continue

Continue public engagement and education on housing needs

5. Continue

Continue to support the work of the Metro North Regional Housing Services Office (MNRHSO)

6. Collaborate

Collaborate with community organizations

Q&A



NEXT STEPS

Contact Us!

Andrew MacNichol: amacnichol@ci.reading.ma.us





Town of Reading
16 Lowell Street
Reading, MA 01867

Andrew MacNichol
Community Development Director
Phone: 781.942-6670
Fax: 781.942-9071
Website: www.readingma.gov

February 6, 2023

Minor Site Plan Review

DECISION

Project/Site: 0 Birch Meadow Drive – Birch Meadow Park

To the Town Clerk:

This is to certify that, at a meeting of the Community Planning and Development Commission, opened on December 12, 2022, continued to January 9, 2023 and closed on XXX, by a motion duly made and seconded, it was voted:

“We, the Reading Community Planning and Development Commission, upon request from Activitas, Inc., on behalf of the Town of Reading, for Minor Site Plan Review for the property located at 0 Birch Meadow Drive (Assessors Map 33, Lots 52, 56, 57, and 91) for an increase of over 500 square feet of Gross Floor Area in new floor area, an increase in impervious area and associated parking improvements, as presented in the application materials enumerated below, do hereby vote XXX, to [REDACTED] the project under Minor Site Plan Review in accordance with Section 4.6.3 of the Reading Zoning Bylaw, subject to the Findings and Conditions below.”

Materials Submitted:

The following materials were submitted into the public record:

1. Certified Abutters List, dated 11/23/22;
2. Minor Site Plan Review Courtesy Notice of Public Meeting to Abutters;
3. Minor Site Plan Review Application, received 11/30/22;
4. Project Narrative, prepared by Activitas Inc., dated 11/30/22;
5. Civil Plan Set Birch Meadow Park Phase I Renovations, prepared by Activitas Inc., prepared for the Town of Reading, and including:
 - a. Cover Sheet and Locus Map, dated 1/27/23;
 - b. Sheet One: Topographic Survey, prepared by Reed Land Surveying, Inc., dated 7/28/22;
 - c. Sheet Two: Topographic Survey, prepared by Reed Land Surveying, Inc., dated 7/28/22;
 - d. Sheet L0.1: Key Plan Sheet, dated 1/27/23;
 - e. Sheet SP1.1: Site Preparation Sheet One, dated 1/27/23;
 - f. Sheet SP1.2: Site Preparation Sheet Two, dated 1/27/23;
 - g. Sheet SP1.3: Site Preparation Detail Sheet, dated 1/27/23;
 - h. Sheet L1.1: Layout and Materials Plan Sheet One, dated 1/27/23;
 - i. Sheet L1.2: Layout and Materials Plan Sheet Two, dated 1/27/23;

- j. Sheet L2.1: Grading and Utility Plan Sheet One, dated 1/27/23;
 - k. Sheet L2.2: Grading and Utility Plan Sheet Two, dated 1/27/23;
 - l. Sheet L2.3: Grading and Utility Detail Sheet, dated November 2022;
 - m. Sheet L3.1: Planting Plan Sheet One, dated 1/27/23;
 - n. Sheet L3.2: Planting Plan Sheet Two, dated 1/27/23;
 - o. Sheet L3.3: Planting Details and Schedule, dated 1/27/23;
 - p. Sheet L4.1: Enlargement Sheet Plan One, dated 1/27/23;
 - q. Sheet L4.2: Enlargement Sheet Plan Two, dated 1/27/23;
 - r. Sheet L5.1: Detail Sheet One, dated 1/27/23;
 - s. Sheet L5.2: Detail Sheet Two, dated 1/27/23;
 - t. Sheet L5.3: Detail Sheet Three, dated 1/27/23;
 - u. Sheet E0.0: Electrical Legend and Schedule, dated 1/27/23;
 - v. Sheet E1.0: Electrical Site Plan Part A, dated 1/27/23;
 - w. Sheet E1.1: Electrical Site Plan Part B, dated 1/27/23;
 - x. Sheet E1.2: Electrical Site Plan Part C, dated 1/27/23;
 - y. Sheet E2.0: Electrical One-Line Diagram/Schedule/Details, dated 1/27/23;
 - z. Sheet E2.1: Electrical Details and Schedule, dated 1/27/23;
 - aa. Sheet E3.0: Electrical Details, dated 1/27/23;
 - bb. Sheet E3.1: Electrical Details and Schedule, dated 1/27/23;
 - cc. Sheet ED1.1: Electrical Site Plan Part B Demolition, dated 1/27/23;
 - dd. Sheet A1.1: First Floor Plan, dated November 2022;
 - ee. Sheet A1.2: Elevations, dated November 2022;
 - ff. Sheet A1.3L Renderings, dated November 2022;
6. Photometric Plan Set, Reading Birch Meadow Park, dated 11/11/22
 7. Colorized Site Renderings, prepared by Actvitas Inc., received 11/30/22;
 8. Birch Meadow Proposed Materials, received 11/30/22;
 9. Responses to Conservation, dated 1/4/23;
 10. Responses to RPD and CPDC, dated 1/4/23;
 11. Staff Reports:
 - a. Comments from Town Engineer, received 12/8/22;
 - b. Memo from RPD, dated 12/19/22;
 - c. Draft Decision, dated 2/6/23;

Findings:

- 1) **Applicability:** The proposed work requires Minor Site Plan Review approval under Zoning Bylaw Section 4.6.2.3(a), “*An increase in gross floor area of 500 square feet or more either by the creation of new floor area or by the expansion of an existing use into adjacent space within an existing structure*” and Section 4.6.2.3(b), “*...an increase in pavement of more than 300 square feet...*”
- 2) **Zoning/Site:** The site is located in the S-15 Residential Zoning District. The abutting/local area also includes the Coolidge Middle School, Reading Memorial High School and the Burbank YMCA.
- 3) **Existing Conditions:** The site maintains a public educational use with associated parking and open space/recreational amenities. The Birch Meadow School is primarily accessed off of Arthur B Lord Drive; though the park amenities and additional parking is accessed through the ‘Imagination Station’ parking lot to the south and off of Birch Meadow Drive. The existing Imagination Station parking lot is currently gravel based and maintains unformalized parking spaces; it also includes a graveled pathway to the fields and parks.

4) Overview: The proposal is considered as Phase I of improvements to the Birch Meadow Park complex. Phase I includes the improvement and paving of the existing Imagination Station gravel parking lot; a new walkway/path system that will connect the parking lot to the High School; site lighting, landscape and drainage improvements; as well as the construction of a new restroom/storage facility building and a new lacrosse wall. The proposed improvements result in an approximate increase of 14,573 square feet of impervious area.

- a. Parking Lot Improvements: The parking lot will be paved over and formalized into a total of fifty-five (55) striped spaces. Included in the fifty-five spaces is fifty (50) standard 9'x18' spaces, three (3) ADA accessible parking spaces (one of which is to be an ADA van accessible space), and two (2) Electric Vehicle (EV) charging stalls. It will also be improved with a combination of vertical granite curbing, transition granite curbing, bituminous concrete curbing and mountable granite curbing.

The parking lot will allow two-way vehicle traffic flow by maintaining 24' wide drive aisles. The existing 24' wide curb cut to the west of the lot, providing access to/from Birch Meadow Drive, will be maintained but improved with accessible ramps and crosswalk. This curb cut will allow entry and exit, as well as left- and right-hand turning movements out.

A second curb cut will be added to the east. This curb cut will measure 18' wide and be controlled through a vehicular gate. The gate will be opened during events (i.e. sporting/recreation events, public events, etc.) and when open, those exiting from such will be limited to 'Right Turn Only'. Additionally, 'No Parking' striping and regulation is proposed to the areas immediately adjacent to the curb cut and the existing crosswalk directly to the east on Birch Meadow Drive.

- b. Walkway/Path System Improvements: The existing gravel path will be expanded and paved to allow for improved accessibility. It will be constructed of bituminous concrete (asphalt). Along the path will be a series benches, retaining walls, signage and site amenities (i.e. trash/recycle bins) to serve as a gateway into the park complex. Paths will range from 4' to 10' wide but all will be accessible with flush connections to adjacent areas.

- c. Lighting: A series of light fixtures will be provided in the parking lot, along the path system and on/within the new facilities. New transformer, electrical equipment enclosure, and utility infrastructure will be located on-site to house proposed improvements and future lighting/site improvements.

Parking lot lighting will be provided around the edges of the lot and will include bronze finished poles ranging 10- to 15-feet tall.

Pathway lighting includes a series of bronze finished fixtures measuring 12-feet tall.

Building/Structure lighting will include wall mounted, pole mounted and safety lighting.

- d. Landscape and Drainage Improvements: A series of shrubs, trees, upland and wetland plantings will be provided and strategically located. New parking lot impervious area will be graded and directed to stormwater collection systems designed with BMP and LID features such as raingardens and bioretention areas. Stormwater will be directed through catch basins to the LID features for pre-treatment before discharge.

- e. New Structures: A new facility building will be constructed, along with a lacrosse wall/practice area, between Turf II and Morton Field.

The facility building will be separated into two restroom facilities and storage for the Town and Recreation needs. The building's roof will expand to cover a series of picnic tables for gathering. The metal roof will be pitched to collect stormwater in a gutter system. The building will measure 47'x16' and will be constructed of CMU Block walls. A water fountain will also be provided in its vicinity.

The lacrosse facility will measure 43'x41' and be constructed of synthetic turf. The precast concrete wall will measure 12' high and 26' long for practice use.

- 5) **Trash:** A series of trash and recycle receptacles will be provided within the parking area, facility building and along the walkway/path system.
- 6) **Snow Storage:** A snow management and storage plan is to be developed with the Reading Department of Public Works. Snow storage shall be prohibited within the wetland buffers and in all raingarden/bioretention areas.
- 7) **Conservation:** The proposed improvements requires a Notice of Intent application with the local Conservation Commission. The Applicant/future owner(s) shall comply with the Conservation Commission conditional approval.

Educational signage, constructed of natural materials, will be strategically located along wetland buffer areas and stormwater features.

Conditions:

General:

1. **Limitations / Future Uses:** The Decision herein does not include approval for any future uses or site renovations that may – on their own merits and design – trigger the requirements of future site plan review, and/or require a special permit.
2. **Public Health, Safety and Welfare:** If, at any time, the site becomes a nuisance to public health, safety or welfare (i.e., traffic spillover, excessive noise, unreasonable site illumination beyond the hours of operation, etc.) – as shall be evidenced by substantiated complaints to the Police Department or Public Services Office – the Applicant/Owner shall agree to work with staff to rectify the problem. Should the situation warrant it, an additional Site Plan Review by the CPDC may be required.
3. **Permitting:** The approval herein is for Minor Site Plan Review only. The Applicant shall seek building, electrical, plumbing, and gas permits as required for the work.
4. **Lighting:** Light fixtures shall be installed/adjusted to minimize impacts on traffic.
5. **Conservation:** At all times throughout construction of the project and occupancy of the site, the Applicant and/or future owners shall comply with all provisions of the Order of Conditions issued for the project by the Reading Conservation Commission.

During Construction:

6. **Construction Hours:** Construction shall be limited to the hours specified in General Bylaw Section 8.9.8.
7. **Construction Activities:** Construction activities shall be conducted in a workmanlike manner at all times. Blowing dust or debris shall be controlled by the Applicant through stabilization, wetting down, and proper storage and disposal methods, subject to the approval of the Health Agent or designee. The Applicant shall ensure that the abutting local streets are kept clear of dirt and debris, which may accumulate as a result of construction activities for the Project.

Documentation shall be provided as needed demonstrating ongoing pest management control, subject to the approval of and administration by the Health Agent.

8. **Site Inspections:** Town staff or their designee shall have reasonable access to inspect the site to determine compliance with this Decision.

Prior to the Issuance of Occupancy:

9. **Architecture:** The building façade on each elevation (north, south, east, and west) shall be substantially as indicated on the approved plans and elevations.
10. **Right of Way/Traffic Improvements:** The Applicant shall continue to work with the Town’s Parking Traffic and Transportation Task Force (PTTTF) and school administration for review and implementation of additional right-of-way improvements and/or traffic regulations (i.e. turning movement restrictions, etc.).

Conditions for Ongoing Maintenance After Occupancy:

11. **Landscaping:** Landscaping on-site shall be maintained in a healthy condition in perpetuity. In the event that landscaping is damaged during snow removal operations, the property owner shall replace such landscaping during the next growing season.

Modifications/Revisions - Plan Changes after Approval by the Approving Authority:

Contemplated future changes to the plan approved herein shall be presented to the Community Development Director and the Zoning Enforcement Officer/Building Inspector, or other relevant Town staff, for review prior to implementation of proposed changes.

1. Minor Modification: Changes that do not substantially alter the concept of the approved Plan in terms of the specific location, the proposed land use, the design of building form and approved building details and materials, site grading or egress points. These include but are not limited to small changes in site layout, topography, architectural plans, landscaping plan, traffic circulation, parking, lighting, signage, open space or other criteria set forth in Section 4.6.9.1. Requests for approval under a minor modification for future renovations/alterations to the approved site plan or for future tenant changes shall be reviewed by the Community Development Director to determine if the proposed work qualifies for review through the Minor Site Plan Review process of Section 4.6.3 of the Reading Zoning Bylaw. If the work is eligible for review under Minor Site Plan review, the Community Development Director may review and grant approval of the proposed work by administrative approval of the Minor Modification. At the determination of the Community Development Director, the Applicant may be required to present the proposed project at a public meeting of the CPDC.

2. Major Modification: Substantial additions, deletions or deviations from the approved plan, including but not limited to changes in site layout, topography, architectural plan, landscaping plans, traffic circulation, parking, lighting plan, signage, open space or other criteria set forth in Section 4.6.9.1 of the Reading Zoning Bylaw. (Note: Approval of the major modification shall be grounds for reconsideration of the Site Plan application. Denial of proposed major modifications shall not invalidate the Site Plan in conformance with the previously approved Plan).

Signed as to the accuracy of the vote as reflected in the minutes:

Andrew MacNichol, Community Development Director

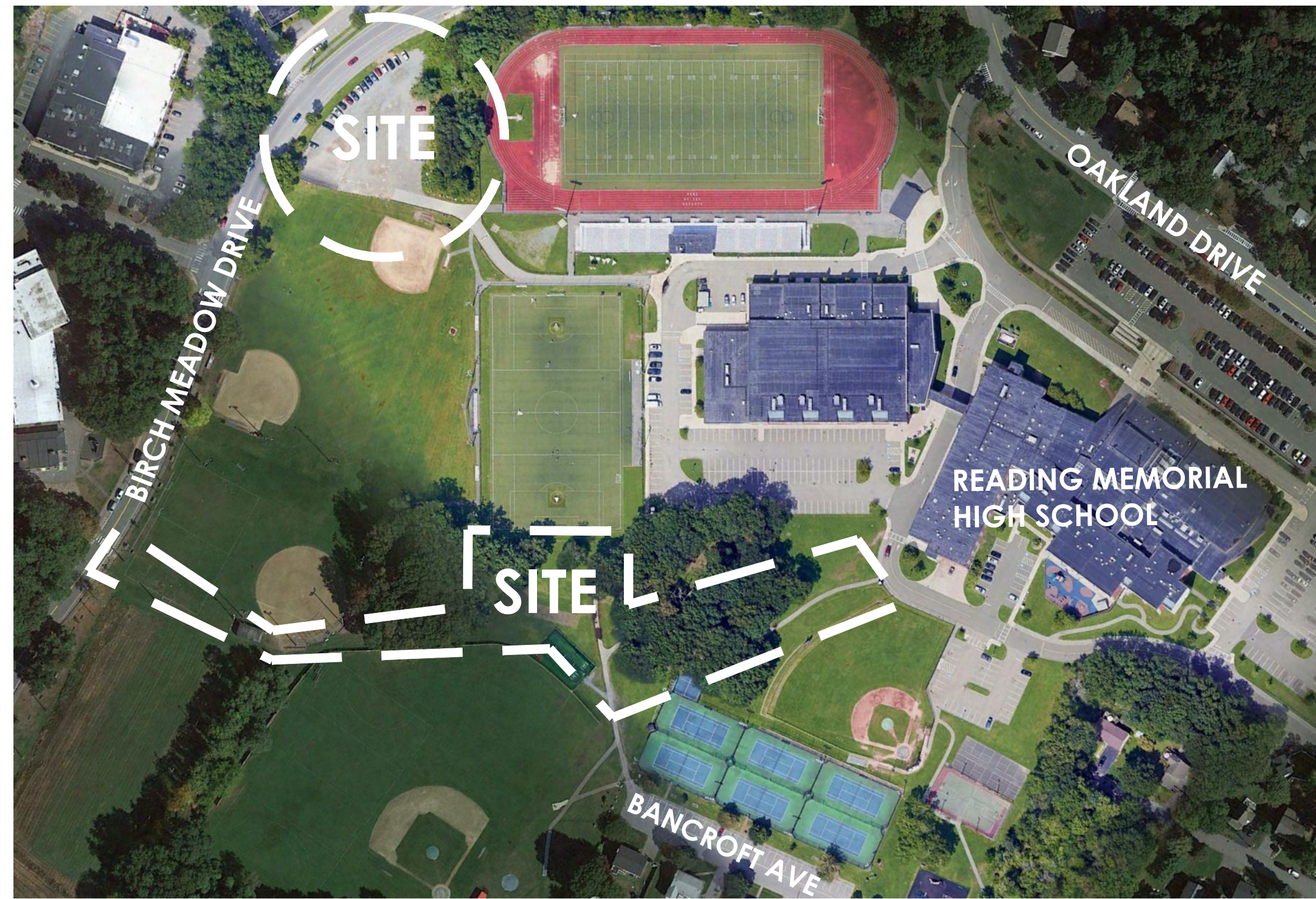
Date

Cc: Applicant, Town Clerk, CPDC, Development Review Team, Building Inspector, planning file

DRAFT

TOWN OF READING BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

READING, MA



LOCUS MAP



LIST OF DRAWINGS

	TOPOGRAPHIC SURVEY (SHEET 1 OF 2)
	TOPOGRAPHIC SURVEY (SHEET 2 OF 2)
L0.1	KEY PLAN
SP1.1	SITE PREPARATION PLAN SHEET I
SP1.2	SITE PREPARATION PLAN SHEET II
SP1.3	SITE PREPARATION DETAILS
L1.1	LAYOUT AND MATERIALS PLAN SHEET I
L1.2	LAYOUT AND MATERIALS PLAN SHEET II
L2.1	GRADING AND UTILITY PLAN SHEET I
L2.2	GRADING AND UTILITY PLAN SHEET II
L3.1	PLANTING PLAN SHEET I
L3.2	PLANTING PLAN SHEET II
L3.3	PLANTING DETAILS AND SCHEDULES
L4.1	ENLARGEMENT PLAN SHEET I
L4.2	ENLARGEMENT PLAN SHEET II
L5.1	DETAIL SHEET I
L5.2	DETAIL SHEET II
L5.3	DETAIL SHEET III
E0.0	ELECTRICAL LEGEND & SCHEDULES
E1.0	ELECTRICAL SITE PLAN PART A
E1.1	ELECTRICAL SITE PLAN PART B
E1.2	ELECTRICAL SITE PLAN PART C
E2.0	ELECTRICAL ONE-LINE DIAGRAM, SCHEDULES + DETAILS
E2.1	ELECTRICAL DETAILS + SCHEDULES
E3.0	ELECTRICAL DETAILS
E3.1	ELECTRICAL DETAILS + SCHEDULES
ED1.1	ELECTRICAL SITE PLAN PART B DEMOLITION

OWNER

Town of Reading
16 Lowell Street
Reading, MA 01867
(781) 942-9001

LANDSCAPE ARCHITECT/CIVIL ENGINEER

Activitas
70 Milton Street
Dedham, MA 02026
(781) 326-2600

ELECTRICAL ENGINEER

NV5 Engineers
200 Brickstone Square, Suite 201
Andover, MA 01810
(978) 475-0298

WETLAND DELINEATION

Epsilon Associates, Inc.
3 Mill & Main Place, Suite 250
Maynard, MA 01754
(978) 897-7100

SURVEY

Reed Land Survey, Inc.
109 Rhode Island Road, Suite 4A
Lakeville, MA 02347
(508) 923-1181

TOWN OF READING
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

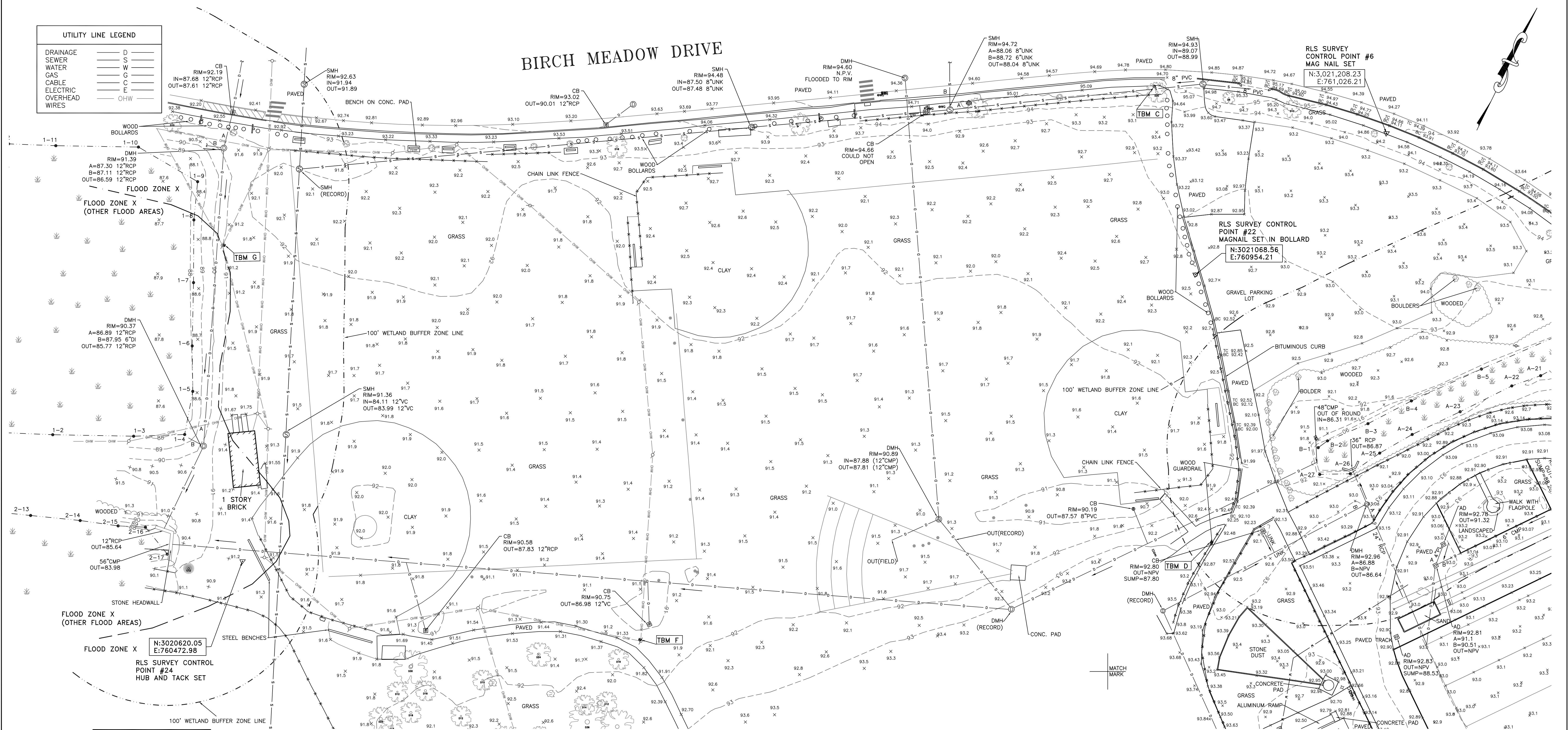
BID DOCUMENTS | JANUARY 27, 2023

REVISIONS:			PROJECT NO. 22014.00
NO.	DATE	SHEETS REVISED	NOTES



BIRCH MEADOW DRIVE

UTILITY LINE LEGEND	
DRAINAGE	D
SEWER	S
WATER	W
GAS	G
CABLE	C
ELECTRIC	E
OVERHEAD WIRES	OHW



RLS SURVEY CONTROL POINT #6
MAG NAIL SET
N:3,021,208.23
E:761,026.21

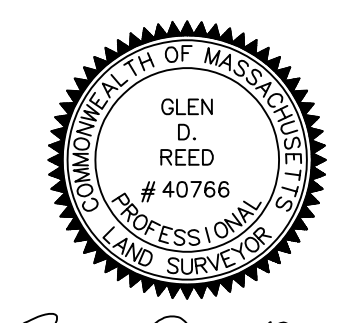
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MAGNAIL SET IN BOLLARD
N:3021068.56
E:760954.21

N:3020620.05
E:760472.98
RLS SURVEY CONTROL POINT #24
HUB AND TACK SET

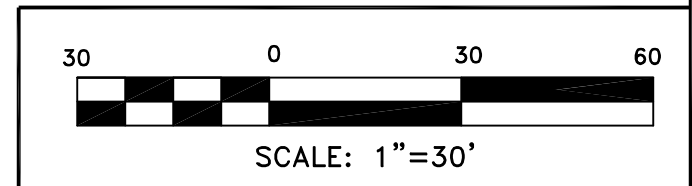
LEGEND	
THESE STANDARD SYMBOLS MAY BE FOUND IN THE DRAWING	
⊠	STREET SIGN
⊕	FIRE HYDRANT
⊙	CABLE MANHOLE
⊚	DRAIN MANHOLE
⊛	ELECTRIC MANHOLE
⊜	SEWER MANHOLE
⊝	TELEPHONE MANHOLE
⊞	WATER MANHOLE
⊟	UNKNOWN MANHOLE
⊠	CATCH BASIN
⊡	ELECTRIC BOX/MTR
⊢	CABLE BOX
⊣	TELEPHONE BOX
⊤	GAS METER
⊥	MONITORING WELL
⊦	GAS GATE
⊧	WATER GATE
⊨	ELECTRIC HAND HOLE
⊩	UTILITY POLE
⊪	LIGHT POLE
⊫	GUY WIRE
⊬	YARD LIGHT
⊭	BOUND
⊮	BOUND W/ DRILL HOLE
⊯	POST/BOLLARD
⊰	ROOF DRAIN
⊱	BUSH/SHRUB
⊲	PARKING SPACES

- NOTES:
1. THE VERTICAL DATUM OF THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88). THE ELEVATIONS WERE DERIVED FROM GPS MEASUREMENTS REFERENCED TO THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION NETWORK (MACORS).
 2. THE COORDINATES SHOWN HEREON AND BASIS OF THE BEARINGS ARE REFERENCED TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (MAINLAND - NORTH AMERICAN DATUM OF 1983). THE COORDINATES WERE DERIVED FROM GPS MEASUREMENTS REFERENCED TO THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION NETWORK (MACORS).
 3. THE AREA SURVEYED IS LOCATED PARTIALLY IN FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AND PARTIALLY IN FLOOD ZONE X OTHER FLOOD AREAS (AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD) AS INDICATED ON THE F.E.M.A. FLOOD INSURANCE RATE MAP FOR MIDDLESEX COUNTY, MASSACHUSETTS, PANEL 311 OF 656 (COMMUNITY NUMBER 250211 PANEL 311 SUFFIX E) WITH AN EFFECTIVE DATE OF JUNE 4, 2010.
 4. THE FIELD SURVEY FOR THIS PROJECT WAS COMPLETED ON JULY 21, 2022.
 5. THE UTILITY LOCATIONS AND SIZES AS SHOWN HEREON ARE BASED ON SURFACE EVIDENCE AND ARE APPROXIMATE. DIG SAFE SHOULD BE CALLED PRIOR TO ANY EXCAVATIONS.

VERTICAL CONTROL FOR SITE - TEMPORARY BENCHMARKS (TBM)	
TBM "C": NAIL IN TREE	ELEVATION = 97.10 (N.A.V.D. 88)
TBM "D": SPIKE IN GUARD RAIL	ELEVATION = 93.62 (N.A.V.D. 88)
TBM "F": SPIKE SET IN UTILITY POLE	ELEVATION = 93.14 (N.A.V.D. 88)
TBM "G": SPIKE SET IN UTILITY POLE	ELEVATION = 92.06 (N.A.V.D. 88)



Glen D. Reed
GLEN D. REED, P.L.S. LICENSE NO. 40766
AS AGENT FOR REED LAND SURVEYING, INC.
NOT INDIVIDUALLY



Reed

Land Surveying, Inc.

109 RHODE ISLAND ROAD, SUITE 4A
LAKEVILLE, MASSACHUSETTS 02347
(508) 923-1181 FAX: (508) 923-1191

SHEET 1 OF 2

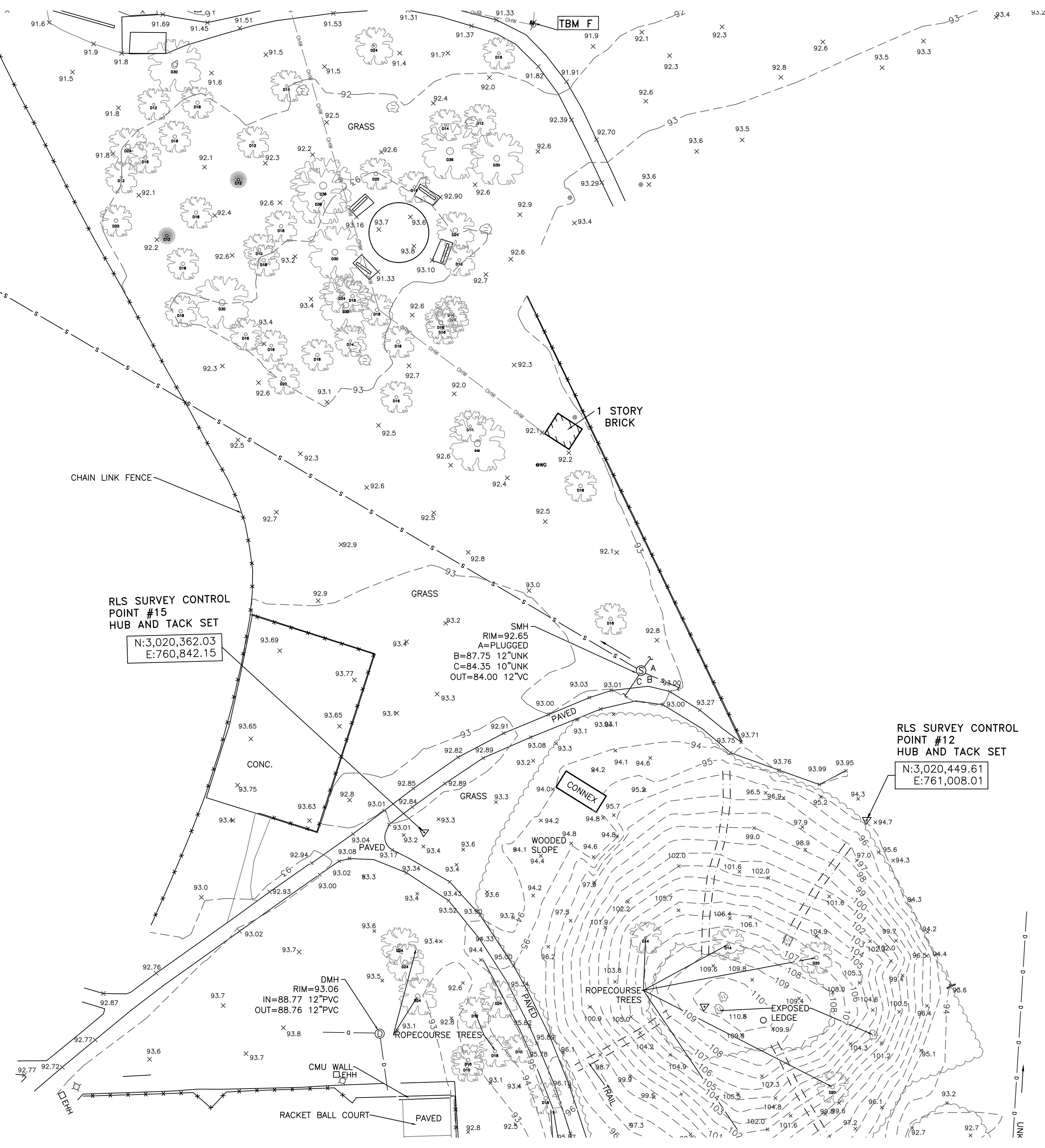
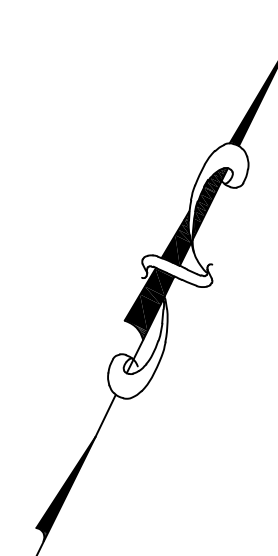
TOPOGRAPHIC SURVEY
READING MEMORIAL HIGH SCHOOL
BIRCH MEADOW DRIVE
READING, MASS.
(MIDDLESEX COUNTY)
PREPARED FOR
ACTIVITAS INC.

FILE: 21026 TOPO JULY 28, 2022

FLOOD ZONE X
 N:3020620.05
 E:760472.98
 RLS SURVEY CONTROL
 POINT #24
 HUB AND TACK SET

100' WETLAND BUFFER ZONE LINE

MATCH
 MARK

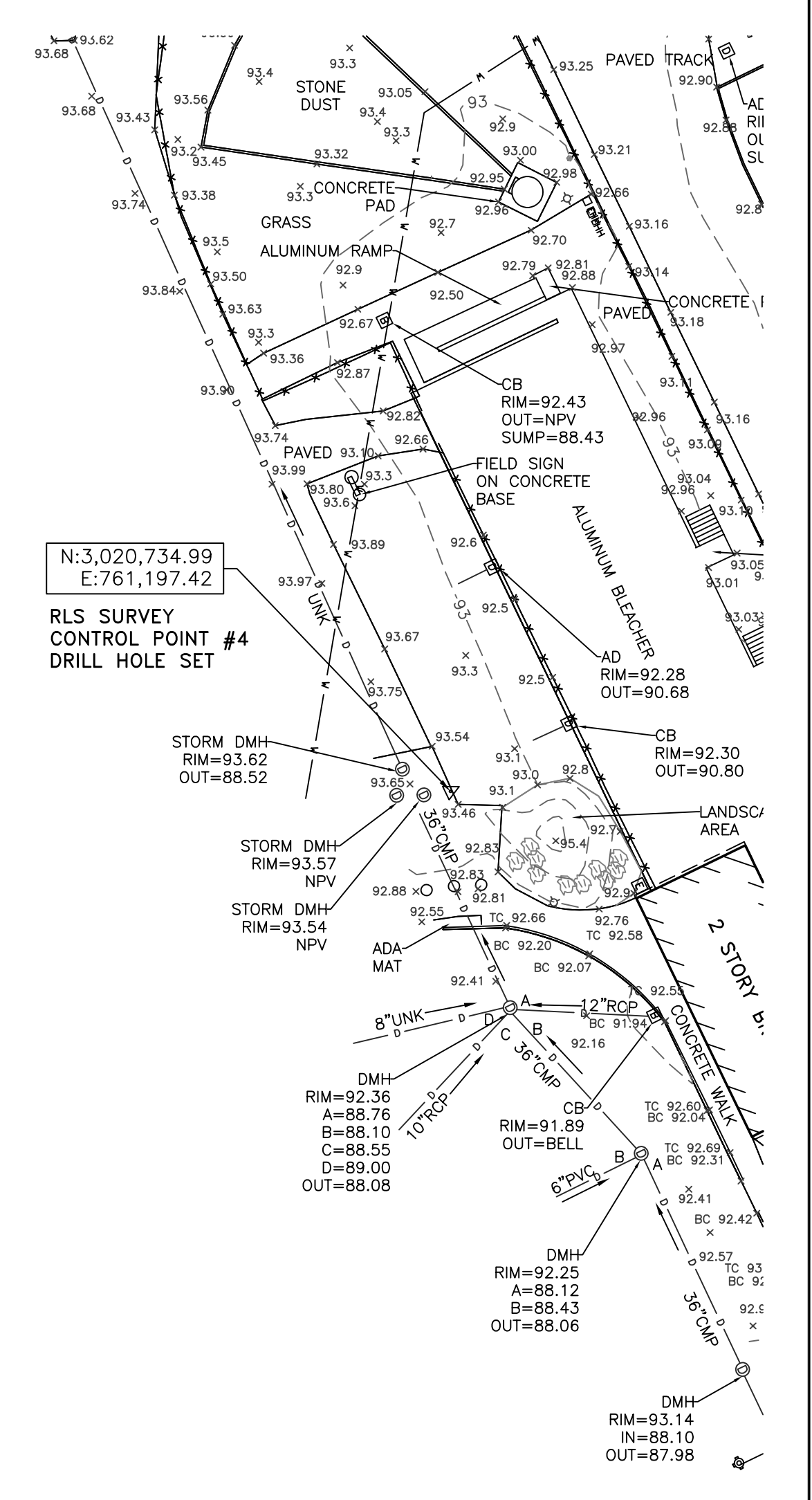


RLS SURVEY CONTROL
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 E:760,842.15

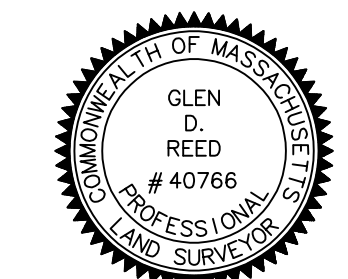
SMH
 RIM=92.65
 A=PLUGGED
 B=87.75 12"JUNK
 C=84.35 10"JUNK
 OUT=84.00 12"VC

RLS SURVEY CONTROL
 POINT #12
 HUB AND TACK SET
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 E:761,008.01

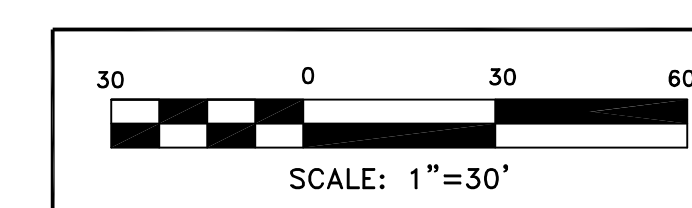
N:3,020,734.99
 E:761,197.42
 RLS SURVEY CONTROL POINT #4
 DRILL HOLE SET



MATCH
 MARK



Glen D. Reed
 GLEN D. REED, P.L.S. LICENSE NO. 40766
 AS AGENT FOR REED LAND SURVEYING, INC.
 NOT INDIVIDUALLY



Reed
 Land Surveying, Inc.

109 RHODE ISLAND ROAD, SUITE 4A
 LAKEVILLE, MASSACHUSETTS 02347
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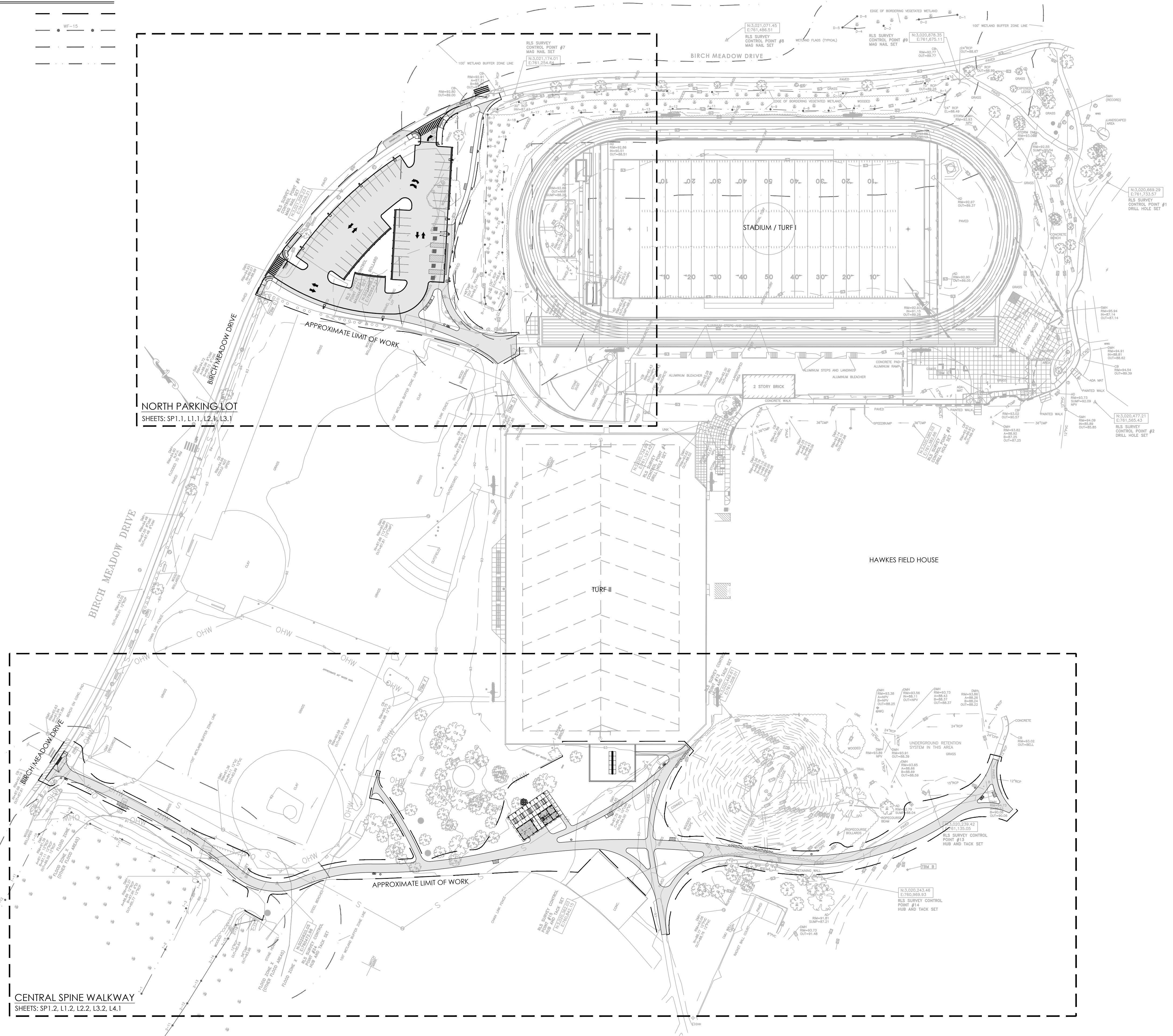
© 2022 REED LAND SURVEYING, INC.

SHEET 2 OF 2
TOPOGRAPHIC SURVEY
 READING MEMORIAL HIGH SCHOOL
 BIRCH MEADOW DRIVE
 READING, MASS.
 (MIDDLESEX COUNTY)
 PREPARED FOR
 ACTIVITAS INC.

FILE: 21026 TOPO JULY 28, 2022

KEY PLAN LEGEND

- APPROXIMATE LIMIT OF WORK
- BORDERING VEGETATED WETLAND
- 35' WETLAND BUFFER
- 100' WETLAND BUFFER



NORTH PARKING LOT
SHEETS: SP1.1, L1.1, L2.1, L3.1

CENTRAL SPINE WALKWAY
SHEETS: SP1.2, L1.2, L2.2, L3.2, L4.1

CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.



- CONSULTANTS**
- ARCHITECT -
OCO ARCHITECTURE :: DESIGN
 - MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.
 - ELECTRICAL ENGINEER -
NV5 ENGINEERS
 - WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.
 - SURVEY -
REED LAND SURVEY, INC.

TOWN OF READING
Reading, MA
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

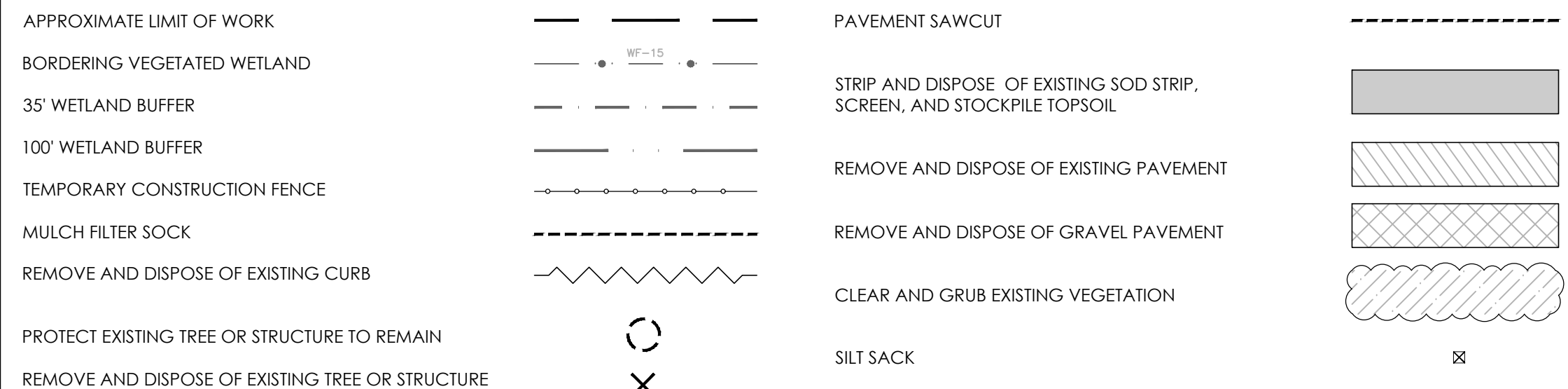
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PROJECT NO.: 22014.00
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SEAL:

SHEET TITLE:
KEY PLAN

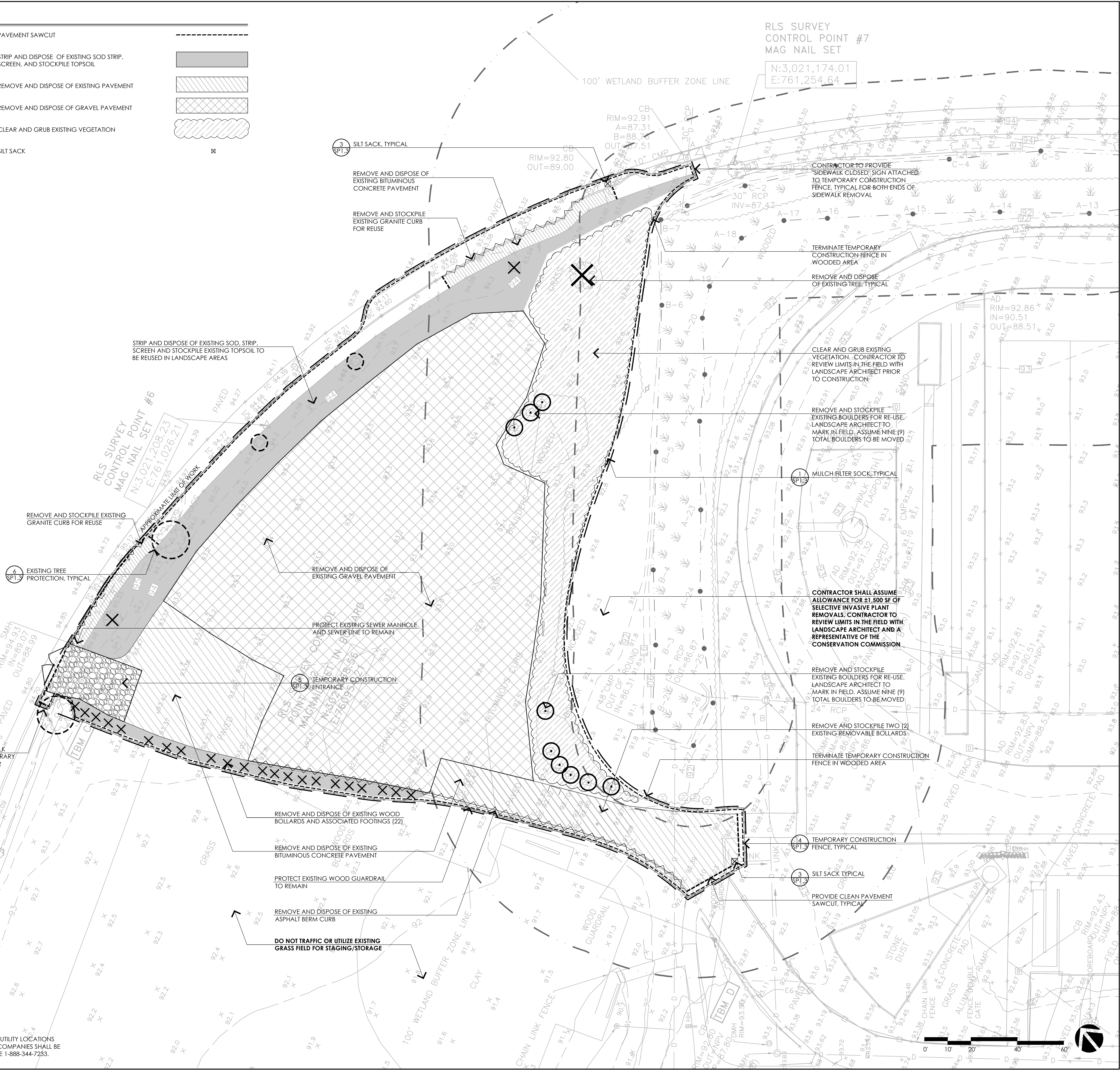
SHEET NO:
L0.1

SITE PREPARATION LEGEND



SITE PREPARATION NOTES

- 1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED JULY 28, 2022.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS, SPECIFICATIONS, AND ACTUAL CONDITIONS TO THE LANDSCAPE ARCHITECT/CIVIL ENGINEER FOR CLARIFICATION AND RESOLUTION PRIOR TO STARTING WORK.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS.
4. ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR FOR DELIVERY TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
5. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON THE SURVEY REFERENCED. THE CONTRACTOR SHALL CONTACT DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.
7. THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENTS OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
8. THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADE (AS NECESSARY) ALL UTILITY AND SITE STRUCTURES SUCH AS MANHOLES, CATCH BASINS, ETC. FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE LANDSCAPE ARCHITECT.
9. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCING PER THE PLANS AND SPECIFICATIONS. CONTRACTOR MUST TAKE APPROPRIATE MEASURES TO MAINTAIN A SECURE SITE THROUGHOUT THE PROJECT.
10. CONTRACTOR SHALL REVIEW EROSION CONTROL INSTALLATION METHOD (AS IT RELATES TO CHAIN LINK FENCE REMOVAL) AND SEQUENCING FOR ALL AREAS WITHIN WETLAND BUFFER ZONE PRIOR TO MOBILIZATION. REPRESENTATIVES FROM THE TOWN OF READING CONSERVATION COMMISSION SHALL BE INCLUDED IN PRE-CONSTRUCTION MEETING AND MAY BE ONSITE WITH LANDSCAPE ARCHITECT DURING THE INSTALLATION OF EROSION CONTROL AND SITE PREPARATION.
11. EXISTING DRAINAGE SYSTEM BASINS SHALL REMAIN OPERATIONAL AS LONG AS POSSIBLE. UPON REMOVAL OF EXISTING BASINS, CONTRACTOR SHALL PROVIDE TEMPORARY INFILTRATION AREAS TO INFILTRATE CONSTRUCTION RUNOFF. CONTRACTOR SHALL FOCUS ON GETTING PROPOSED DRAINAGE SYSTEMS OPERATIONAL AS SOON AS POSSIBLE. CONTRACTOR SHALL ENSURE ALL STORMWATER FLOWING TO NEW BASINS IS TREATED STORMWATER THAT WILL NOT NEGATIVELY AFFECT THE FINAL SYSTEMS.
12. ALL GRANITE CURBING TO BE REMOVED SHALL BE REUSED TO THE GREATEST EXTENT PRACTICABLE.
13. ALL TREE REMOVALS AND TREE PROTECTION TO BE REVIEWED IN THE FIELD WITH TOWN TREE WARDEN AND LANDSCAPE ARCHITECT PRIOR TO MOBILIZATION.



RLS SURVEY CONTROL POINT #7 MAG NAIL SET N:3,021,174.01 E:761,254.64

CONSULTANTS ARCHITECT - OCO ARCHITECTURE :: DESIGN MECHANICAL/PLUMBING ENGINEER - BUILDING ENGINEERING RESOURCES, INC. ELECTRICAL ENGINEER - NV5 ENGINEERS WETLAND DELINEATION - EPSILON ASSOCIATES, INC. SURVEY - REED LAND SURVEY, INC.

TOWN OF READING Reading, MA BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS January, 27 2023

Table with 3 columns: NO., DATE, DESCRIPTION. It is currently empty.

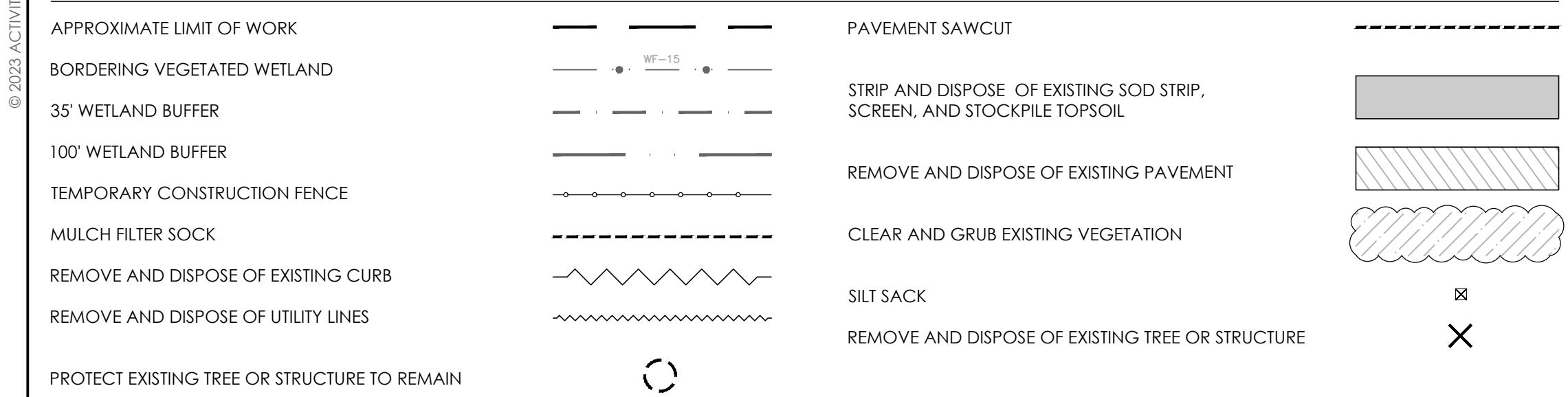
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SEAL: SHEET TITLE: SITE PREPARATION PLAN SHEET 1

SHEET NO.: SP1.1

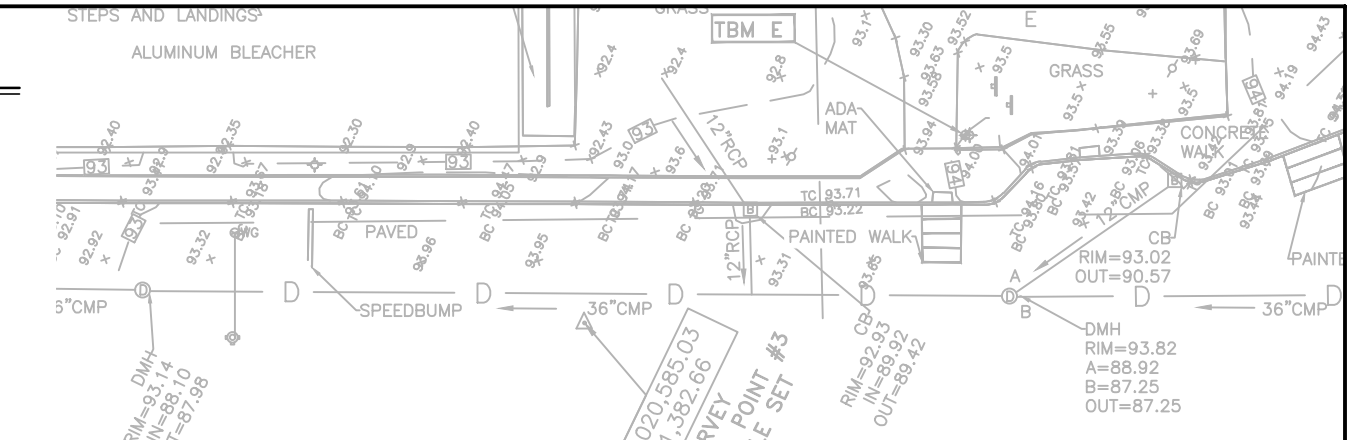
CONTACT DIGSAFE: UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS, PHONE DIGSAFE 1-888-344-7233.

SITE PREPARATION LEGEND



SITE PREPARATION NOTES

- EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED JULY 28, 2022.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT TO THE LANDSCAPE ARCHITECT/CIVIL ENGINEER FOR CLARIFICATION AND RESOLUTION PRIOR TO STARTING WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS.
- ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR FOR DELIVERY TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON THE SURVEY REFERENCED. THE CONTRACTOR SHALL CONTACT DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.
- THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENTS OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
- THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADE (AS NECESSARY) ALL UTILITY AND SITE STRUCTURES SUCH AS MANHOLES, CATCH BASINS, ETC. FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL REVIEW EROSION CONTROL INSTALLATION METHOD (AS IT RELATES TO CHAIN LINK FENCE REMOVAL) AND SEQUENCING FOR ALL AREAS WITHIN WETLAND BUFFER ZONE PRIOR TO MOBILIZATION. REPRESENTATIVES FROM THE TOWN OF READING CONSERVATION COMMISSION SHALL BE INCLUDED IN PRE-CONSTRUCTION MEETING AND MAY BE ONSITE WITH LANDSCAPE ARCHITECT DURING THE INSTALLATION OF EROSION CONTROL AND SITE PREPARATION.
- EXISTING DRAINAGE SYSTEM BASINS SHALL REMAIN OPERATIONAL AS LONG AS POSSIBLE. UPON REMOVAL OF EXISTING BASINS, CONTRACTOR SHALL PROVIDE TEMPORARY INFILTRATION AREAS TO INFILTRATE CONSTRUCTION RUNOFF. CONTRACTOR SHALL FOCUS ON GETTING PROPOSED DRAINAGE SYSTEMS OPERATIONAL AS SOON AS POSSIBLE. CONTRACTOR SHALL ENSURE ALL STORMWATER FLOWING TO NEW BASINS IS TREATED STORMWATER THAT WILL NOT NEGATIVELY AFFECT THE FINAL SYSTEMS.
- ALL GRANITE CURBING TO BE REMOVED SHALL BE REUSED TO THE GREATEST EXTENT PRACTICABLE.
- ALL TREE REMOVALS AND TREE PROTECTION TO BE REVIEWED IN THE FIELD WITH TOWN TREE WARDEN AND LANDSCAPE ARCHITECT PRIOR TO MOBILIZATION.
- CONTRACTOR TO REVIEW TEMPORARY CONSTRUCTION FENCE LIMITS WITH THE OWNER AND LANDSCAPE ARCHITECT PRIOR TO MOBILIZATION. UTILIZATION OF TEMPORARY SNOW FENCE MAY BE PERMITTED IN SOME AREAS.

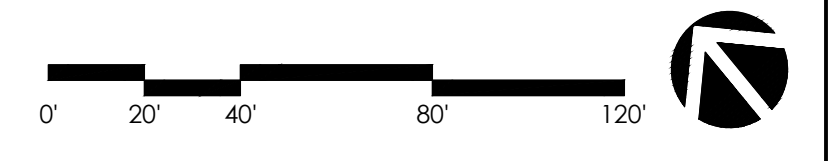


ACTIVITAS
 landscape architecture | civil engineering
 70 Milton Street | Dedham, MA 02026-2915
 (781) 326-2600 | activitas.com

- CONSULTANTS**
- ARCHITECT - OCO ARCHITECTURE :: DESIGN
 - MECHANICAL/PLUMBING ENGINEER - BUILDING ENGINEERING RESOURCES, INC.
 - ELECTRICAL ENGINEER - NV5 ENGINEERS
 - WETLAND DELINEATION - EPSILON ASSOCIATES, INC.
 - SURVEY - REED LAND SURVEY, INC.



CONTACT DIGSAFE: UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.



TOWN OF READING
 Reading, MA
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:		
NO.	DATE	DESCRIPTION

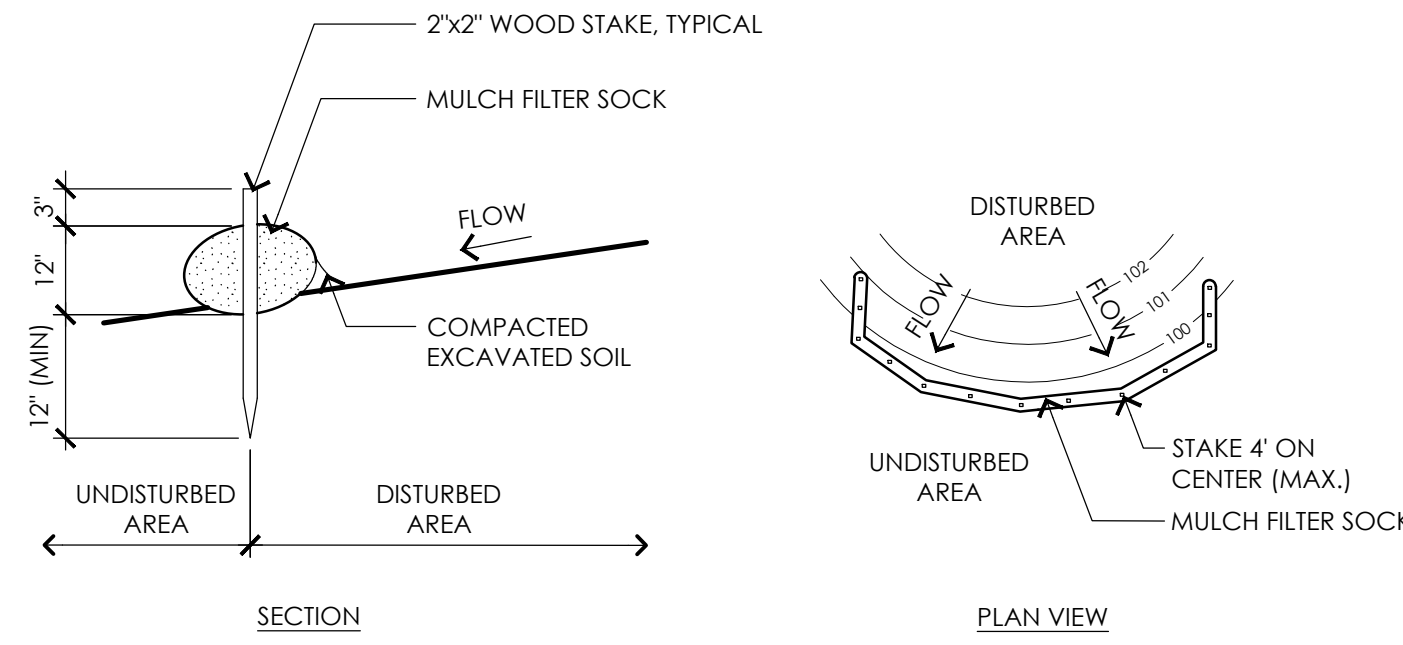
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 SEAL:

SHEET TITLE:
SITE PREPARATION PLAN SHEET II

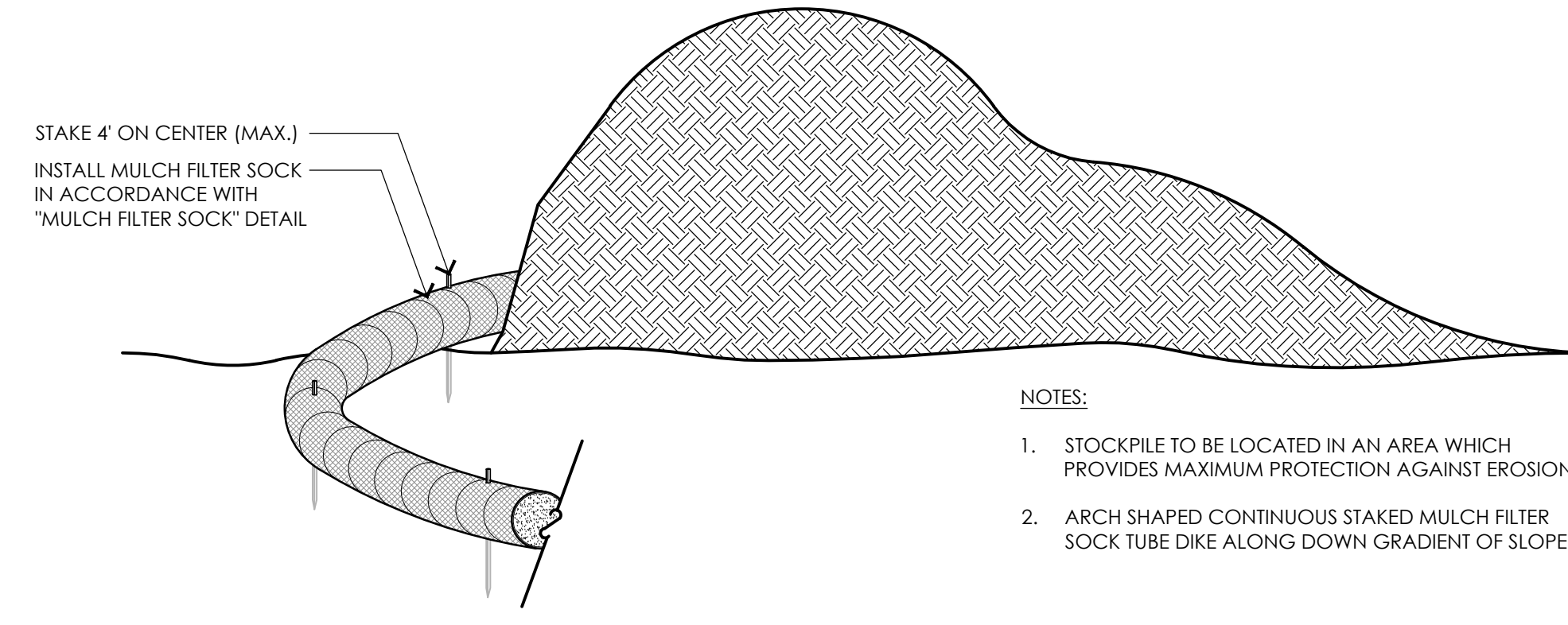
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CONSULTANTS

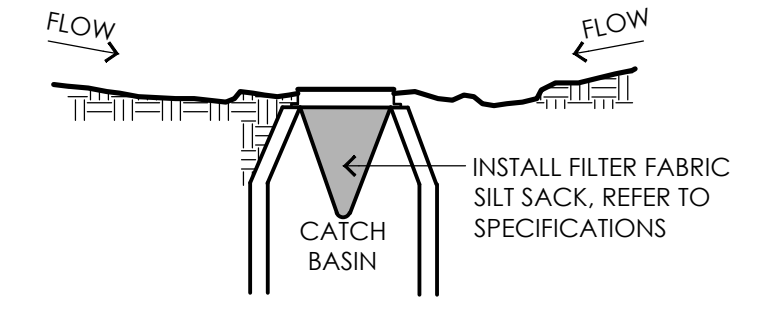
- ARCHITECT -
 OCO ARCHITECTURE :: DESIGN
- MECHANICAL/PLUMBING ENGINEER -
 BUILDING ENGINEERING RESOURCES, INC.
- ELECTRICAL ENGINEER -
 NV5 ENGINEERS
- WETLAND DELINEATION-
 EPSILON ASSOCIATES, INC.
- SURVEY -
 REED LAND SURVEY, INC.



- NOTES:**
1. PLACE MULCH FILTER SOCK ON LEVEL GRADE. EXTEND BOTH ENDS OF THE TUBE AT LEAST 8'-0" UPSLOPE AT 45 DEGREES TO THE MAIN ALIGNMENT.
 2. REMOVE DEPOSITS WHEN SEDIMENT ACCUMULATION IS ONE THIRD THE HEIGHT OF THE EXPOSED MULCH FILTER SOCK OR ONE HALF OF THE EXPOSED FILTER SOCK.
 3. MULCH FILTER SOCK SHALL REMAIN IN WORKING ORDER UNTIL THE SITE IS STABILIZED. ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED AS NEEDED TO PREVENT SILT FROM LEAVING THE SITE AT NO ADDITIONAL COST TO THE OWNER.
 4. ALL CONTROLS SHALL BE SET 5' FROM BOTTOM TOE OF SLOPE



- NOTES:**
1. STOCKPILE TO BE LOCATED IN AN AREA WHICH PROVIDES MAXIMUM PROTECTION AGAINST EROSION.
 2. ARCH SHAPED CONTINUOUS STAKED MULCH FILTER SOCK TUBE DIKE ALONG DOWN GRADIENT OF SLOPE.

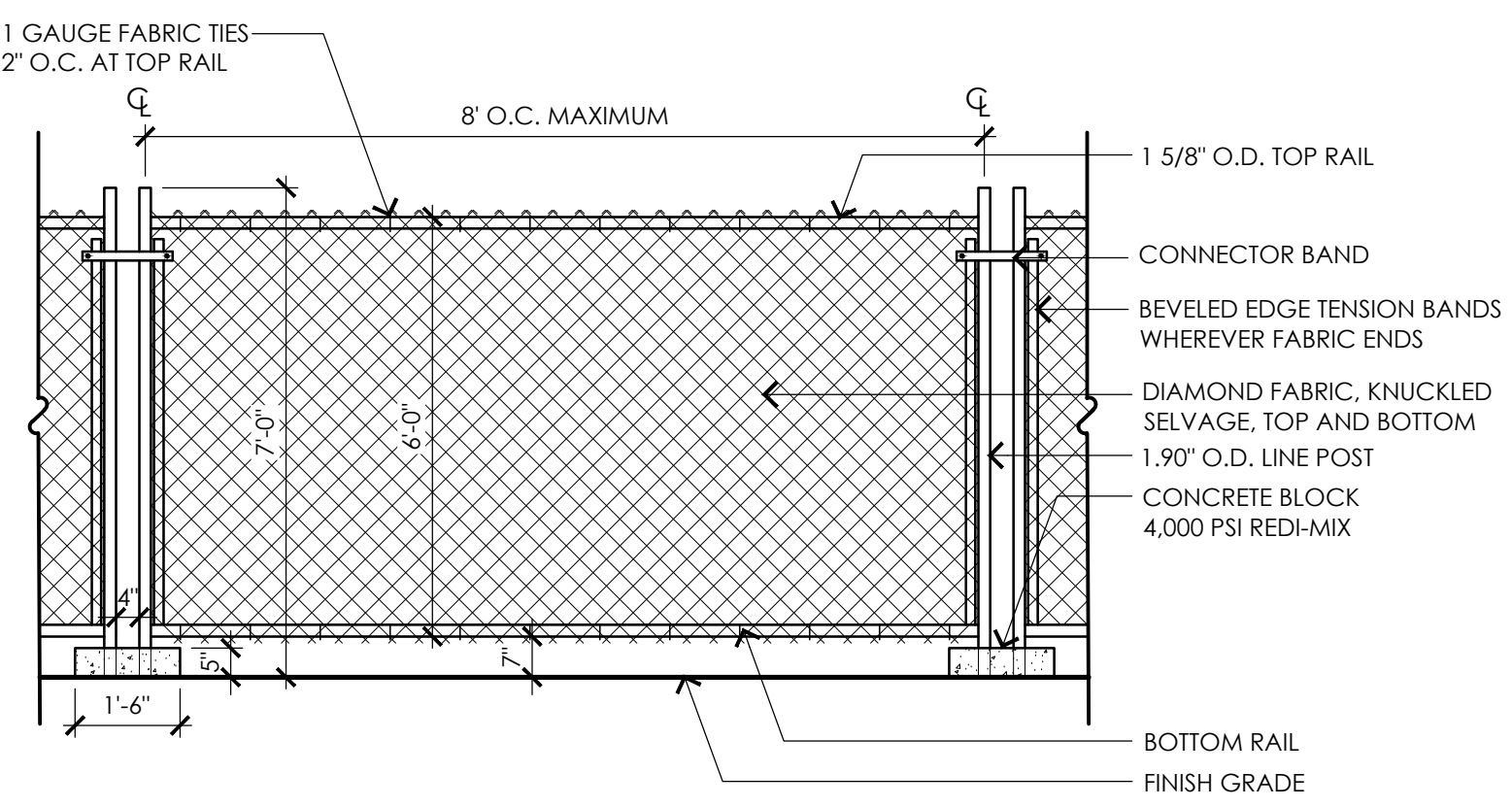
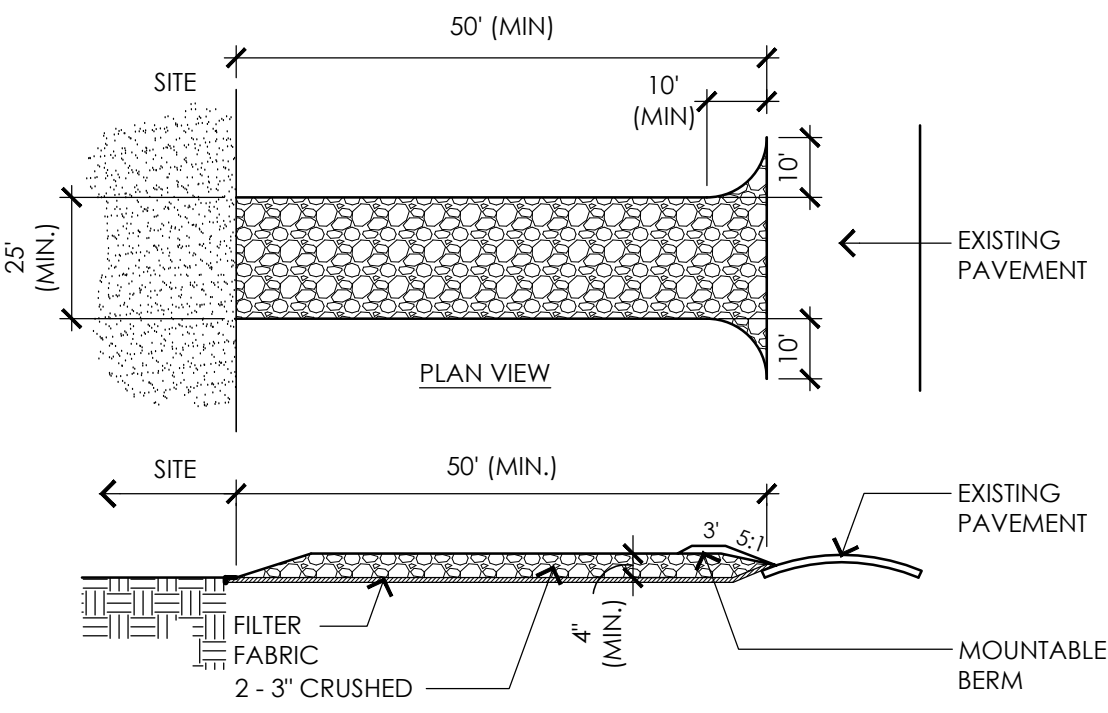


1 MULCH FILTER SOCK
 NOT TO SCALE

2 TEMPORARY MATERIAL STOCKPILE
 NOT TO SCALE

3 SILT SACK
 NOT TO SCALE

- NOTES:**
1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO RIGHT-OF-WAY OR ADJACENT PARKING AREAS AND DRIVES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED AND/OR TRACKED ONTO PUBLIC RIGHTS-OF-WAYS OR ADJACENT PARKING AREAS AND DRIVES MUST BE REMOVED IMMEDIATELY. MOUNTABLE BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED.
 3. CONTRACTOR SHALL WASH WHEELS OF VEHICLES AT CONSTRUCTION ENTRANCE PRIOR TO VEHICLES EXITING SITE TO PREVENT SOIL MATERIAL FROM BEING TRACKED FROM THE SITE.
 4. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED.

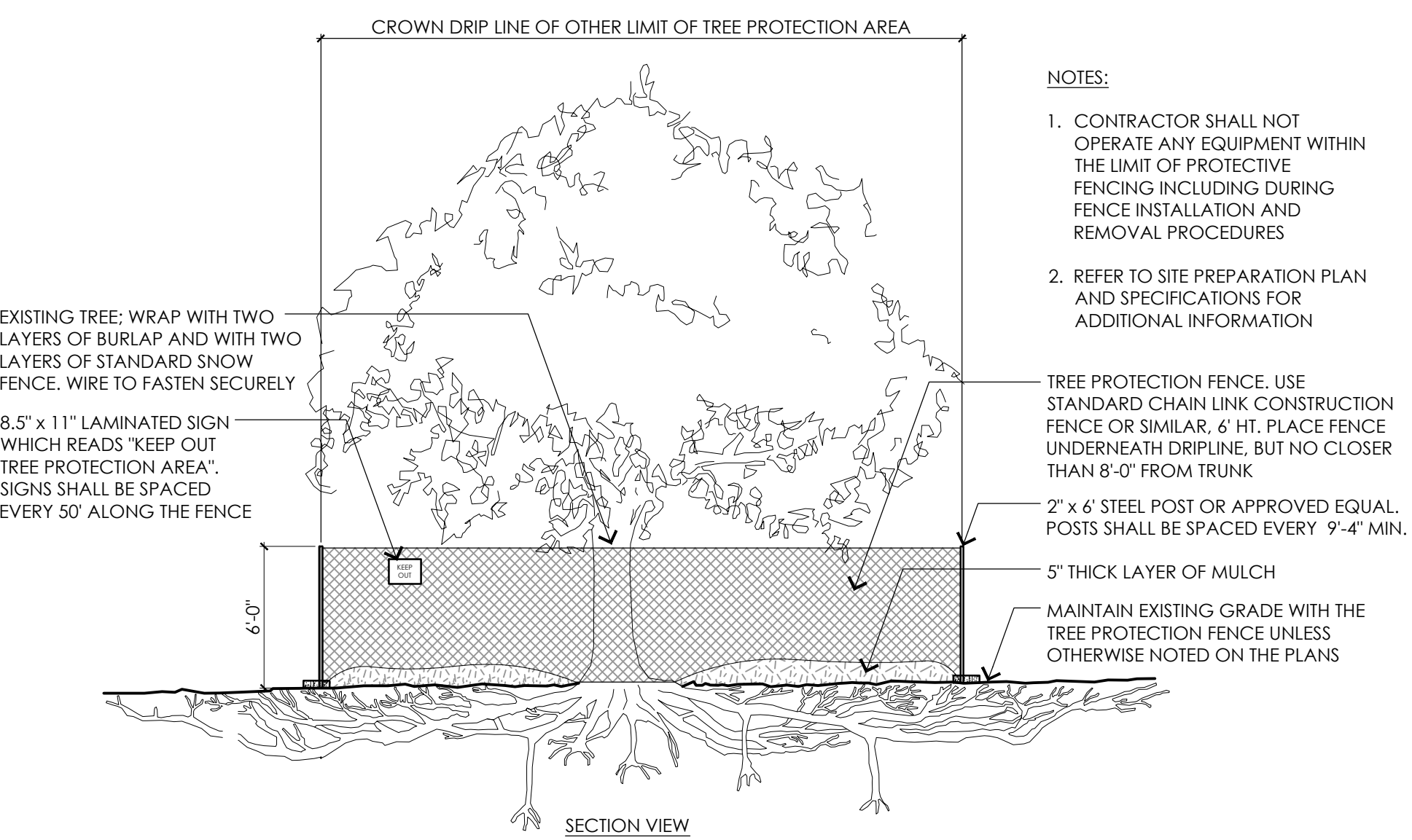
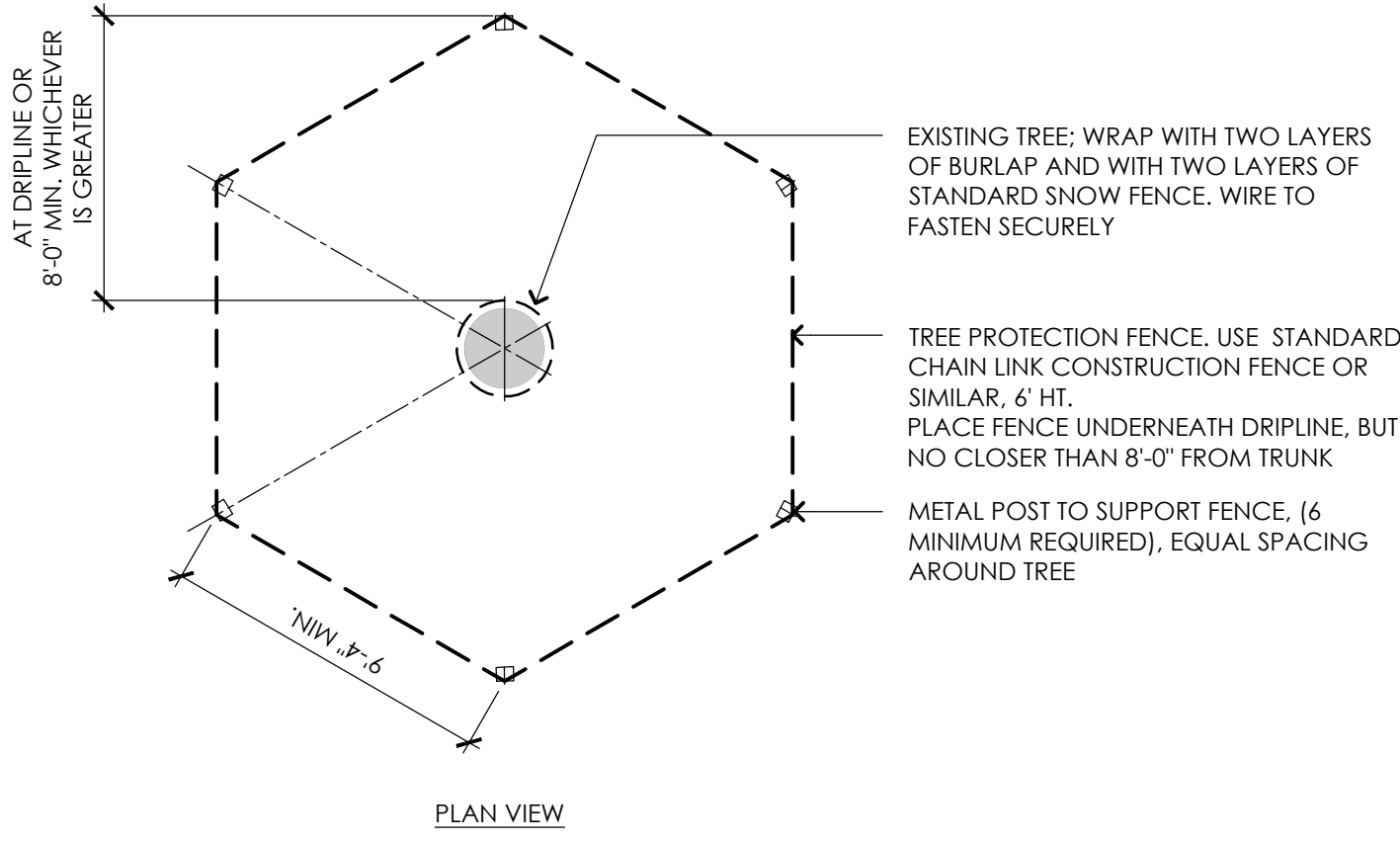


- NOTES:**
1. TEMPORARY CONSTRUCTION FENCE SHALL BE PROVIDED AT PROJECT LIMITS AS SHOWN ON THE SITE PREPARATION PLAN AND AS SPECIFIED. CONTRACTOR PROPOSED MODIFICATIONS TO TEMPORARY CONSTRUCTION FENCE, SUCH AS BUT NOT LIMITED TO THE USE OF SNOW FENCE (OR SIMILAR) WILL NOT BE CONSIDERED, UNLESS OTHERWISE NOTED.
 2. POST SPACING SHALL BE EQUIDISTANT.
 3. CONTRACTOR SHALL MAINTAIN A SECURE SITE AT ALL TIMES. CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY CONSTRUCTION FENCE AT NO ADDITIONAL COST TO THE OWNER IF NECESSARY TO PROPERLY SECURE THE SITE.

4 TEMPORARY CONSTRUCTION FENCE
 NOT TO SCALE

5 TEMPORARY CONSTRUCTION ENTRANCE
 NOT TO SCALE

ALL TREE PROTECTION TO BE REVIEWED IN THE FIELD WITH TOWN TREE WARDEN AND LANDSCAPE ARCHITECT PRIOR TO MOBILIZATION.



- NOTES:**
1. CONTRACTOR SHALL NOT OPERATE ANY EQUIPMENT WITHIN THE LIMIT OF PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL PROCEDURES
 2. REFER TO SITE PREPARATION PLAN AND SPECIFICATIONS FOR ADDITIONAL INFORMATION
- TREE PROTECTION FENCE. USE STANDARD CHAIN LINK CONSTRUCTION FENCE OR SIMILAR, 6' HT. PLACE FENCE UNDERNEATH DRIPLINE, BUT NO CLOSER THAN 8'-0" FROM TRUNK
- 2" x 4" STEEL POST OR APPROVED EQUAL. POSTS SHALL BE SPACED EVERY 9'-4" MIN.
- 5" THICK LAYER OF MULCH
- MAINTAIN EXISTING GRADE WITH THE TREE PROTECTION FENCE UNLESS OTHERWISE NOTED ON THE PLANS

6 EXISTING TREE PROTECTION
 NOT TO SCALE

TOWN OF READING
 Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE:	AS NOTED
PROJECT NO.:	22014.00
FILE:	22014.00-SP1.3-SP_DET.dwg
DRAWN:	MJD
CHECKED:	EPM/SRC

SEAL:

SHEET TITLE:
 SITE PREPARATION
 DETAILS

SHEET NO:
SP1.3

LAYOUT AND MATERIALS LEGEND

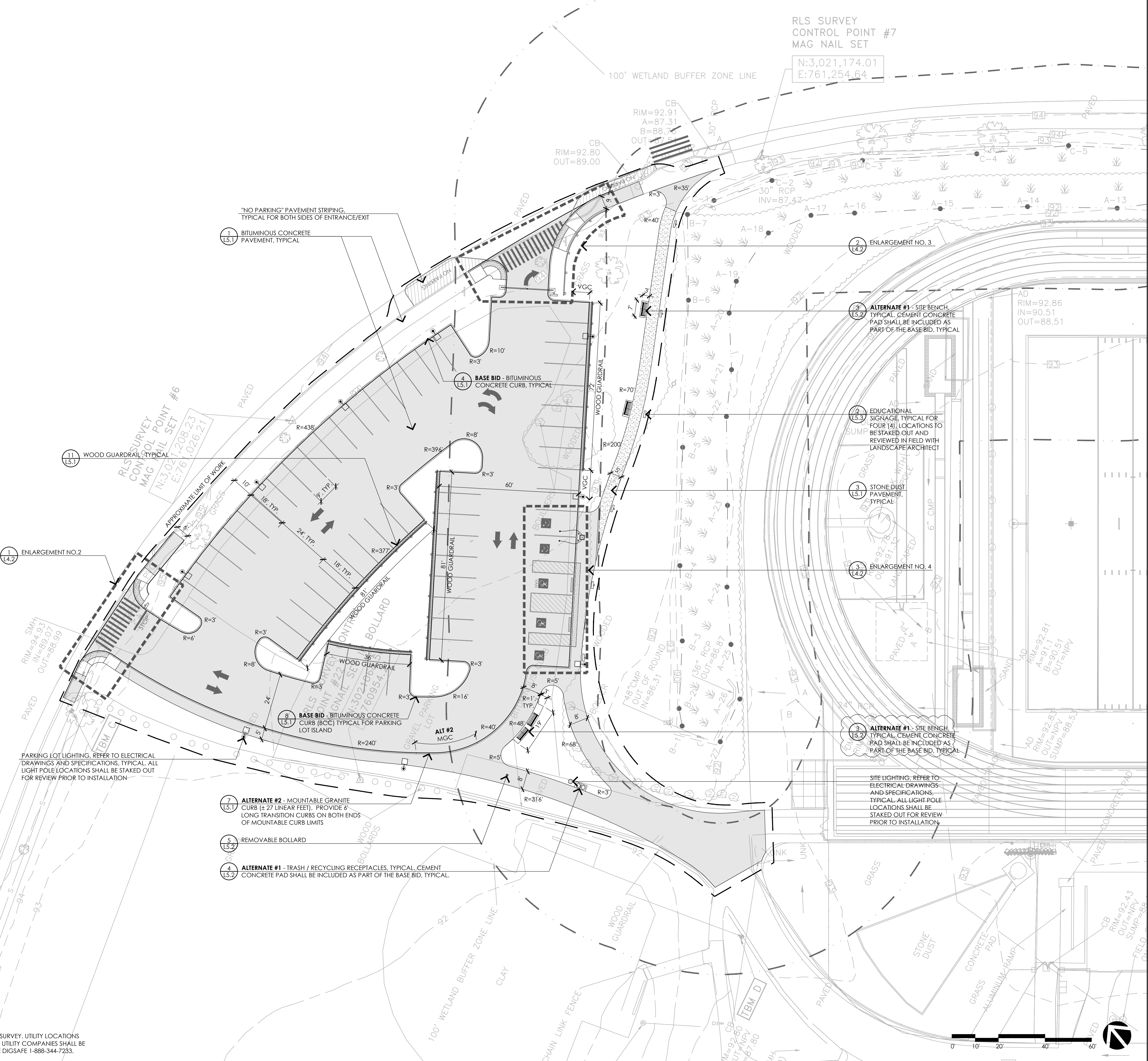
APPROXIMATE LIMIT OF WORK	
BORDERING VEGETATED WETLAND	
35' WETLAND BUFFER	
100' WETLAND BUFFER	
CEMENT CONCRETE PAVEMENT	
BITUMINOUS CONCRETE PAVEMENT	
STONE DUST PAVEMENT	
WOOD GUARDRAIL	
PARKING LOT LIGHTING	
SITE LIGHTING	
SITE SIGNAGE	
ELECTRIC VEHICLE CHARGING STATION	
VERTICAL GRANITE CURB	VGC
TRANSITION GRANITE CURB	TGC
MOUNTABLE GRANITE CURB	MGC
BITUMINOUS CONCRETE CURB	BCC

LAYOUT AND MATERIALS NOTES

- EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED JULY 28, 2022.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE BASED ON THE SURVEY REFERENCED ABOVE. THE CONTRACTOR SHALL NOTIFY DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
- CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
- WHILE THE CONTRACTOR MAY USE THE ELECTRONIC DRAWINGS FOR LAYOUT PURPOSES, IT IS HIS RESPONSIBILITY TO CHECK ALL LAYOUT IN THE FIELD TO CONFIRM CONFORMITY WITH THE PROJECT DRAWINGS, SPECIFICATIONS, AND APPROVED SHOP DRAWINGS AND SUBMITTALS. USE OF ONLY THE ELECTRONIC DRAWINGS WITHOUT A SITE CHECK OF LAYOUT IS NOT ACCEPTABLE.
- ALL SITE BENCHES, TRASH, AND RECYCLING RECEPTACLES SHALL BE BID AS PART OF **ALTERNATE #1**. ALL ASSOCIATED CEMENT CONCRETE PADS FOR THE SITE FURNISHINGS SHALL BE INCLUDED AS PART OF THE **BASE BID**. REFER TO SPECIFICATIONS.
- AS PART OF THE **BASE BID**, BITUMINOUS CONCRETE CURB SHALL BE INSTALLED IN THE AREAS SHOWN. ALL CURB CUTS, CURBING ALONG BIRCH MEADOW DRIVE AND THE EASTERN MOST END OF THE PARKING LOT SHALL BE GRANITE CURB AS SHOWN ON THE PLANS. AS PART OF **ALTERNATE #2**, ALL BITUMINOUS CONCRETE CURB SHALL BE REPLACED WITH GRANITE CURB. REFER TO SPECIFICATIONS.

SIGNAGE SCHEDULE

QUANTITY	SIGNAGE TYPE
3	ACCESSIBLE PARKING SIGN
1	VAN-ACCESSIBLE PARKING SIGN
2	ELECTRIC VEHICLE CHARGING SIGN
2	STOP SIGN
1	RIGHT TURN ONLY
1	NO PARKING IN FRONT OF GATE



RLS SURVEY
CONTROL POINT #7
MAG NAIL SET
N:3,021,174.01
E:761,254.64

CONSULTANTS

ARCHITECT -
OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
NVS ENGINEERS

WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.

SURVEY -
REED LAND SURVEY, INC.

TOWN OF READING
Reading, MA
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: 1"=20'-0"
PROJECT NO.: 22014.00
FILE: 22014.00-11.1-LM_PLAN.dwg
DRAWN: MJD
CHECKED: EPM/SRC

SEAL:

SHEET TITLE:
LAYOUT AND MATERIALS PLAN
SHEET I

SHEET NO:
L1.1

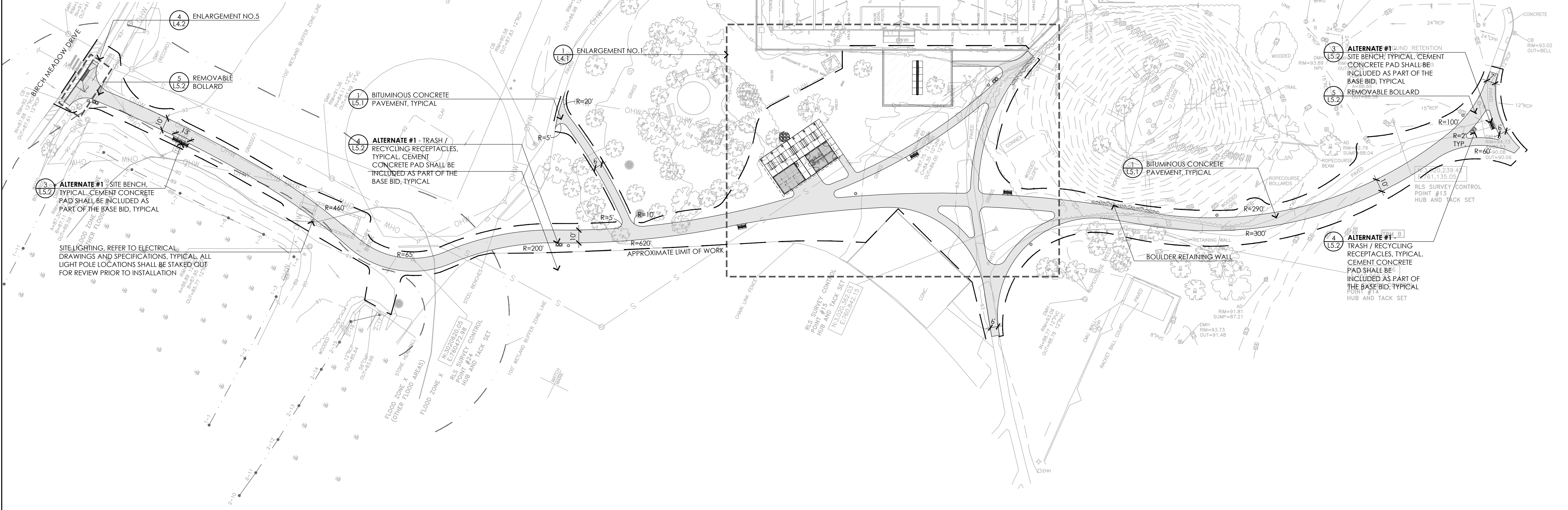
CONTACT DIGSAFE:
UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

LAYOUT AND MATERIALS LEGEND

- APPROXIMATE LIMIT OF WORK
- WETLAND
- 35' WETLAND BUFFER
- 100' WETLAND BUFFER
- CEMENT CONCRETE PAVEMENT
- BITUMINOUS CONCRETE PAVEMENT
- INFILLED SYNTHETIC TURF
- SITE LIGHTING

LAYOUT AND MATERIALS NOTES

1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED JULY 28, 2022.
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3. CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
4. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
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7. AS PART OF THE **BASE BID**, BITUMINOUS CONCRETE CURB SHALL BE INSTALLED IN THE AREAS SHOWN. ALL CURB CUTS, CURBING ALONG BIRCH MEADOW DRIVE, AND THE EASTERN MOST END OF THE PARKING LOT SHALL BE GRANITE CURB AS SHOWN ON THE PLANS. AS PART OF **ALTERNATE #2** ALL BITUMINOUS CONCRETE CURB SHALL BE REPLACED WITH GRANITE CURB. REFER TO SPECIFICATIONS.



- CONSULTANTS**
- ARCHITECT - OCO ARCHITECTURE :: DESIGN
 - MECHANICAL/PLUMBING ENGINEER - BUILDING ENGINEERING RESOURCES, INC.
 - ELECTRICAL ENGINEER - NV5 ENGINEERS
 - WETLAND DELINEATION - EPSILON ASSOCIATES, INC.
 - SURVEY - REED LAND SURVEY, INC.

TOWN OF READING

Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:		
NO.	DATE	DESCRIPTION

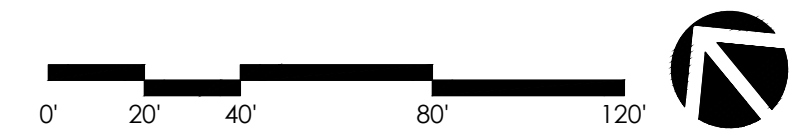
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 PROJECT NO.: 22014.00
 FILE: 22014.00-11.2-LM_PLAN.dwg
 DRAWN: MJD
 CHECKED: EPM/SRC

SEAL:

SHEET TITLE:
 LAYOUT AND MATERIALS PLAN
 SHEET II

SHEET NO:
L1.2

CONTACT DIGSAFE: UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

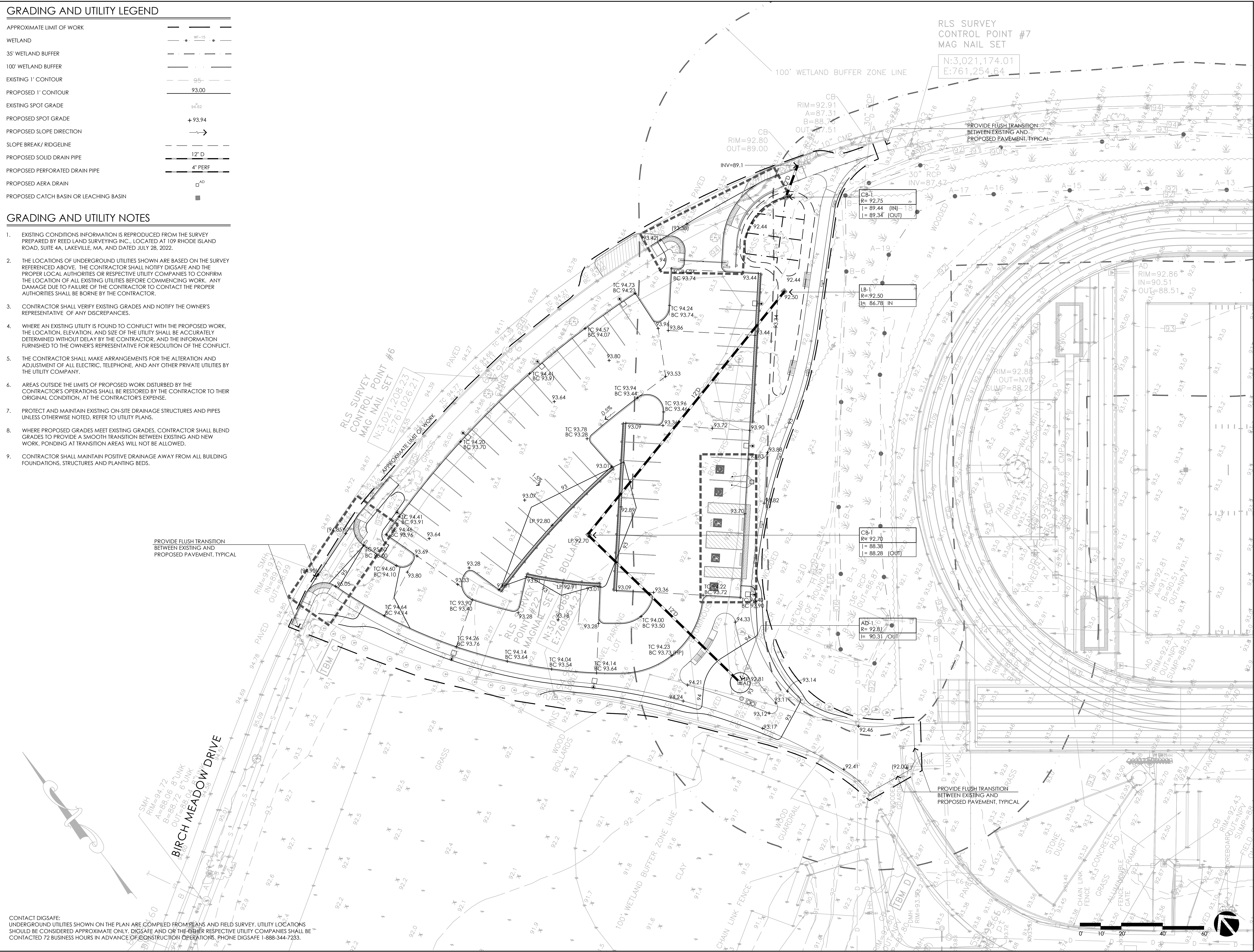


GRADING AND UTILITY LEGEND

APPROXIMATE LIMIT OF WORK	---
WETLAND	WF-15
35' WETLAND BUFFER	---
100' WETLAND BUFFER	---
EXISTING 1" CONTOUR	95-
PROPOSED 1" CONTOUR	93.00
EXISTING SPOT GRADE	94.62
PROPOSED SPOT GRADE	+93.94
PROPOSED SLOPE DIRECTION	→
SLOPE BREAK/ RIDGELINE	12" D
PROPOSED SOLID DRAIN PIPE	4" PERF
PROPOSED PERFORATED DRAIN PIPE	4" PERF
PROPOSED AERA DRAIN	AD
PROPOSED CATCH BASIN OR LEACHING BASIN	■

GRADING AND UTILITY NOTES

- EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED JULY 28, 2022.
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- CONTRACTOR SHALL VERIFY EXISTING GRADES AND NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER'S REPRESENTATIVE FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ALL ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANY.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION, AT THE CONTRACTOR'S EXPENSE.
- PROTECT AND MAINTAIN EXISTING ON-SITE DRAINAGE STRUCTURES AND PIPES UNLESS OTHERWISE NOTED, REFER TO UTILITY PLANS.
- WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.
- CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS, STRUCTURES AND PLANTING BEDS.



RLS SURVEY
CONTROL POINT #7
MAG NAIL SET
N:3,021,174.01
E:761,254.64

CONSULTANTS

ARCHITECT -
OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
NVS ENGINEERS

WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.

SURVEY -
REED LAND SURVEY, INC.

TOWN OF READING
Reading, MA
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
January, 27 2023

REVISIONS:		
NO.	DATE	DESCRIPTION

SCALE: 1"=20'-0"

PROJECT NO.: 22014.00

FILE: 22014.00-L2.1-G_PLAN.dwg

DRAWN: SRC

CHECKED: MEB

SEAL:

SHEET TITLE:
GRADING AND
UTILITY PLAN SHEET I

SHEET NO:
L2.1

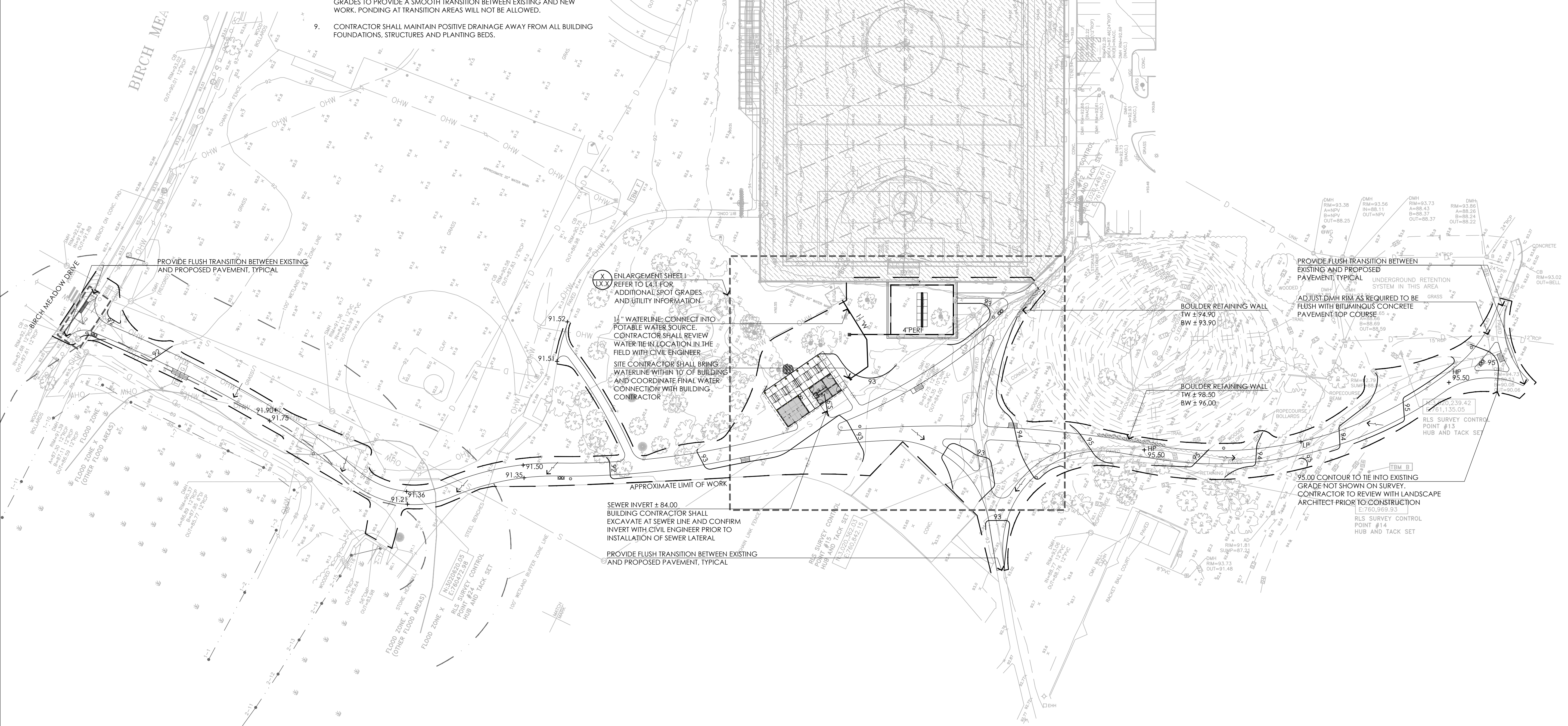
CONTACT DIGSAFE: UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS, PHONE DIGSAFE 1-888-344-7233.

GRADING AND UTILITY LEGEND

APPROXIMATE LIMIT OF WORK	---
WETLAND	WF-15
35' WETLAND BUFFER	---
100' WETLAND BUFFER	---
EXISTING 1' CONTOUR	95.00
PROPOSED 1' CONTOUR	93.00
EXISTING SPOT GRADE	94.62
PROPOSED SPOT GRADE	+93.94
PROPOSED SLOPE DIRECTION	→
SLOPE BREAK/ RIDGELINE	---
PROPOSED SOLID DRAIN PIPE	12" D
PROPOSED PERFORATED DRAIN PIPE	4" PERF
PROPOSED AERA DRAIN	□ ^{AD}
PROPOSED CATCH BASIN OR LEACHING BASIN	■

GRADING AND UTILITY NOTES

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ACTIVITAS
 landscape architecture | civil engineering
 70 Milton Street | Dedham, MA 02026-2915
 (781) 326-2600 | activitas.com

CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
 BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
 NV5 ENGINEERS

WETLAND DELINEATION-
 EPSILON ASSOCIATES, INC.

SURVEY -
 REED LAND SURVEY, INC.

TOWN OF READING
 Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

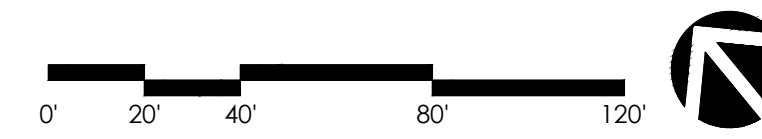
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PROJECT NO.:	22014.00
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DRAWN:	MJD
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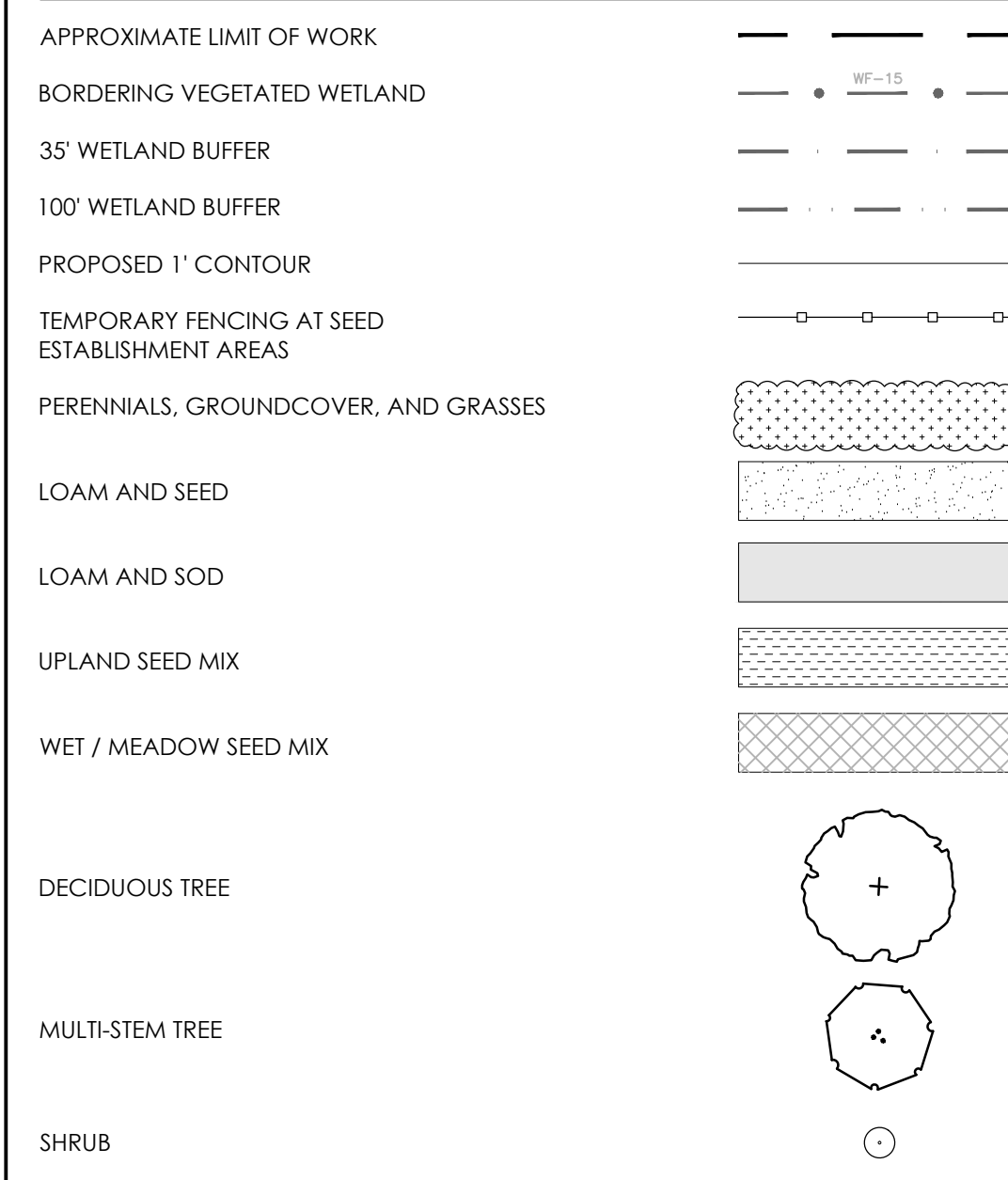
SHEET TITLE:
 GRADING AND
 UTILITY PLAN SHEET II

SHEET NO:
L2.2

CONTACT DIGSAFE:
 UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.



PLANTING LEGEND

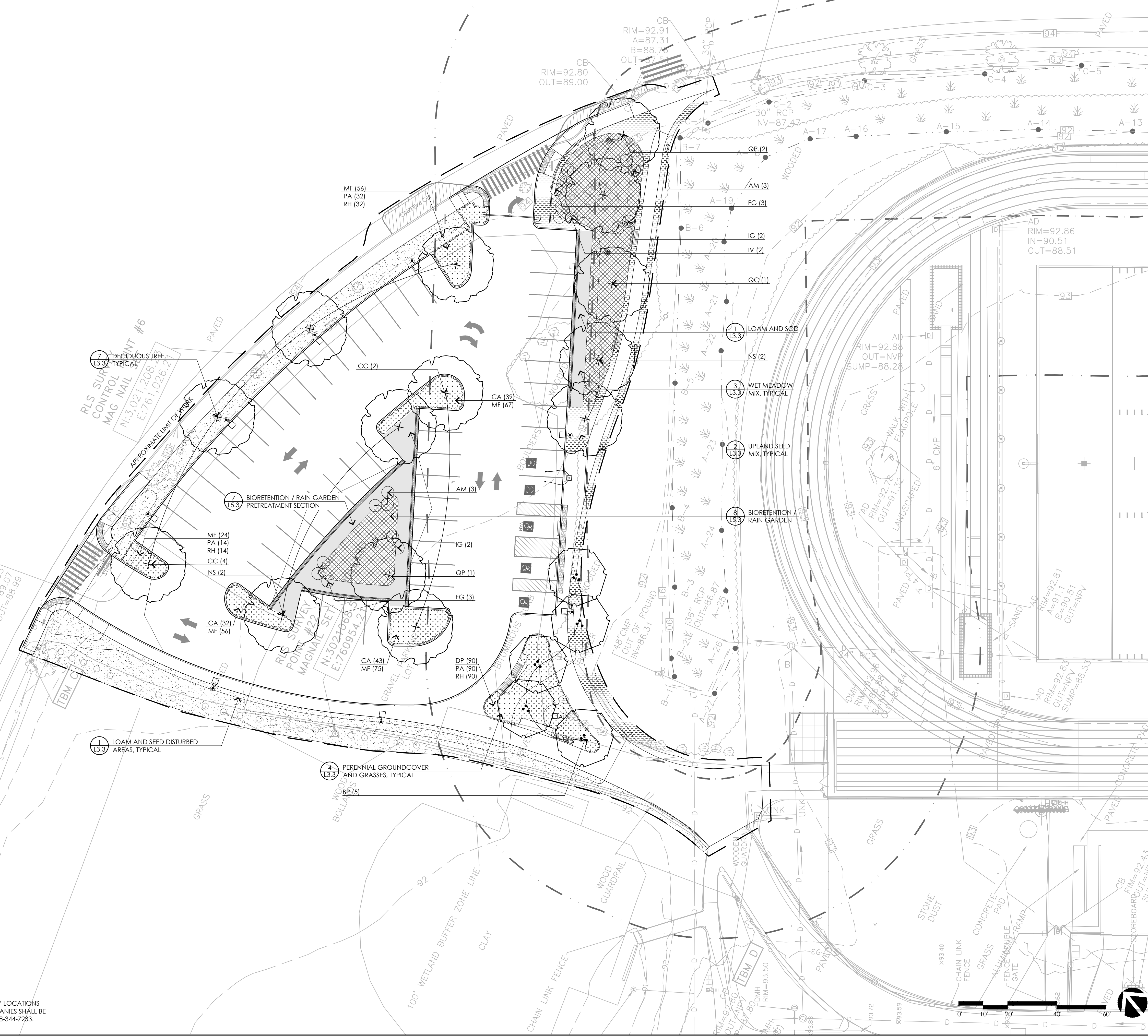


PLANTING NOTES

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- CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND WILL CONTINUE UNTIL FINAL WRITTEN ACCEPTANCE OF PLANT MATERIAL.
- CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM PROPOSED BUILDING, STRUCTURES, AND PLANTING BEDS.
- THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE ALL PLANTINGS SHOWN ON THIS DRAWING.
- ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
- ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS TO ORIGINAL GRADES BEFORE DIGGING.
- FINAL LAYOUT OF PLANTINGS WILL BE IN THE FIELD PER THE DIRECTION OF THE LANDSCAPE ARCHITECT. PROVIDE A MINIMUM FORTY-EIGHT (48) HOURS NOTICE PRIOR TO BEGINNING FINAL LAYOUT AND PLANTING OPERATIONS.
- ALL PLANTS TO BE BALLED IN BURLAP OR CONTAINERIZED.
- ALL PLANTED AREAS TO BE EDGED AND MULCHED WITH AGED PINE BARK; PARTIALLY DECOMPOSED, JET BLACK IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.
- LANDSCAPE ISLAND PLANTING SOIL MIX: UTILIZE EXISTING SITE LOAM FROM STOCKPILES, THOROUGHLY INCORPORATE WITH COMPOST AS NEEDED PER SOILS ANALYSIS. FERTILIZE PER RECOMMENDED RATES IN SOIL ANALYSIS.
- TREE PIT PLANTING SOIL MIX: REFER TO SPECIFICATIONS FOR CU STRUCTURAL SOIL.
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE.
- ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT, AT THE NURSERY, AND AT THE SITE.
- ALL AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED AND SEEDED WITH A MINIMUM DEPTH OF 12" DEPTH TOPSOIL UNLESS OTHERWISE NOTED.
- SLOPES 3:1 AND GREATER SHALL RECEIVE STRAW BLANKET PRIOR TO SEEDING.
- REFER TO SHEET L3.3 FOR PLANTING AND SEED MIX SCHEDULES.

RLS SURVEY CONTROL POINT #7
MAG NAIL SET
N:3,021,174.01
E:761,254.64

100' WETLAND BUFFER ZONE LINE



CONSULTANTS

ARCHITECT -
OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
NVS ENGINEERS

WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.

SURVEY -
REED LAND SURVEY, INC.

TOWN OF READING
 Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:		
NO.	DATE	DESCRIPTION

SCALE: 1"=20'-0"
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 FILE: 22014.00-L3.1-P_PLAN.dwg
 DRAWN: MJD
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SEAL:

SHEET TITLE:
 PLANTING PLAN
 SHEET I

SHEET NO.:
L3.1

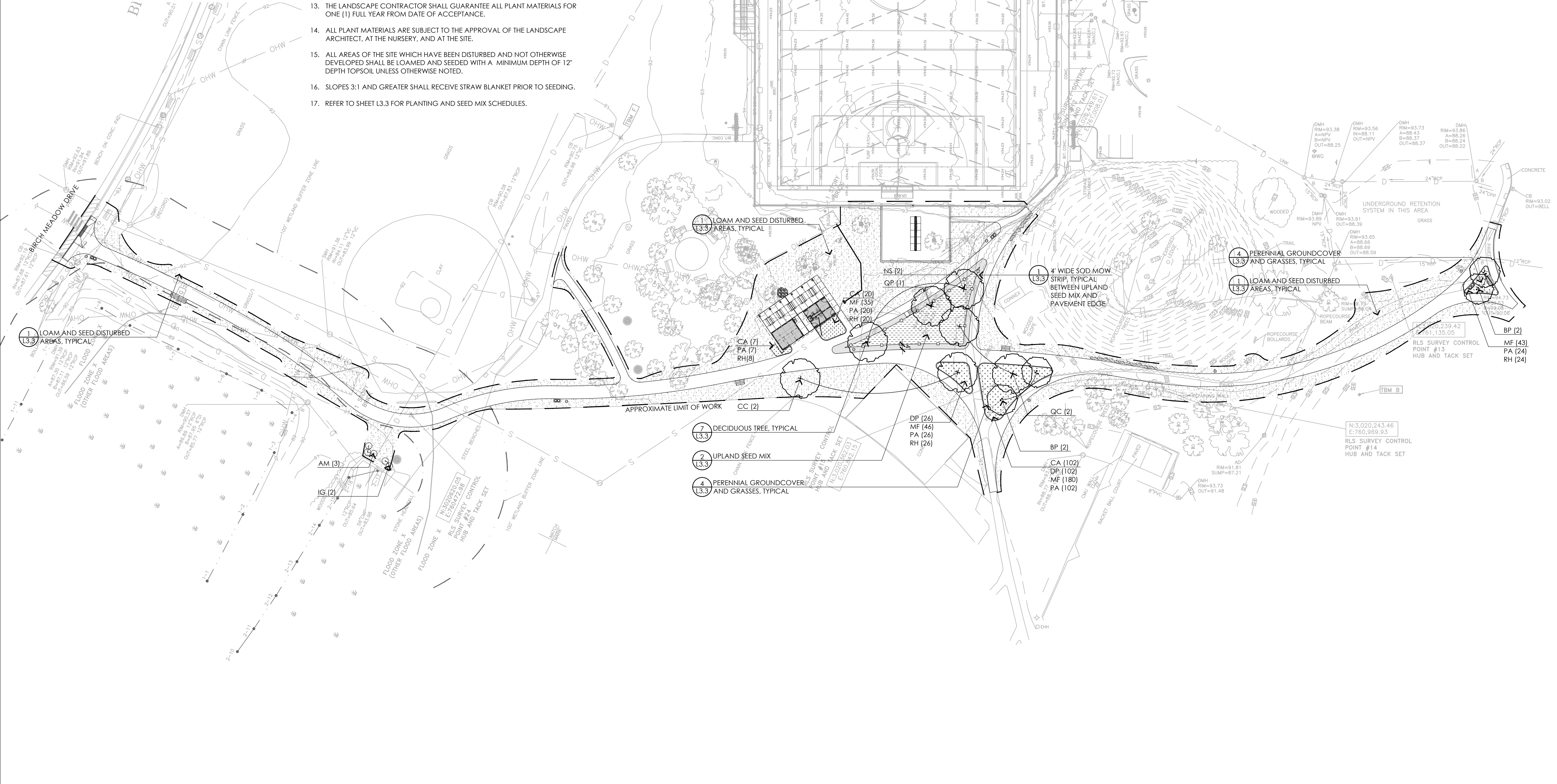
CONTACT DIGSAFE:
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PLANTING LEGEND

- APPROXIMATE LIMIT OF WORK
- BORDERING VEGETATED WETLAND
- 35' WETLAND BUFFER
- 100' WETLAND BUFFER
- PROPOSED 1' CONTOUR
- TEMPORARY FENCING AT SEED ESTABLISHMENT AREAS
- PERENNIALS, GROUNDCOVER, AND GRASSES
- LOAM AND SEED
- LOAM AND SOD
- UPLAND SEED MIX
- WET / MEADOW SEED MIX
- DECIDUOUS TREE
- MULTI-STEM TREE
- SHRUB

PLANTING NOTES

1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED JULY 28, 2022.
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3. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND WILL CONTINUE UNTIL FINAL WRITTEN ACCEPTANCE OF PLANT MATERIAL.
4. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM PROPOSED BUILDING, STRUCTURES, AND PLANTING BEDS.
5. THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE ALL PLANTINGS SHOWN ON THIS DRAWING.
6. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
7. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS TO ORIGINAL GRADES BEFORE DIGGING.
8. FINAL LAYOUT OF PLANTINGS WILL BE IN THE FIELD PER THE DIRECTION OF THE LANDSCAPE ARCHITECT, PROVIDE A MINIMUM FORTY-EIGHT (48) HOURS NOTICE PRIOR TO BEGINNING FINAL LAYOUT AND PLANTING OPERATIONS.
9. ALL PLANTS TO BE BALLED IN BURLAP OR CONTAINERIZED.
10. ALL PLANTED AREAS TO BE EDGED AND MULCHED WITH AGED PINE BARK; PARTIALLY DECOMPOSED, JET BLACK IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.
11. LANDSCAPE ISLAND PLANTING SOIL MIX: UTILIZE EXISTING SITE LOAM FROM STOCKPILES, THOROUGHLY INCORPORATE WITH COMPOST AS NEEDED PER SOILS ANALYSIS. FERTILIZE PER RECOMMENDED RATES IN SOIL ANALYSIS.
12. TREE PIT PLANTING SOIL MIX: REFER TO SPECIFICATIONS FOR CU STRUCTURAL SOIL.
13. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE.
14. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT, AT THE NURSERY, AND AT THE SITE.
15. ALL AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED AND SEEDED WITH A MINIMUM DEPTH OF 12" DEPTH TOPSOIL UNLESS OTHERWISE NOTED.
16. SLOPES 3:1 AND GREATER SHALL RECEIVE STRAW BLANKET PRIOR TO SEEDING.
17. REFER TO SHEET L3.3 FOR PLANTING AND SEED MIX SCHEDULES.



- CONSULTANTS**
- ARCHITECT -
OCO ARCHITECTURE :: DESIGN
 - MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.
 - ELECTRICAL ENGINEER -
NVS ENGINEERS
 - WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.
 - SURVEY -
REED LAND SURVEY, INC.

TOWN OF READING

Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:		
NO.	DATE	DESCRIPTION

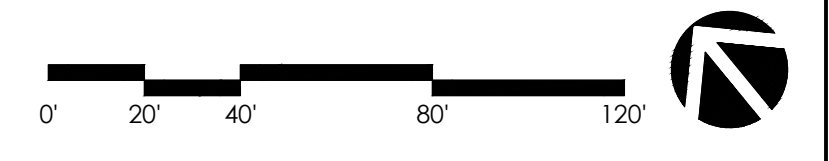
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 FILE: 22014.00-L3.2-P_PLAN.dwg
 DRAWN: MJD
 CHECKED: EPM/SRC

SEAL:

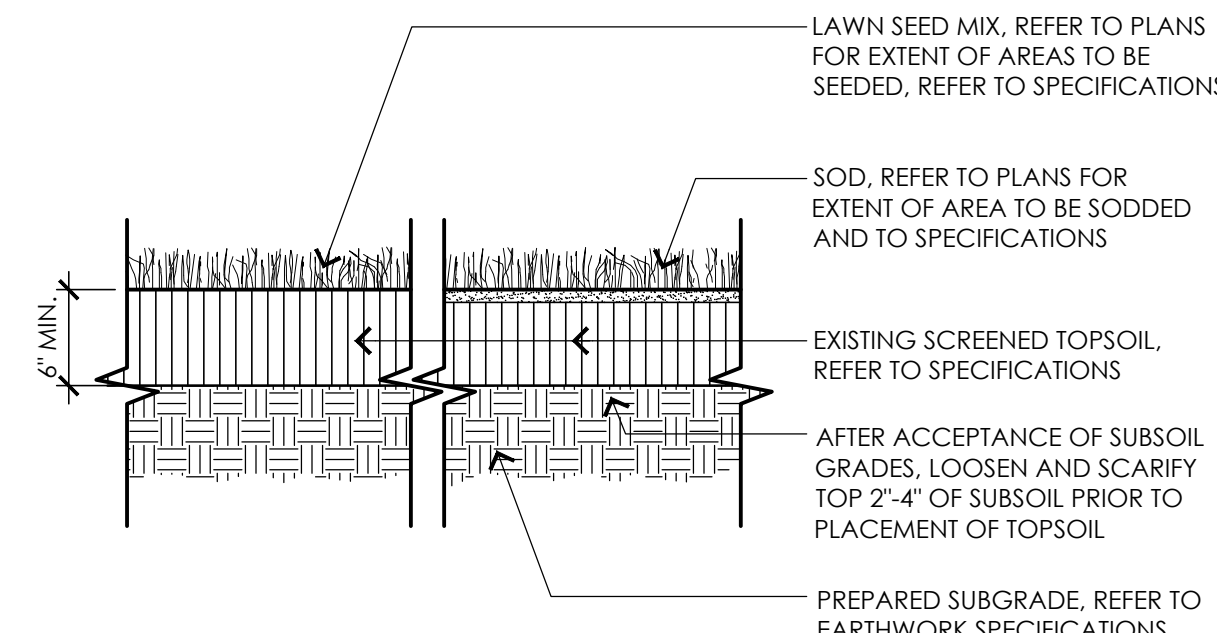
SHEET TITLE:
 PLANTING PLAN
 SHEET II

SHEET NO.:
L3.2

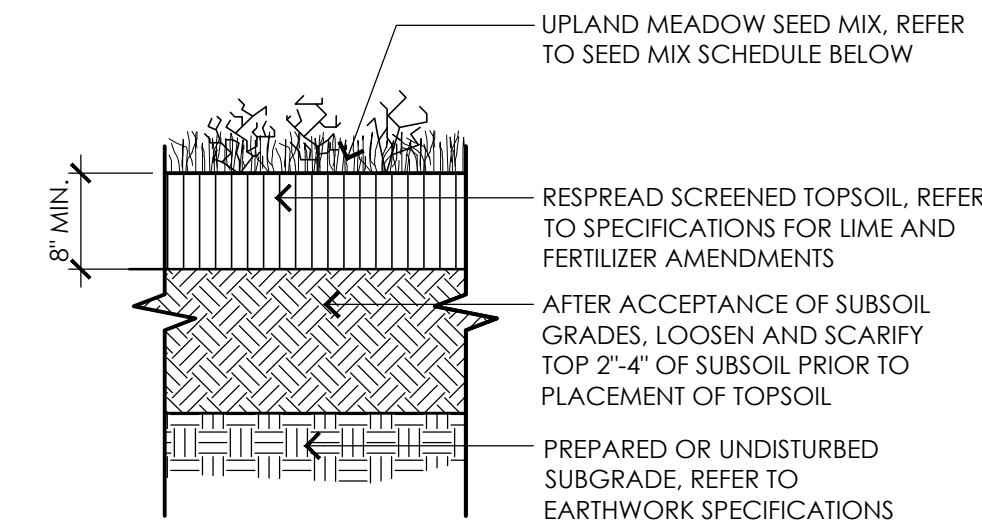
CONTACT DIGSAFE: UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.



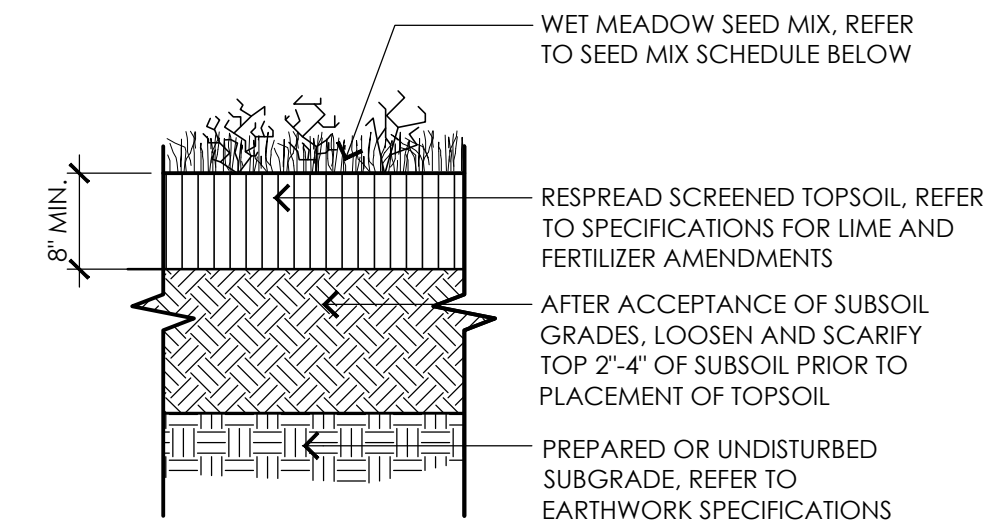
NOTE:
REFER TO SHEETS L3.1 AND L3.2 FOR LIMITS OF SOD MOW STRIP AREAS.



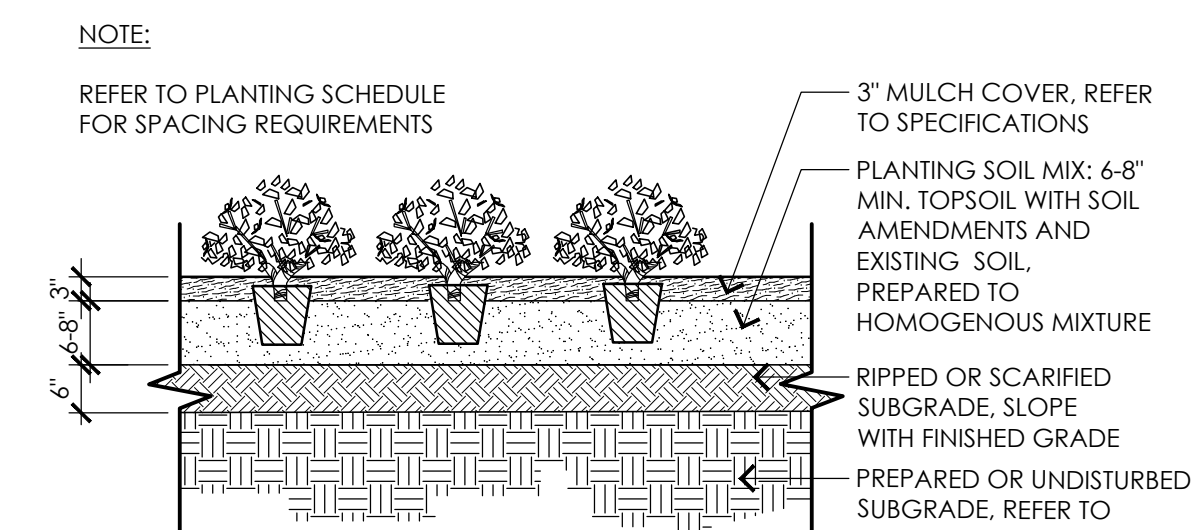
1 LOAM AND SEED / SOD
NOT TO SCALE



2 UPLAND SEED MIX
NOT TO SCALE

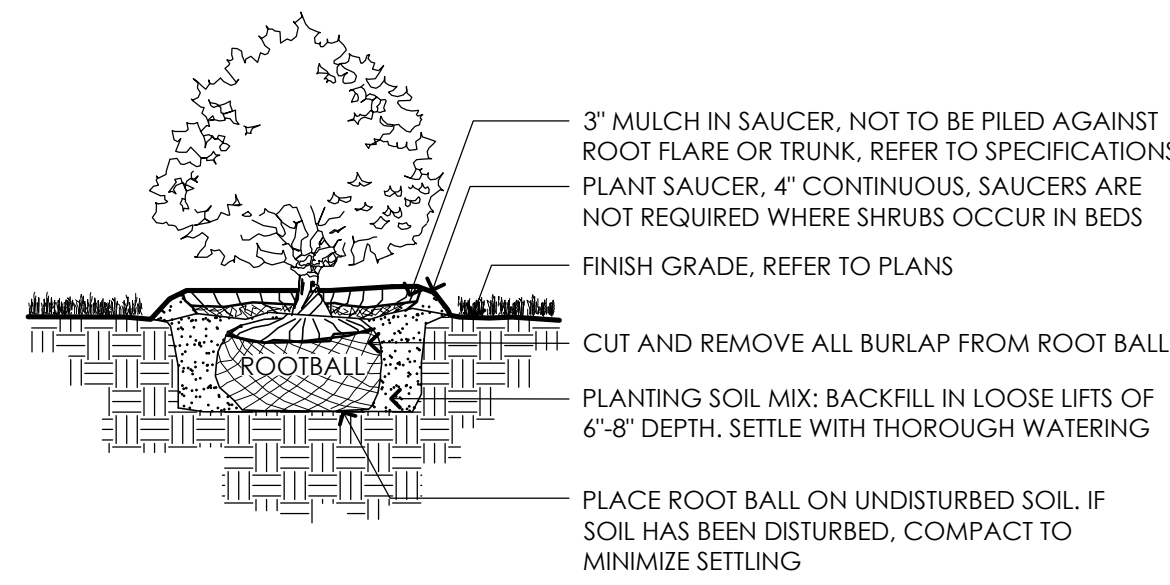


3 WET MEADOW SEED MIX
NOT TO SCALE

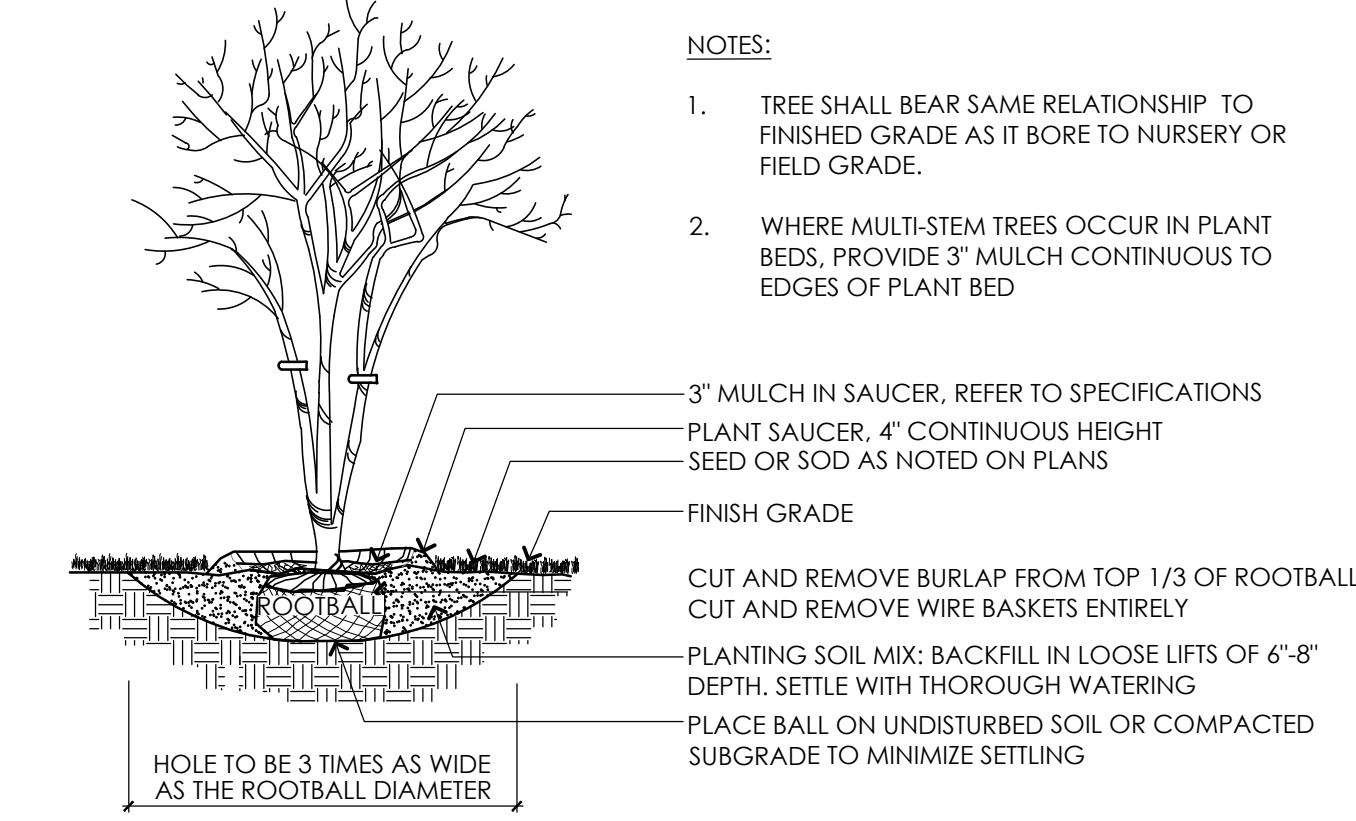


4 PERENNIALS, GROUNDCOVER, AND GRASSES
NOT TO SCALE

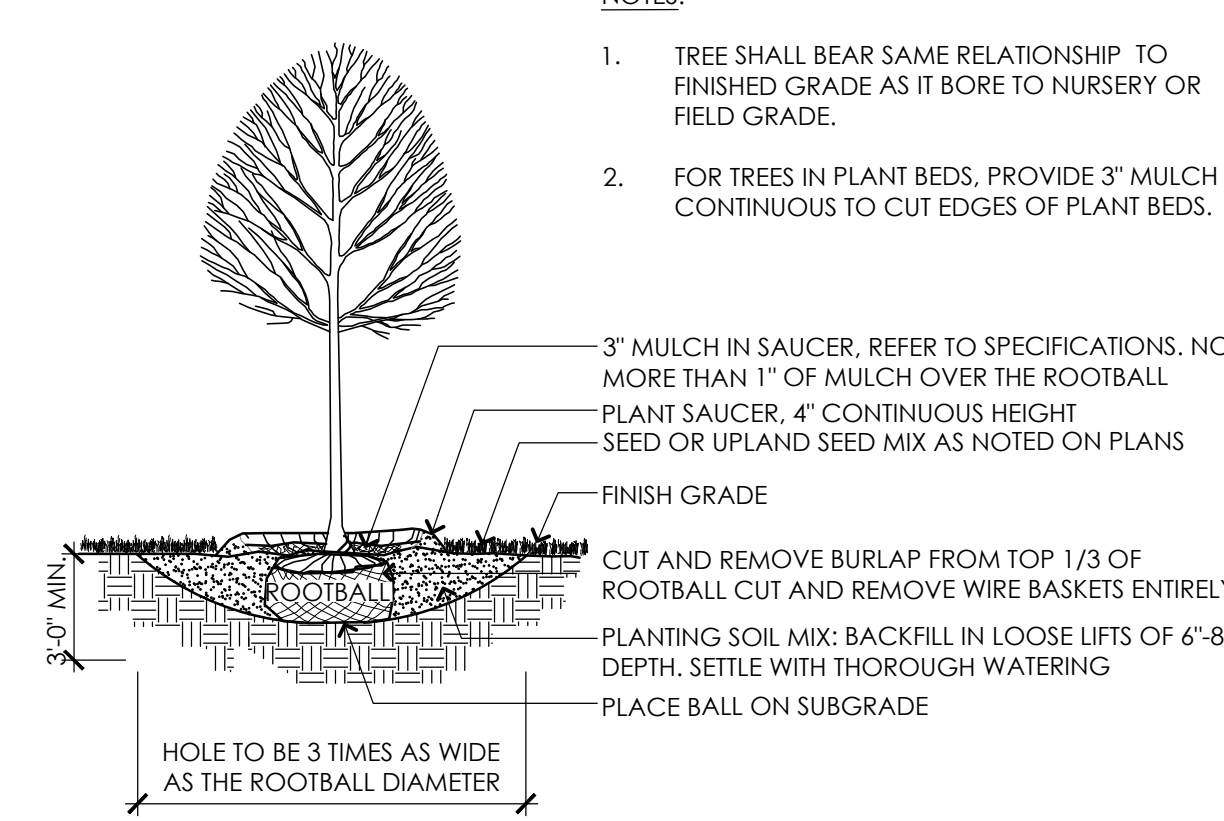
- NOTES:
- SHRUB SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AS IT BORE TO NURSERY OR FIELD GRADE.
 - WHERE SHRUBS OCCUR IN GROUPINGS IN PLANT BEDS, PROVIDE 2-FOOT DEEP CONTINUOUS LOAM BED AND 3" MULCH CONTINUOUS TO CUT EDGES OF PLANT BED



5 SHRUB
NOT TO SCALE

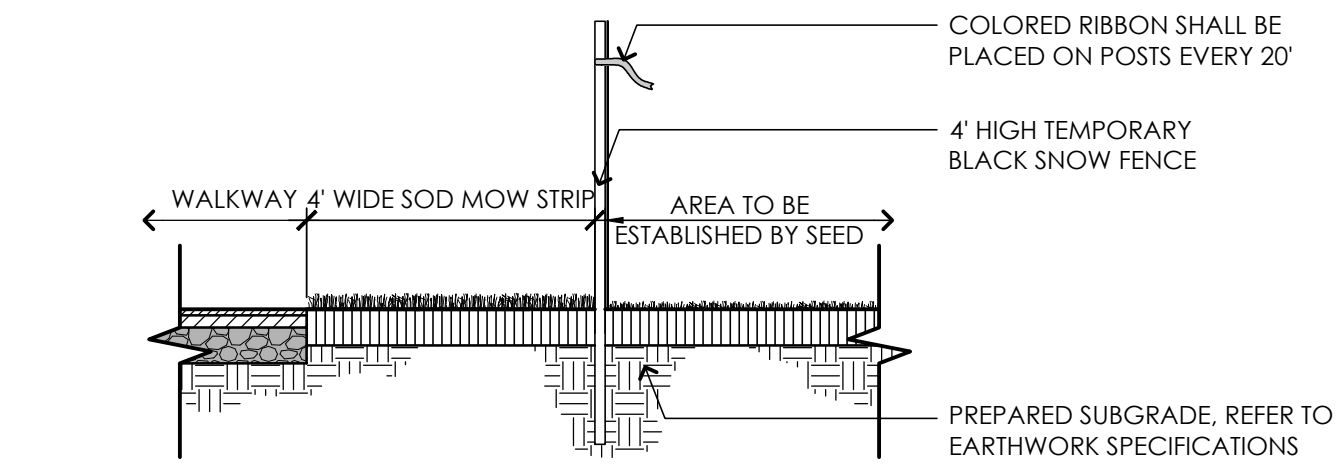


6 MULTI-STEM TREE
NOT TO SCALE



7 DECIDUOUS TREE
NOT TO SCALE

- NOTE:
- CONTRACTOR SHALL PROVIDE 18"x24" TEMPORARY VINYL SIGNS SECURED TO SNOW FENCE, TYPICAL FOR FOUR (4) SIGNS. GRAPHICS TO BE PROVIDED BY LANDSCAPE ARCHITECT.



8 TEMPORARY FENCING AT SEED ESTABLISHMENT AREAS
NOT TO SCALE

SUGGESTED TREES AND SHRUBS

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	QTY
TREES (MIXTURE OF DRY AND WET)					
BP	BETULA POPULIFOLIA	GRAY BIRCH	10'-12' HT.	MULTI-STEM	9 FACW
CC	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2-2.5' CAL.	B&B	8 FAC
NS	NYSSA SYLVATICA	BLACK TUPELO	2-2.5' CAL.	B&B	6 FAC
QC	QUERCUS COCCINEA	SCARLET OAK	3-3.5' CAL.	B&B	3 FACW+
QP	QUERCUS PALUSTRIS	PIN OAK	3-3.5' CAL.	B&B	4 FACW
SHRUBS (MIXTURE OF DRY AND WET)					
AM	ARONIA MELANOCARPA	BLACK CHOKEBERRY	3 GAL.	SPACE 36" O.C.	9 FAC
FG	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	3 GAL.	SPACE 24" O.C.	6 FACW
IG	ILEX GLABRA	INKBERRY	3 GAL.	SPACE 36" O.C.	6 FACW-
IV	ILEX VERTICILLATA	WINTERBERRY	3 GAL.	SPACE 36" O.C.	2 FACW+
GRASSES AND GROUNDCOVERS					
CA	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	SPACE 24" O.C.	582
DP	DENNSTAEDIA PUNCTILOBULA	HAY SCENTED FERN	1 GAL.	SPACE 24" O.C.	315
MF	MONARDA FISTULOSA	WILD BERGAMOT/ BEEBALM	1 GAL.	SPACE 18" O.C.	214
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	1 GAL.	SPACE 24" O.C.	243
RH	RUDBECKIA HIRTA	BLACK-EYED SUSAN	1 GAL.	SPACE 24" O.C.	218

TERMS:

TERMS:	OBLIGATED WETLAND SPECIES	ALMOST ALWAYS IN WETLANDS
OBL	OBLIGATED WETLAND SPECIES	ALMOST ALWAYS IN WETLANDS
FACW	FACULTATIVE WETLAND SPECIES	USUALLY IN WETLANDS BUT OCCASIONALLY NOT IN WETLANDS
FACU	FACULTATIVE UPLAND SPECIES	EQUALLY LIKELY IN WETLANDS AND NOT IN WETLANDS
FACU	FACULTATIVE UPLAND SPECIES	USUALLY NOT IN WETLANDS BUT OCCASIONALLY IN WETLANDS
UPL	OBLIGATED UPLAND SPECIES	ALMOST ALWAYS IN NON-WETLANDS

UPLAND SEED MIX

BOTANICAL NAME	COMMON NAME	
NEW ENGLAND ROADSIDE MATRIX UPLAND SEED MIX		
ELYMUS CANADENSIS	CANADA WILD RYE	FACW+
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	FACU
FESTUCA RUBRA	CREeping RED FESCUE	FACU
ANDROPOGON GERARDII	BIG BLUESTEM	FAC
SORGHASTRUM NUTANS	INDIAN GRASS	UPL
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	FACU
PANICUM VIRGATUM	SWITCHGRASS	FAC
RHUS TYPHINA	STAGHORN SUMAC	
CORNUS AMOMUM	SILKY DOGWOOD	FACW
CORNUS RACEMOSA	GREY DOGWOOD	FAC
ASCLEPIAS SYRIACA	COMMON MILKWEEED	FACU-
ZIZIA AUREA	GOLDEN ALEXANDERS	FAC
DESMODIUM CANADENSE	SHOWY TICK TREFOIL	FAC
LESPEDeza CAPITATA	BUSH CLOVER	FACU-
HELIOPSIS HELIANTHOIDES	OX EYE SUNFLOWER	UPL
MONARDA FISTULOSA	WILD BERGAMOT	UPL
RUDBECKIA HIRTA	BLACK EYED SUSAN	FACU-
ASTER LAEVIS	SMOOTH BLUE ASTER	UPL
EUTHAMIA GRAMINIFOLIA	GRASS LEAVED GOLDENROD	FAC
SOLIDAGO JUNCEA	EARLY GOLDENROD	

APPLY 18LBS/ACRE: 1250 SF/LB

- NOTES:
- SEED MIXES SHALL BE EQUIVALENT TO THE SEED MIXES SHOWN AS DESIGNED AND SUPPLIED BY NEW ENGLAND WETLAND PLANTS, INC., AMHERST, MA (413) 548-8000.
 - CONTRACTOR SHALL SUBMIT ALL SEED MIXES TO LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO PLACING ORDER.

UPLAND SEED MIX | 50:50 Blend of Upland Seed Mix and Wet Meadow Seed Mix Quantity:
Site Development Areas (±5,400 sf) 1 lb/1250 sf (qty. ±5 lbs)

WETLAND MEADOW SEED MIX | 50:50 Blend of Upland Seed Mix and Wet Meadow Seed Mix Quantity:
Site Development Areas (±3,600 sf) 1 lb/1250 sf (qty. ±3 lbs)

WET MEADOW SEED MIX

BOTANICAL NAME	COMMON NAME	
NEW ENGLAND ROADSIDE MATRIX WET MEADOW SEED MIX		
ELYMUS RIPARIUS	RIVERBANK WILD RYE	FACW
FESTUCA RUBRA	CREeping RED FESCUE	FACU
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	FACW-
BIDENS ARISTOSA	TICKSEED SUNFLOWER	FACW
PANICUM DICHOTOMIFLORUM	SMOOTH PANIC GRASS	FACW-
PANICUM VIRGATUM	SWITCHGRASS	FAC
CORNUS AMOMUM	SILKY DOGWOOD	FACW
VERBENA HASTATA	BLUE VERVAIN	FACW
CAREX LURIDA	LURID SEDGE	OBL
CAREX SCOPARIA	BLUNT BROOM SEDGE	FACW
HELENIUM AUTUMNALE	COMMON SNEEZEWEED	FACW+
VIBURNUM DENTATUM	ARROW WOOD VIBURNUM	FAC
ASCLEPIAS INCARNATA	SWAMP MILKWEEED	OBL
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	FACW-
EUPATORIUM MACULATUM	SPOTTED JOE PYE WEED	FACW
EUPATORIUM PERFOLIATUM	BONASET	FACW
AGROSTIS SCABRA	ROUGH BENTGRASS/TICKLEGRASS	FAC
SCIRPUS ATROVIRENS	GREEN BULRUSH	OBL
SAMBUCUS CANADENSIS	ELDERBERRY	FACW-

APPLY 18LBS/ACRE: 1250 SF/LB

CONSULTANTS

- ARCHITECT -
OCO ARCHITECTURE :: DESIGN
- MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.
- ELECTRICAL ENGINEER -
NVS ENGINEERS
- WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.
- SURVEY -
REED LAND SURVEY, INC.

TOWN OF READING
Reading, MA
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION
1	12.21.22	REGULATORY REVIEW COMMENTS

SCALE: AS NOTED

PROJECT NO.: 22014.00

FILE: 22014.00-L3.3-P_DET_1.dwg

DRAWN: SRC

CHECKED: EPM/SRC

SEAL:

SHEET TITLE:
**PLANTING DETAILS
AND SCHEDULES**

SHEET NO:

CONSULTANTS

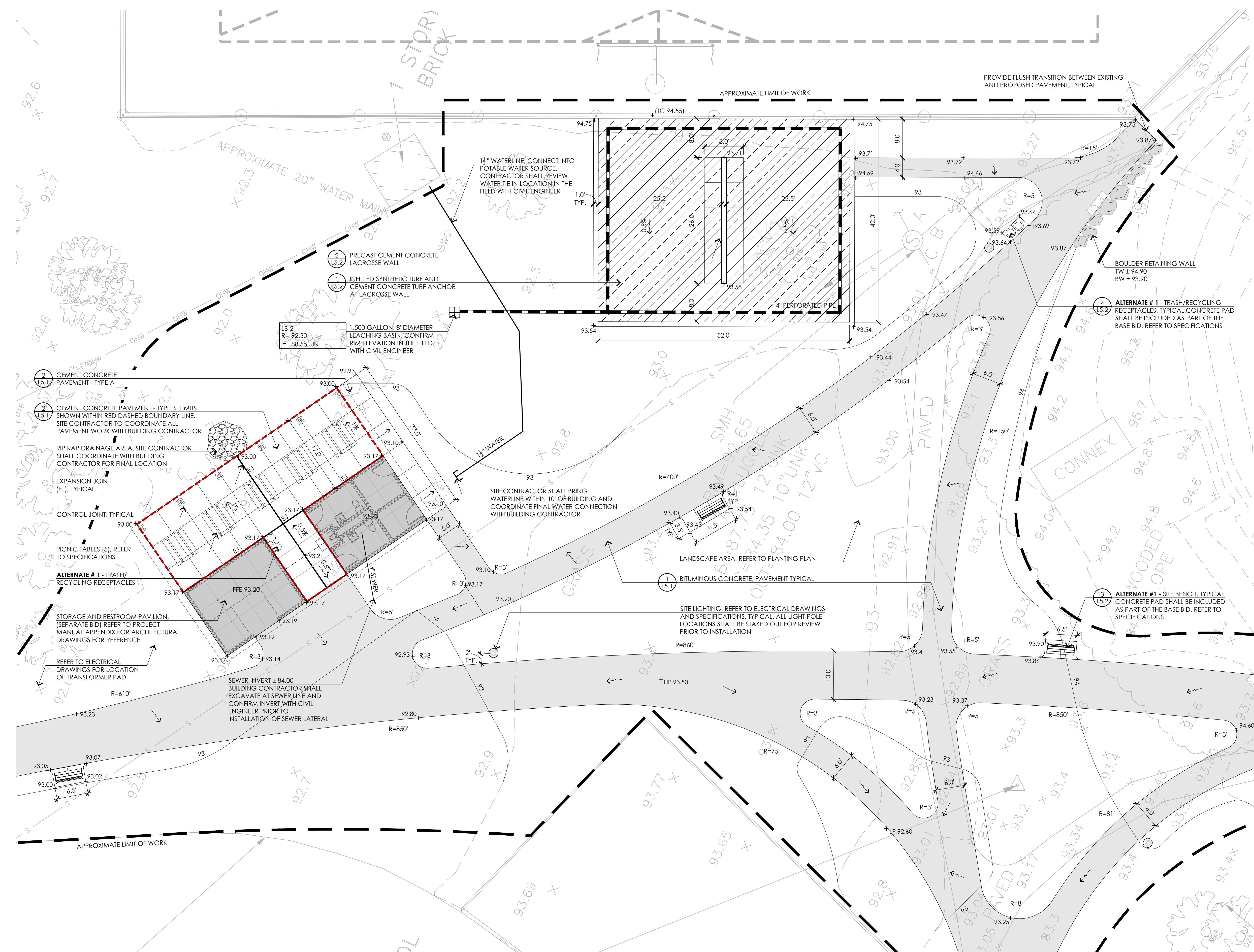
ARCHITECT -
 OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
 BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
 NV5 ENGINEERS

WETLAND DELINEATION-
 EPSILON ASSOCIATES, INC.

SURVEY -
 REED LAND SURVEY, INC.



1 ENLARGEMENT NO. 1
 1" = 10'-0"

TOWN OF READING
 Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

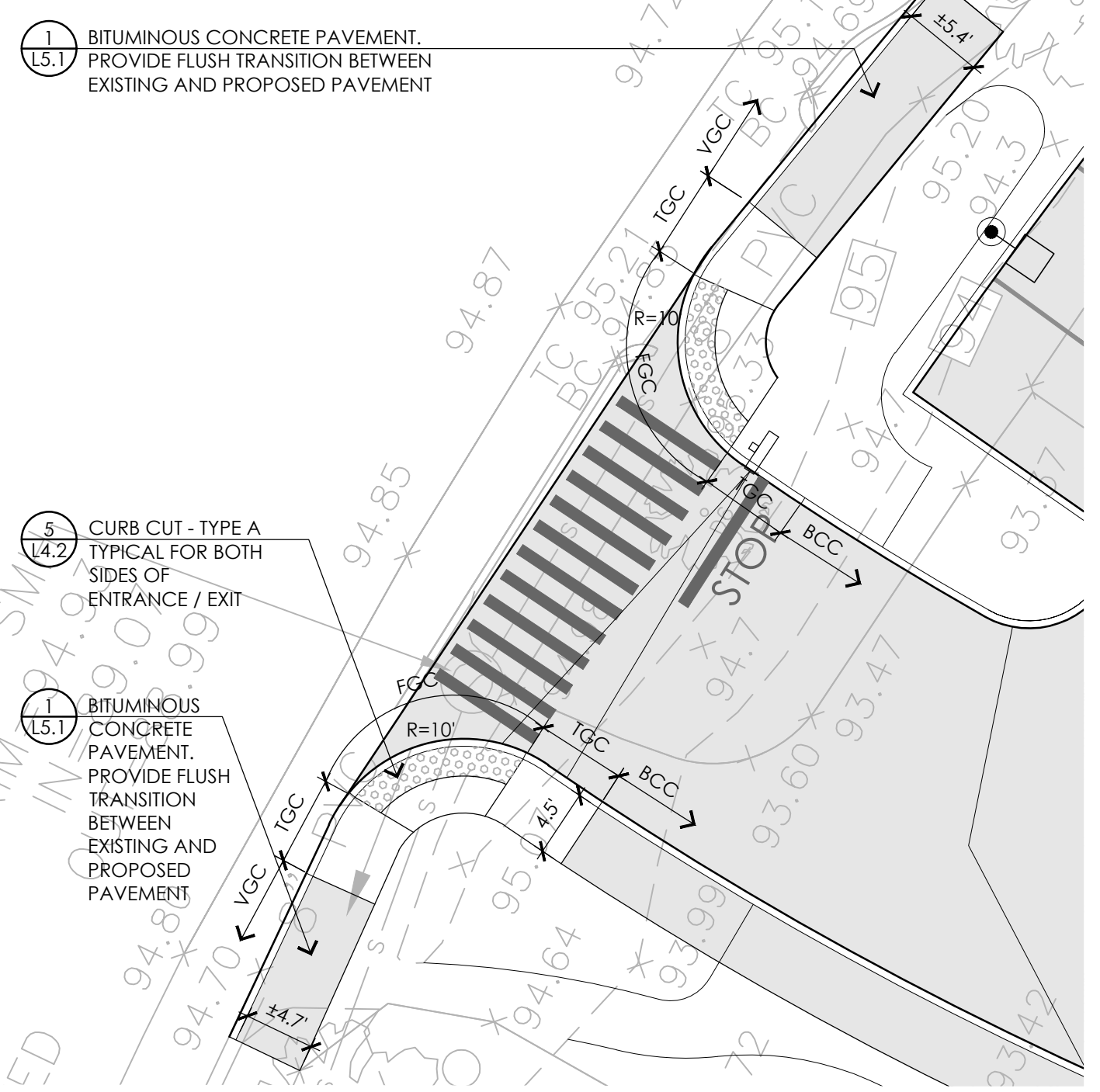
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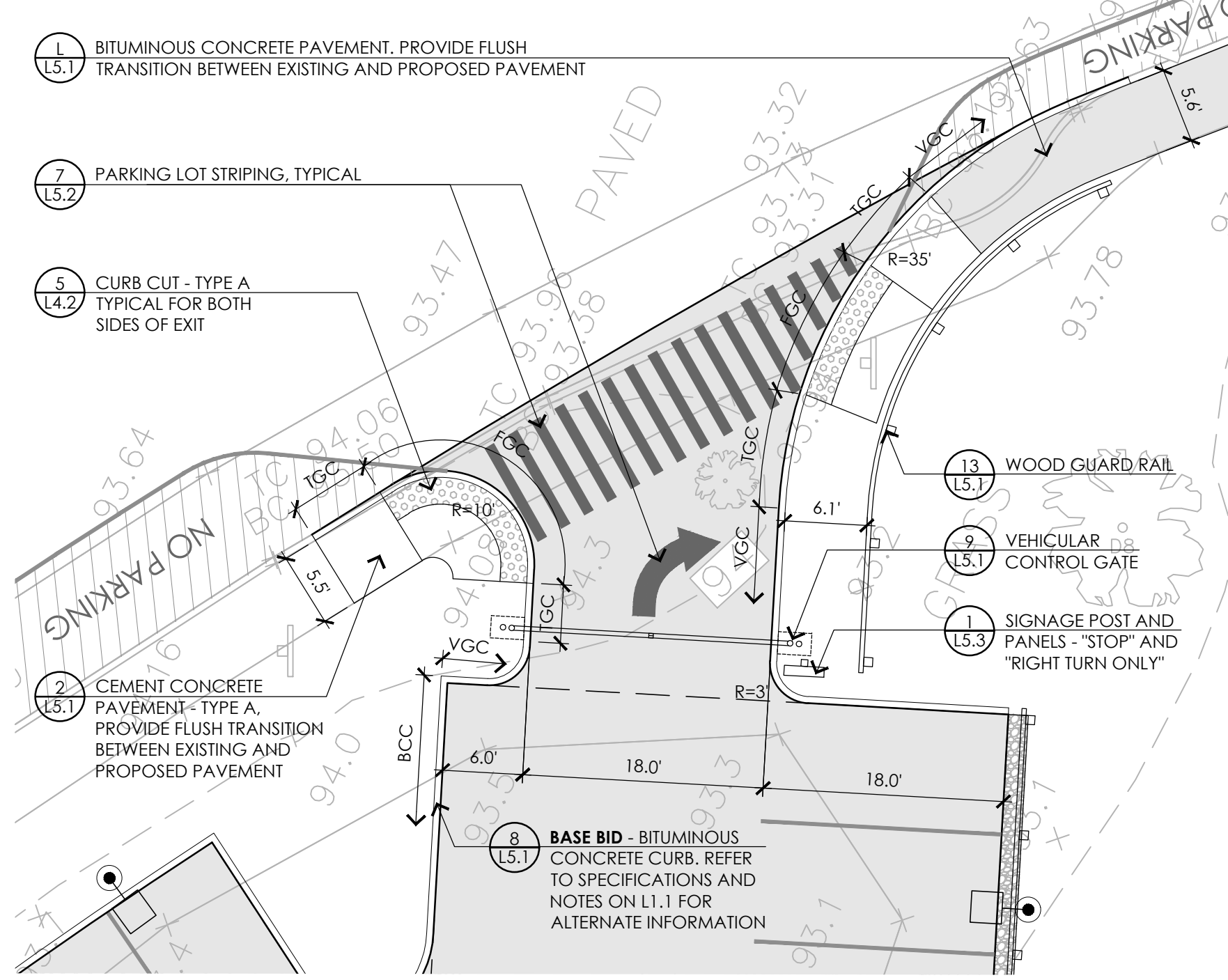
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 ENLARGEMENT PLAN
 SHEET 1

SHEET NO:
L4.1

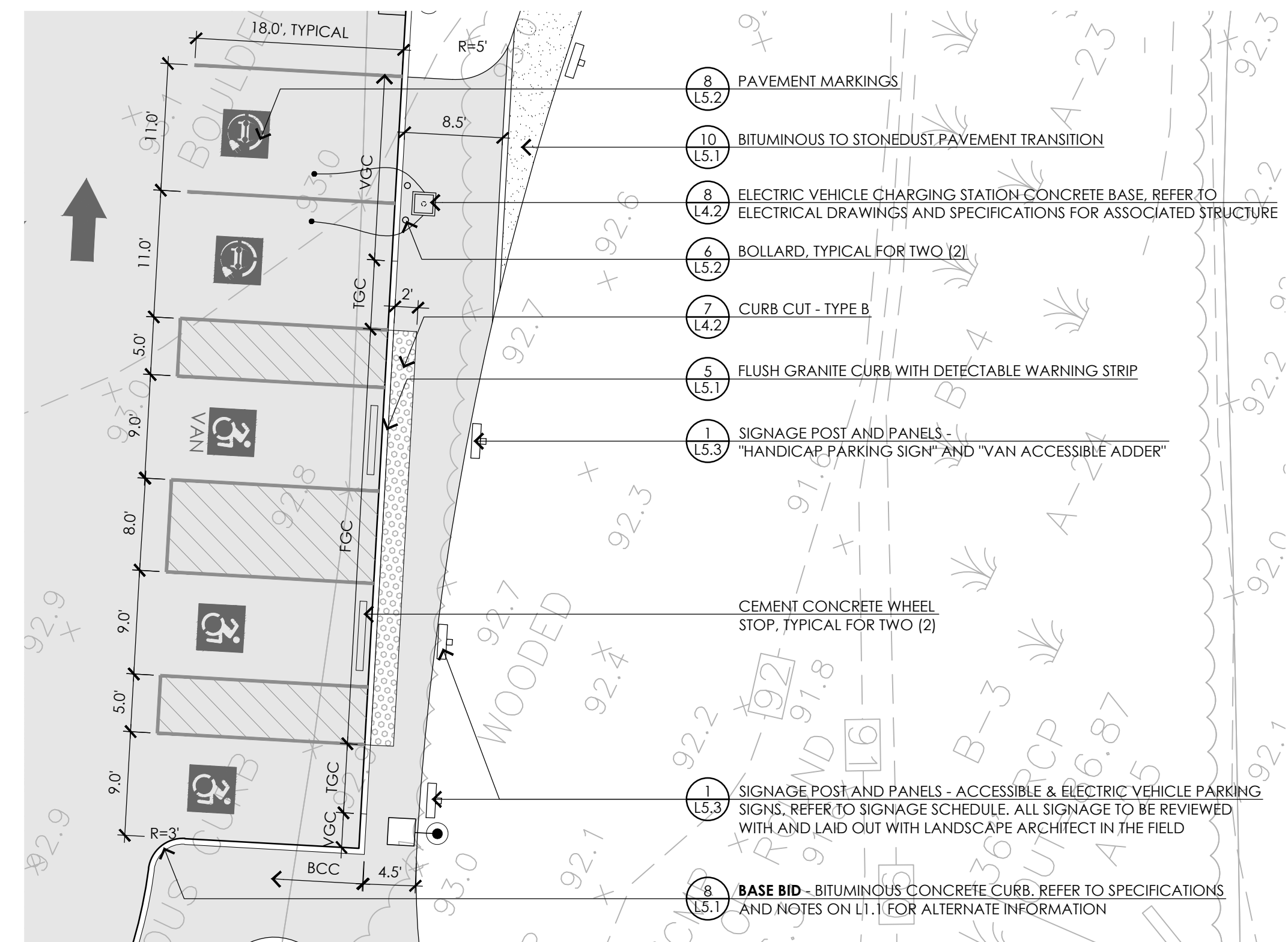
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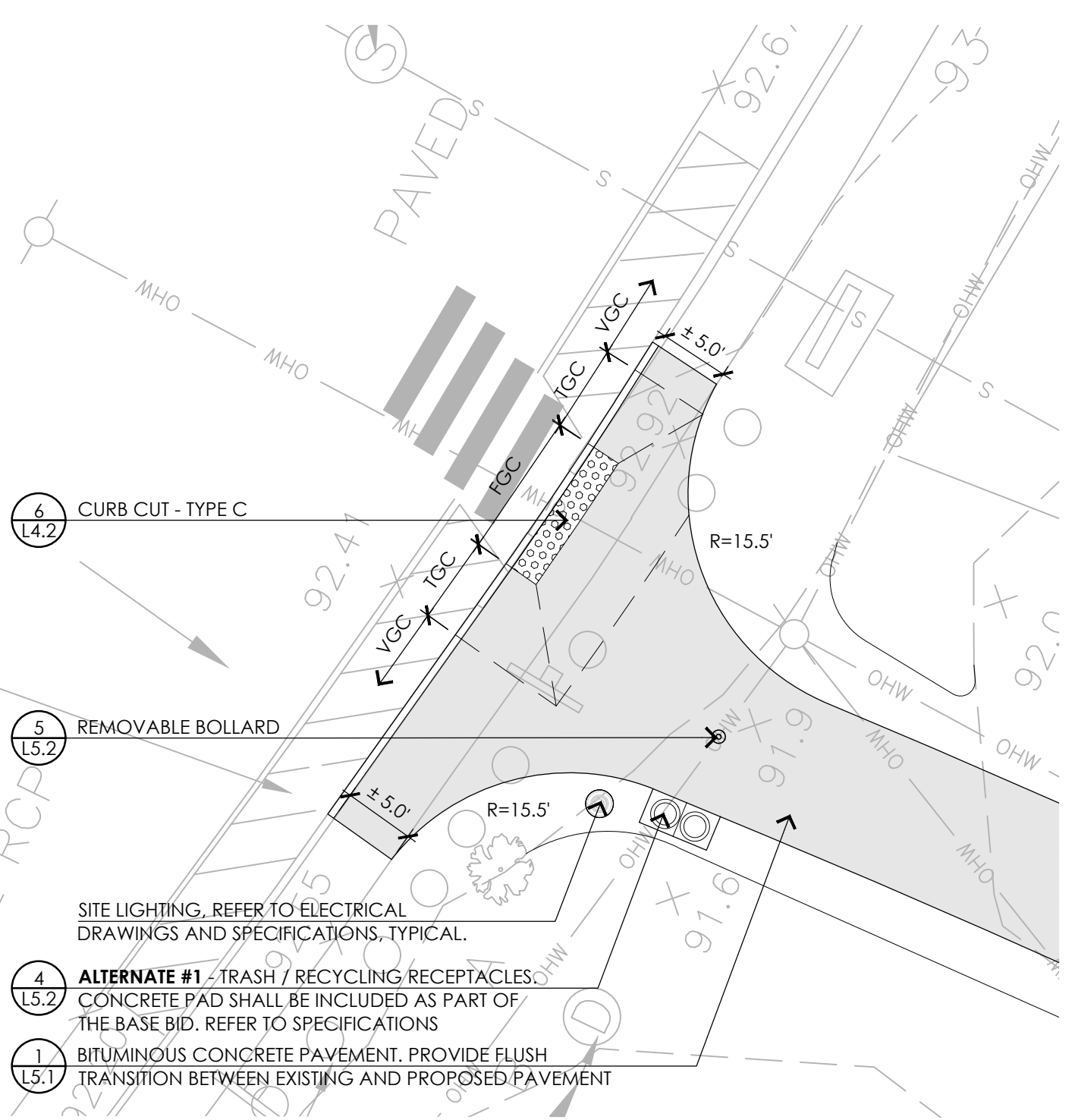
1 ENLARGEMENT NO. 2
1" = 10'-0"



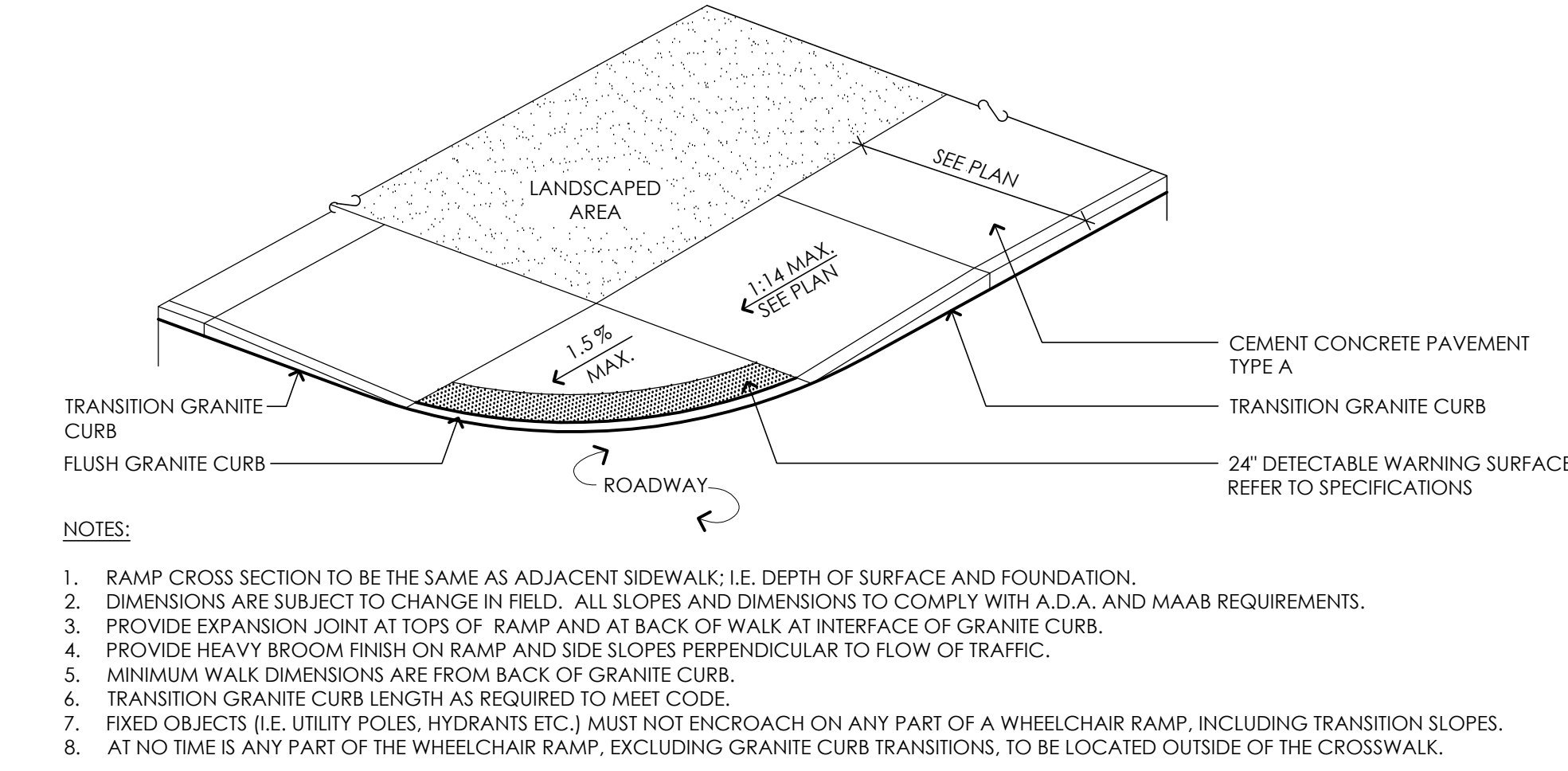
2 ENLARGEMENT NO. 3
1" = 10'-0"



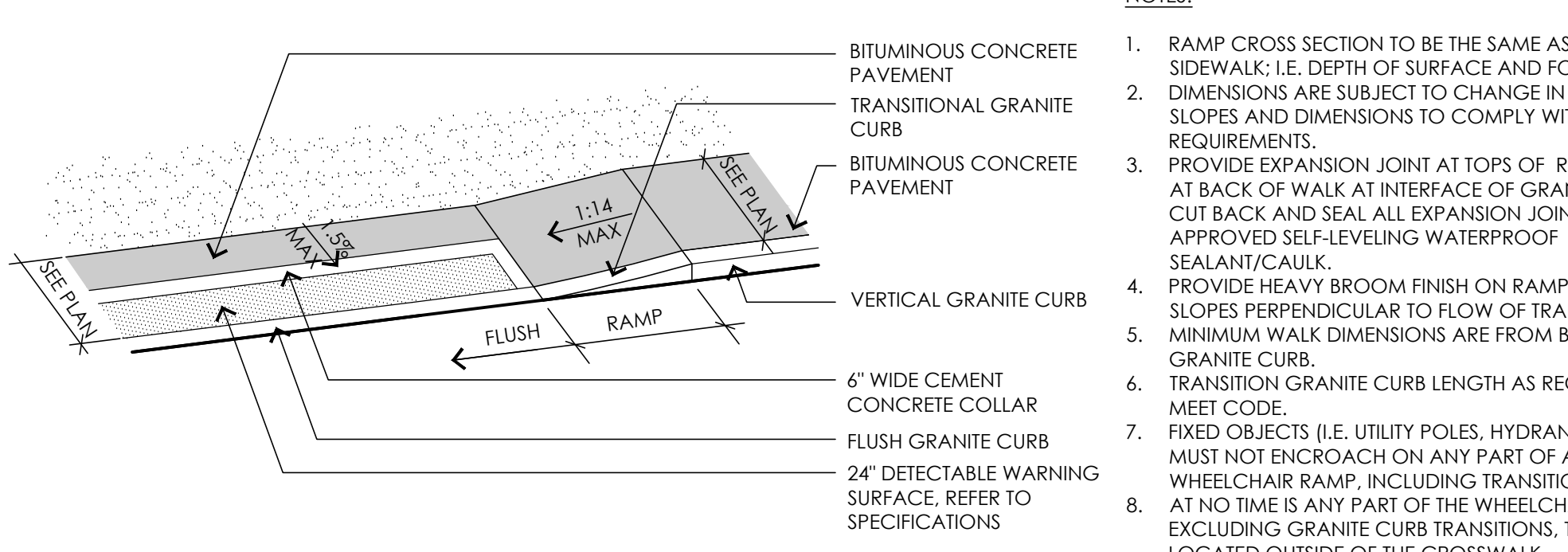
3 ENLARGEMENT NO. 4
1" = 10'-0"



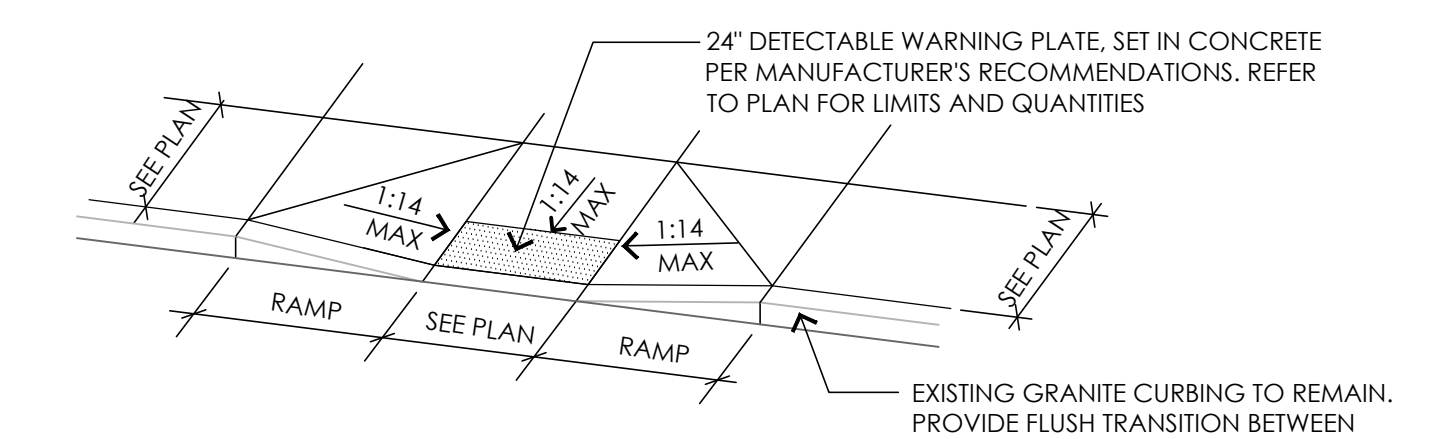
4 ENLARGEMENT NO. 5
1" = 10'-0"



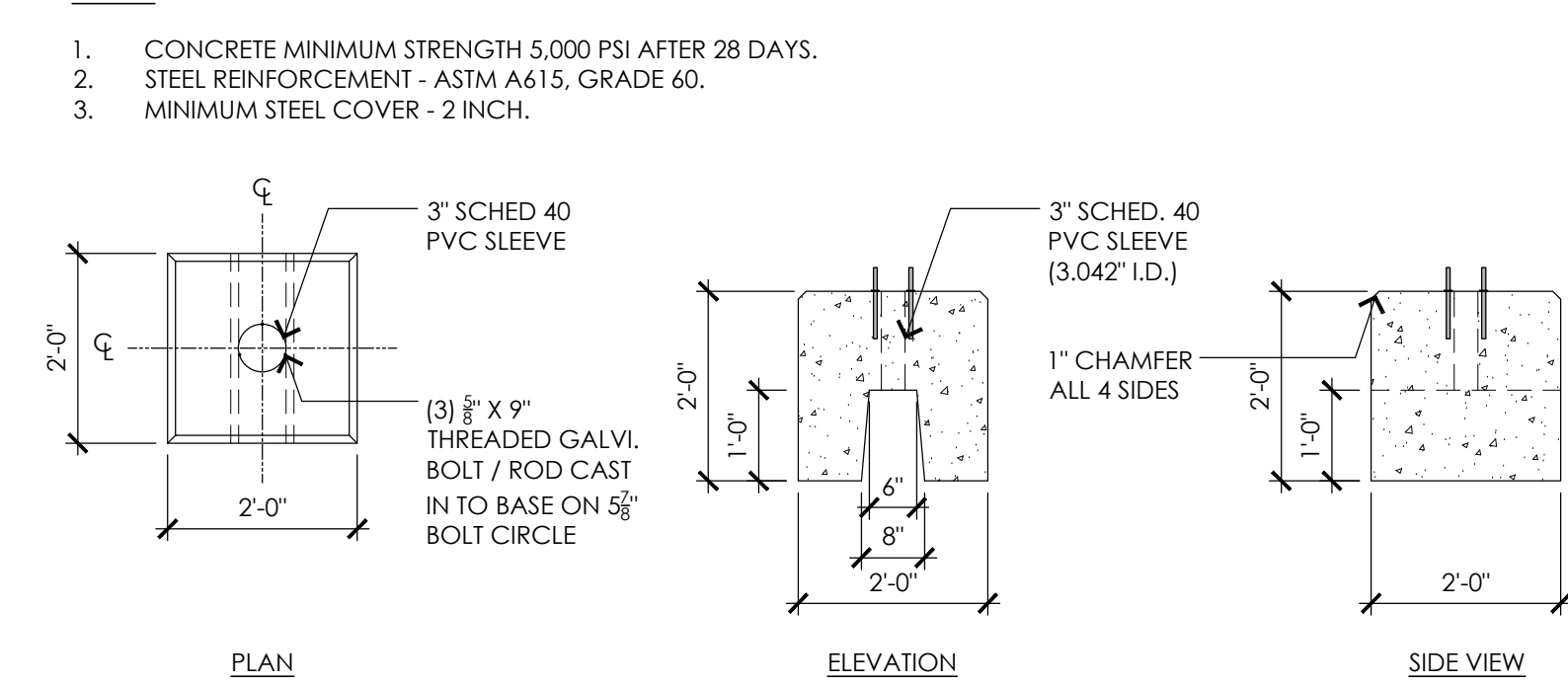
5 CURB CUT - TYPE A
NOT TO SCALE



7 CURB CUT - TYPE B
NOT TO SCALE



6 CURB CUT - TYPE C
NOT TO SCALE



8 ELECTRIC VEHICLE CHARGING STATION CONCRETE BASE
NOT TO SCALE

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CONSULTANTS

ARCHITECT -
OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
NVS ENGINEERS

WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.

SURVEY -
REED LAND SURVEY, INC.

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Reading, MA
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
January, 27 2023

REVISIONS:		
NO.	DATE	DESCRIPTION

SCALE: 1" = 10'-0"
PROJECT NO.: 22014.00
FILE: 22014.00-L4.2-ENL_PLAN.dwg
DRAWN: MJD
CHECKED: EPM/SRC

SEAL:

SHEET TITLE:
ENLARGEMENT PLAN
SHEET II

SHEET NO:
L4.2

CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
 BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
 NV5 ENGINEERS

WETLAND DELINEATION-
 EPSILON ASSOCIATES, INC.

SURVEY -
 REED LAND SURVEY, INC.

TOWN OF READING
 Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

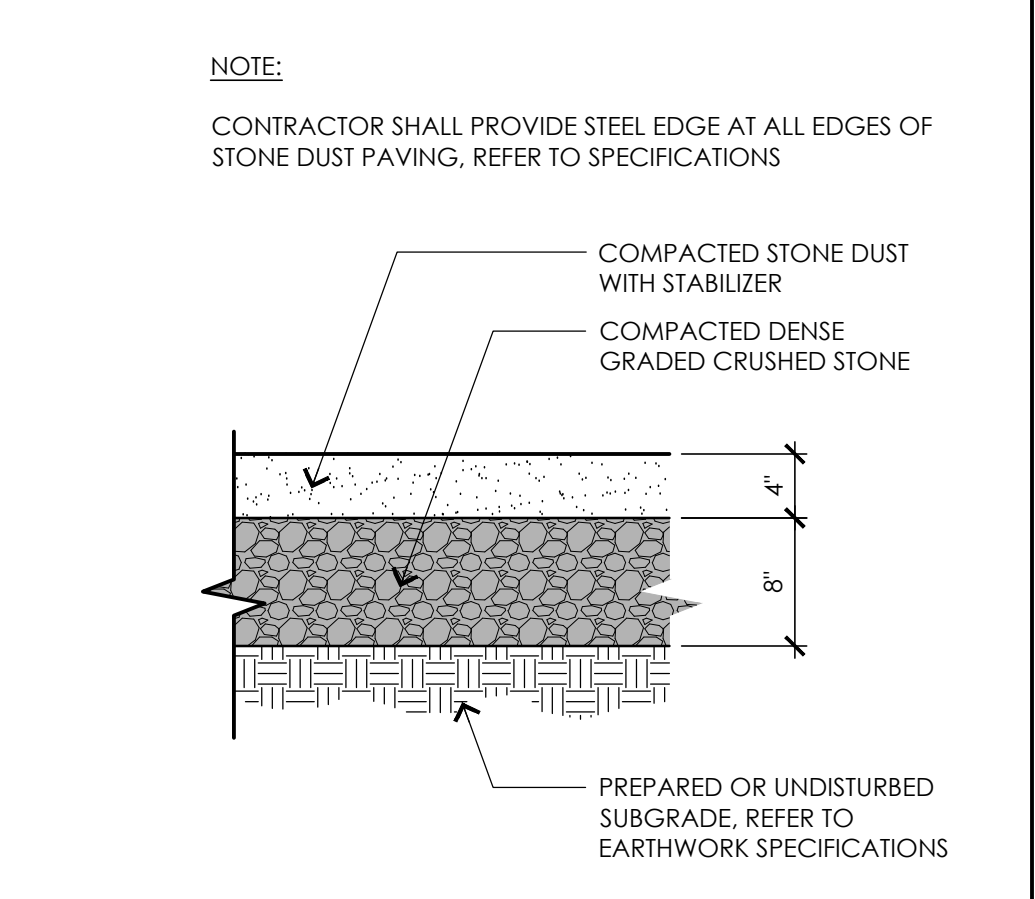
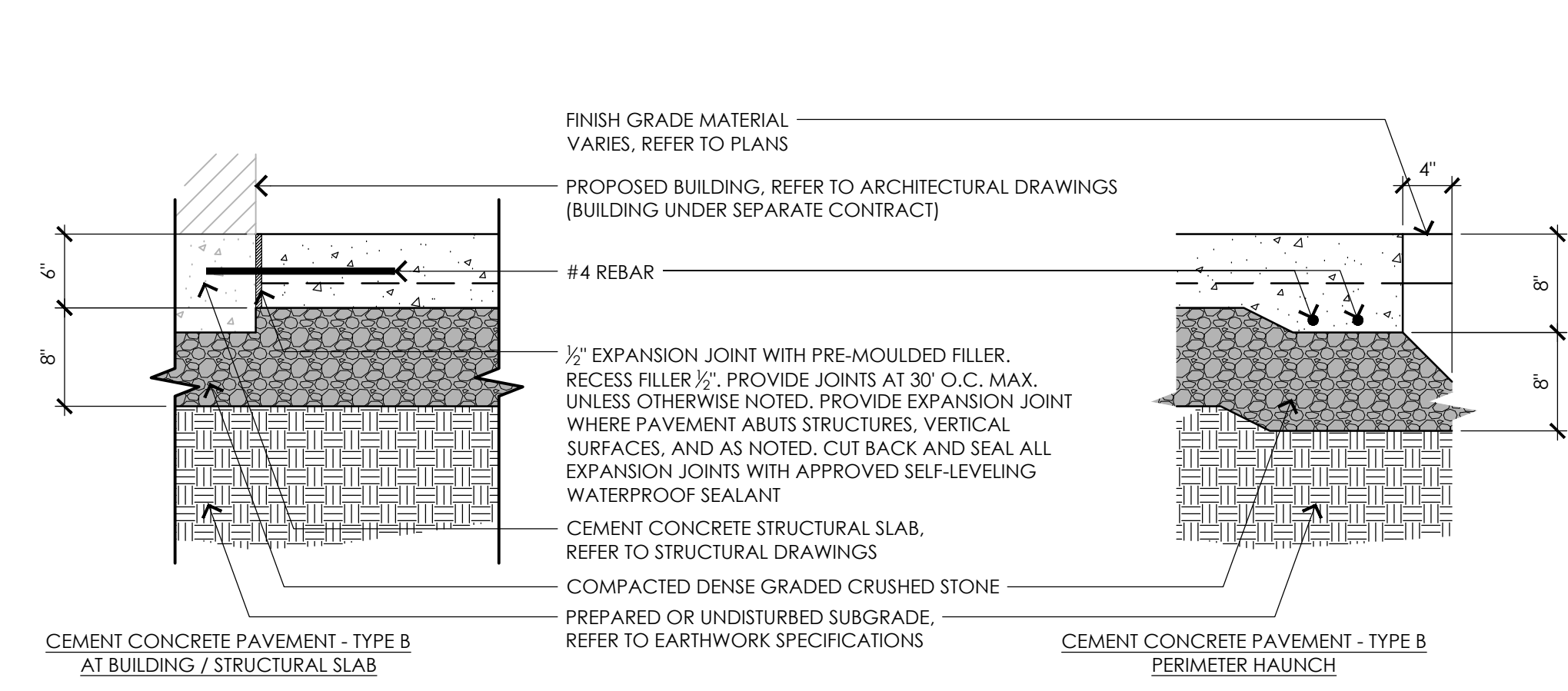
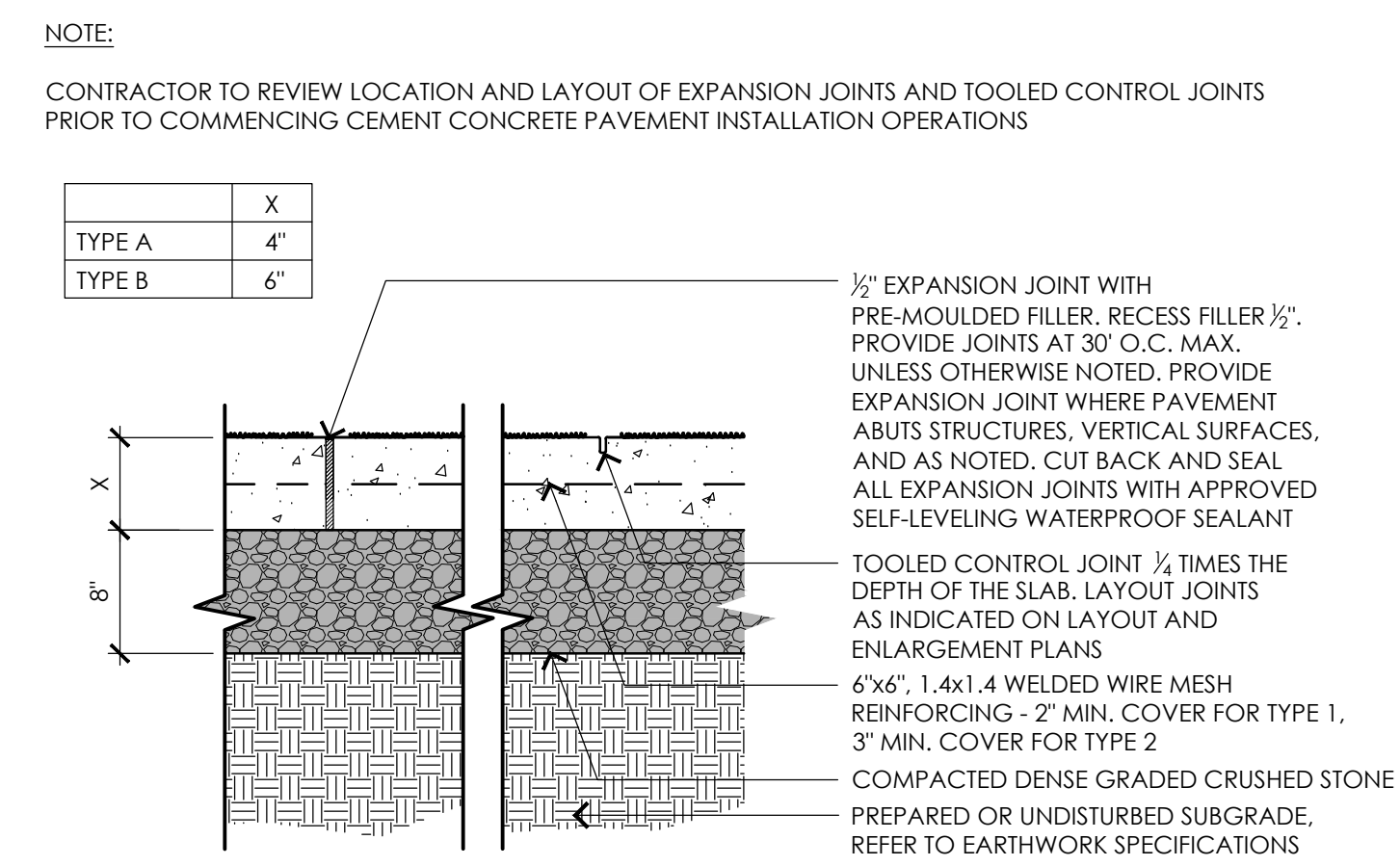
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NO.	DATE	DESCRIPTION

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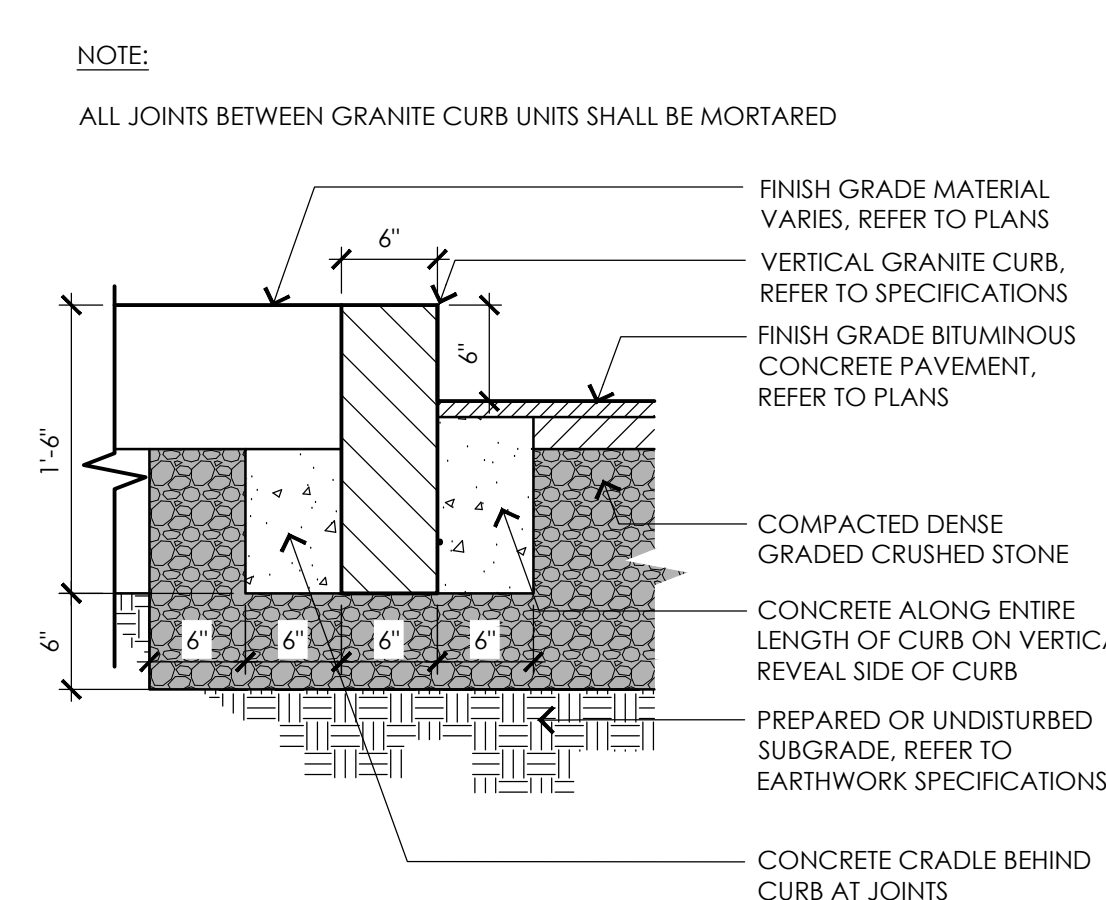
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SHEET TITLE:
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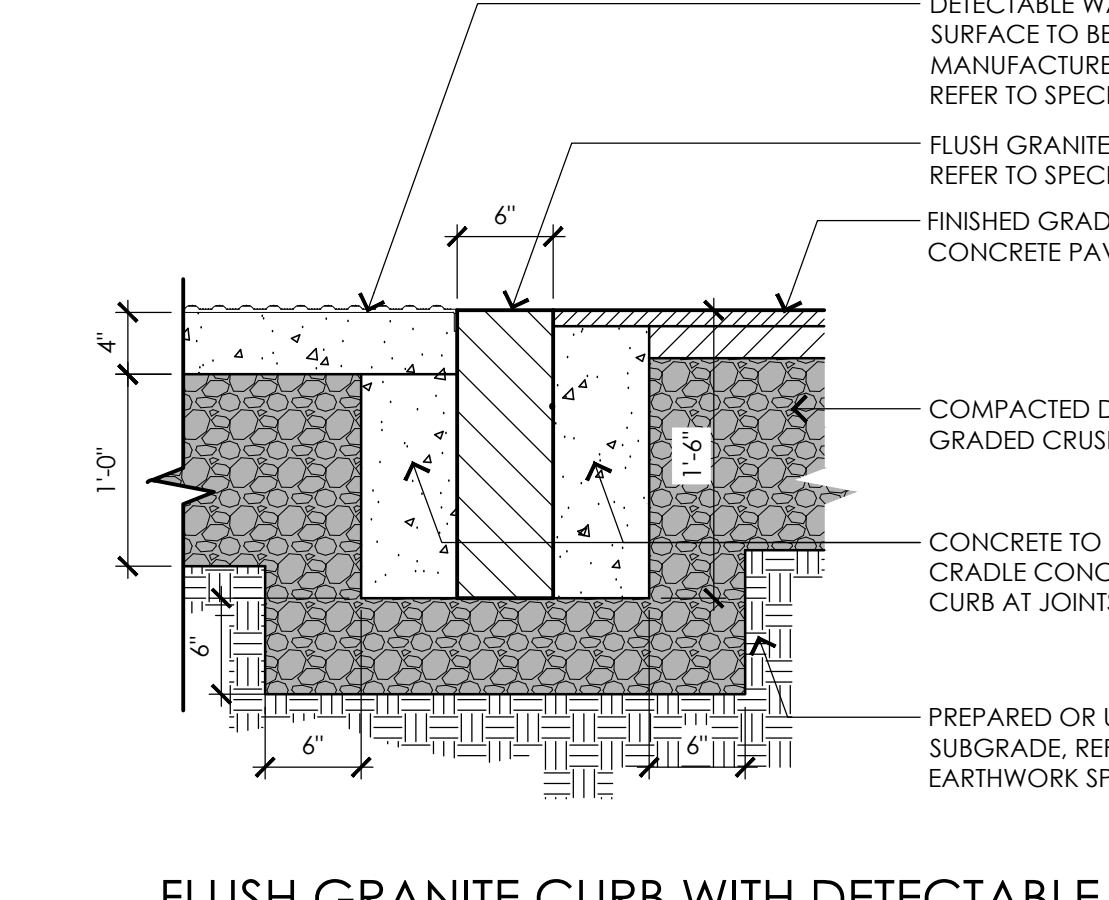
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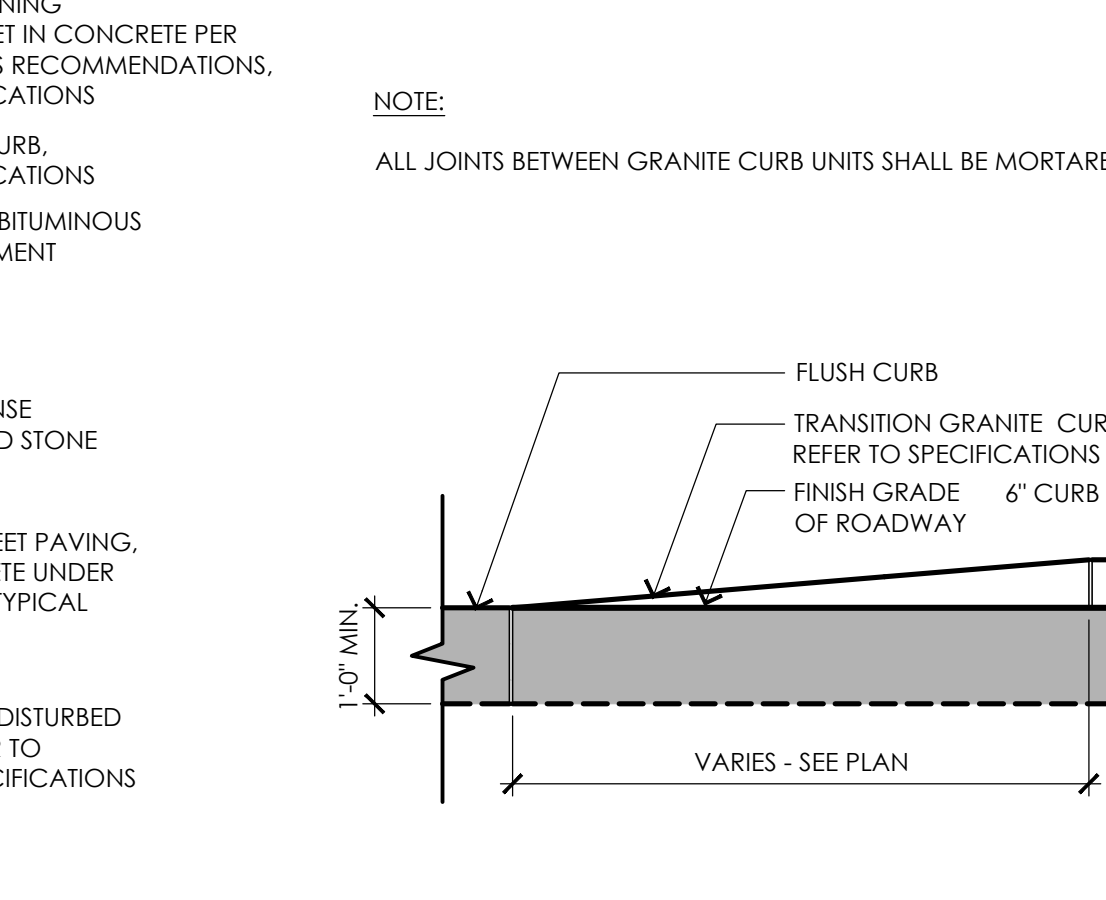
1 BITUMINOUS CONCRETE PAVEMENT
 NOT TO SCALE



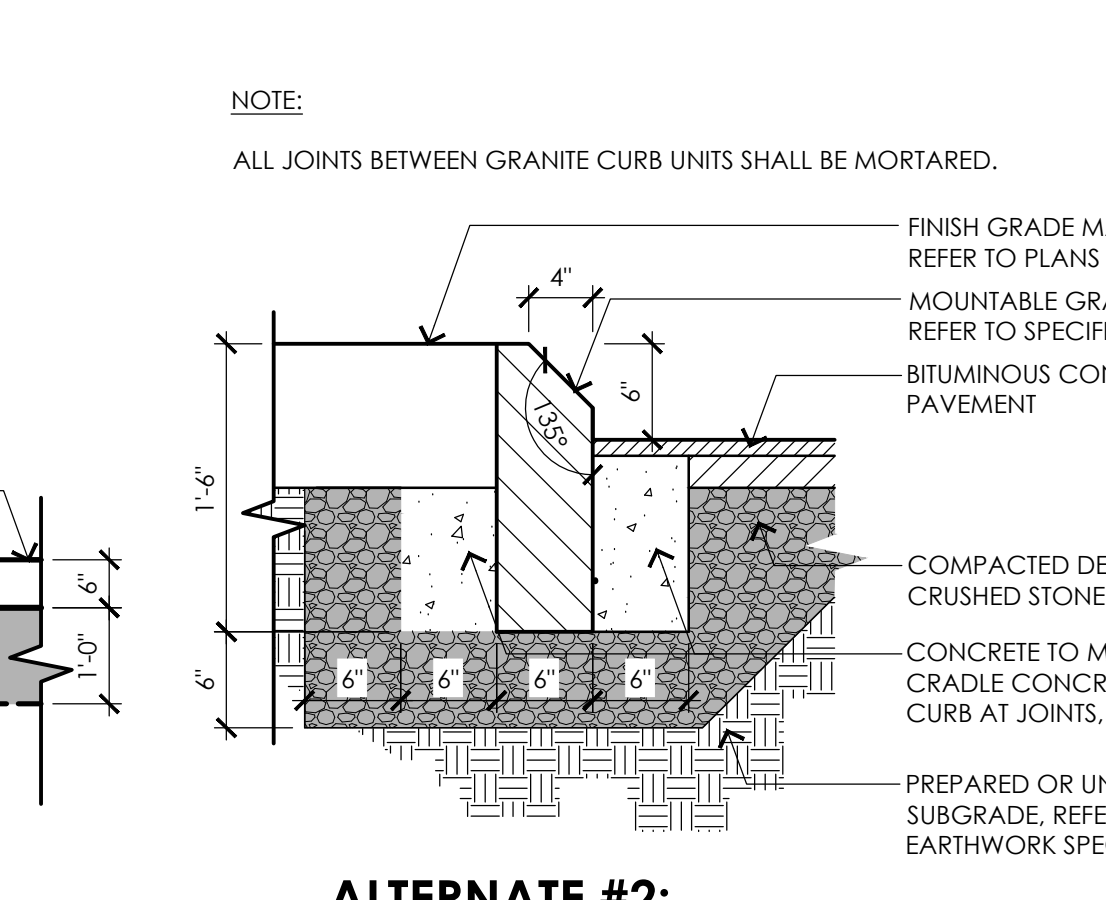
2 CEMENT CONCRETE PAVEMENT
 NOT TO SCALE



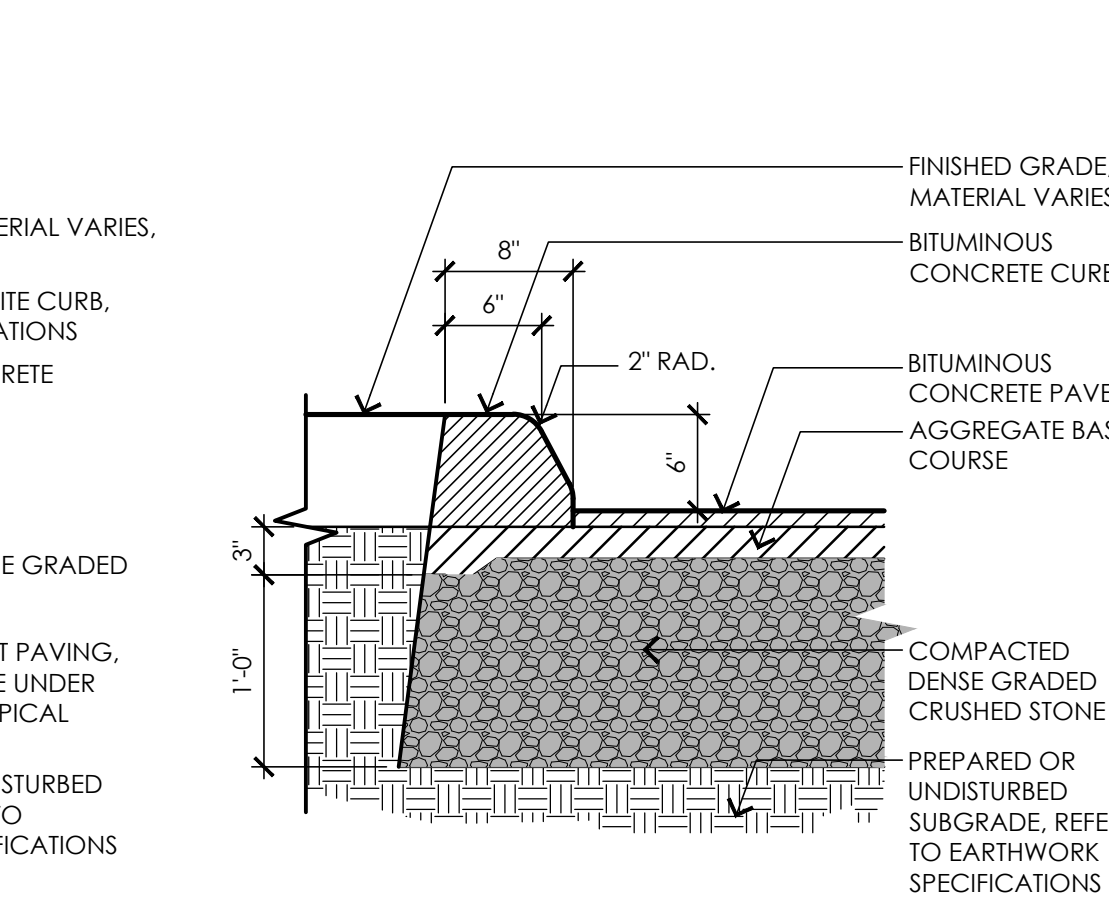
3 STONE DUST PAVEMENT
 NOT TO SCALE



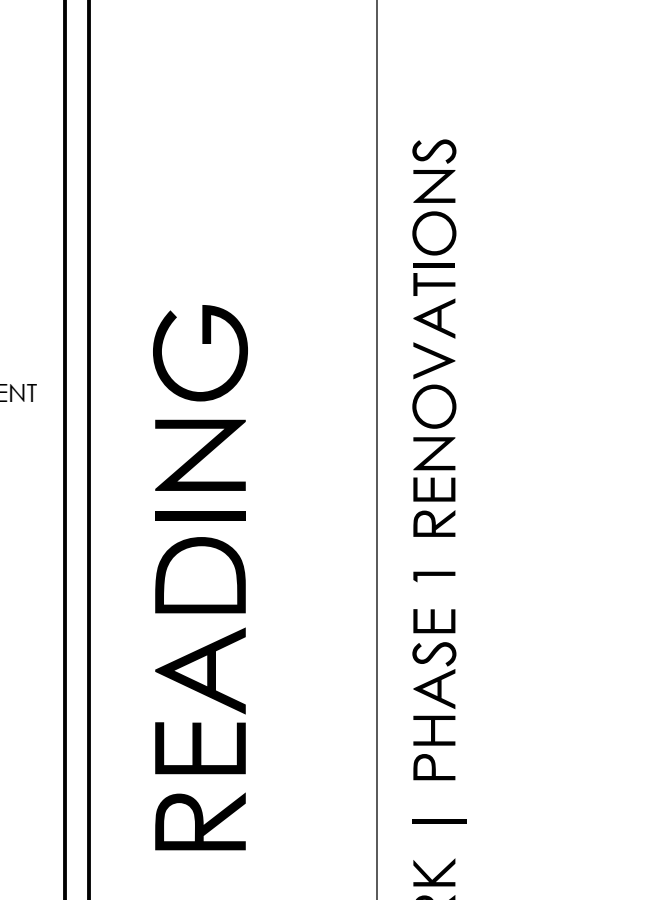
4 VERTICAL GRANITE CURB
 NOT TO SCALE



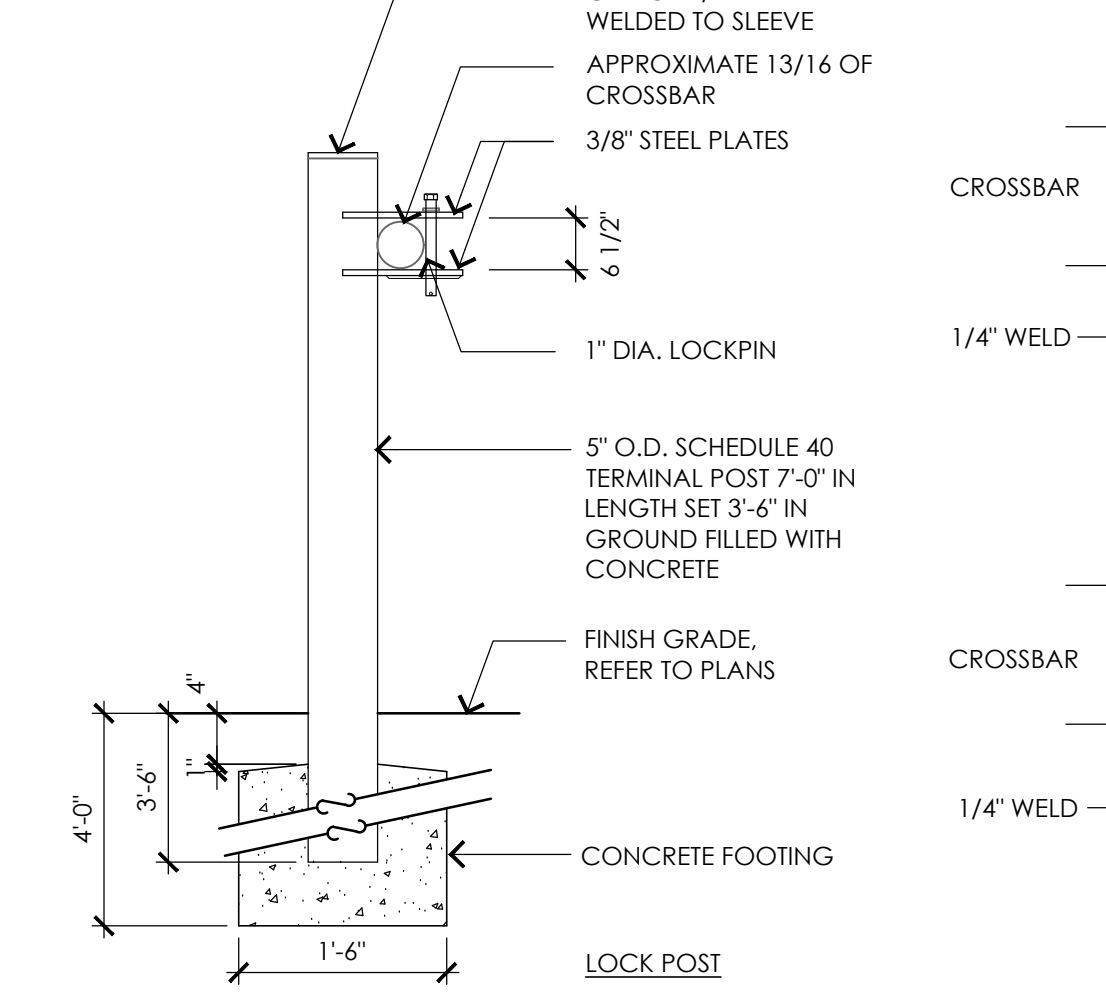
5 FLUSH GRANITE CURB WITH DETECTABLE WARNING STRIP
 NOT TO SCALE



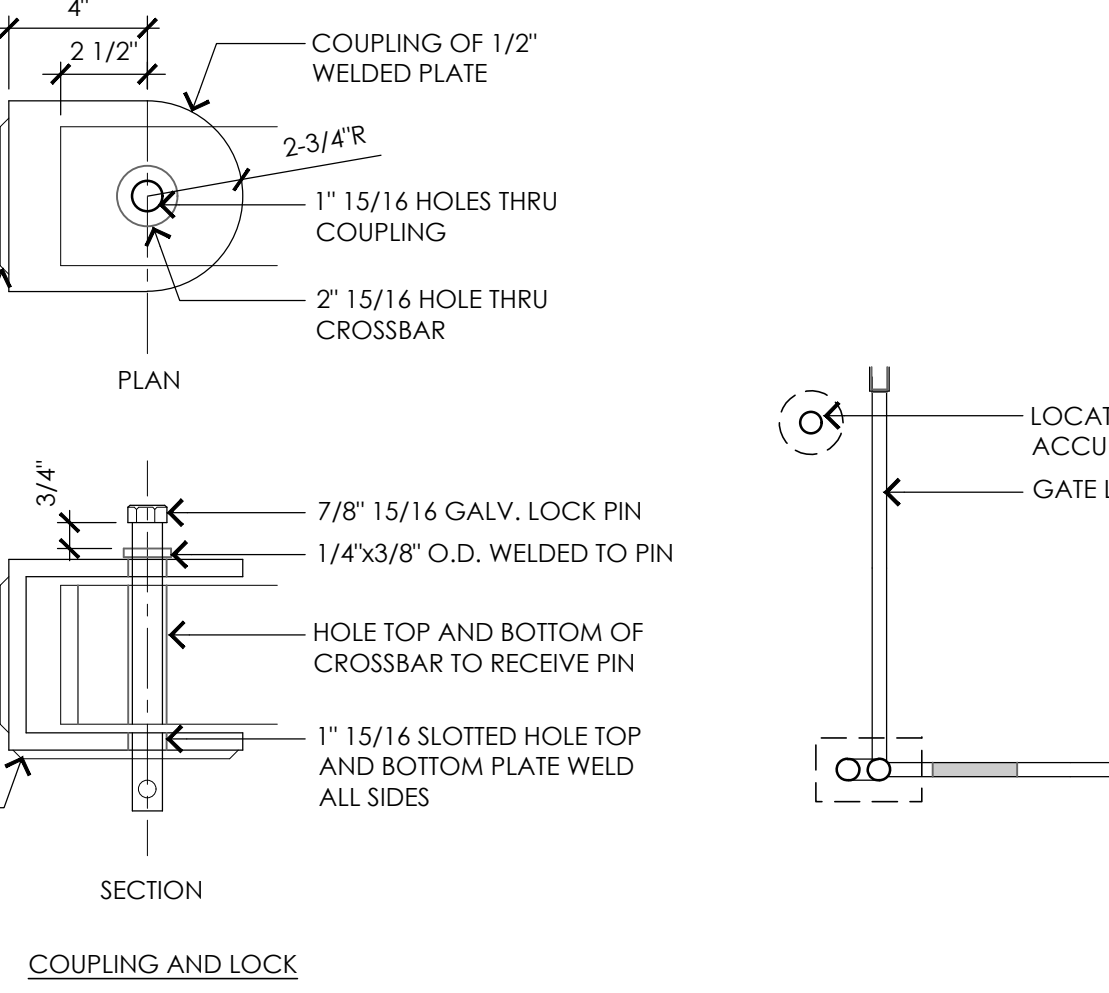
6 TRANSITION GRANITE CURB
 NOT TO SCALE



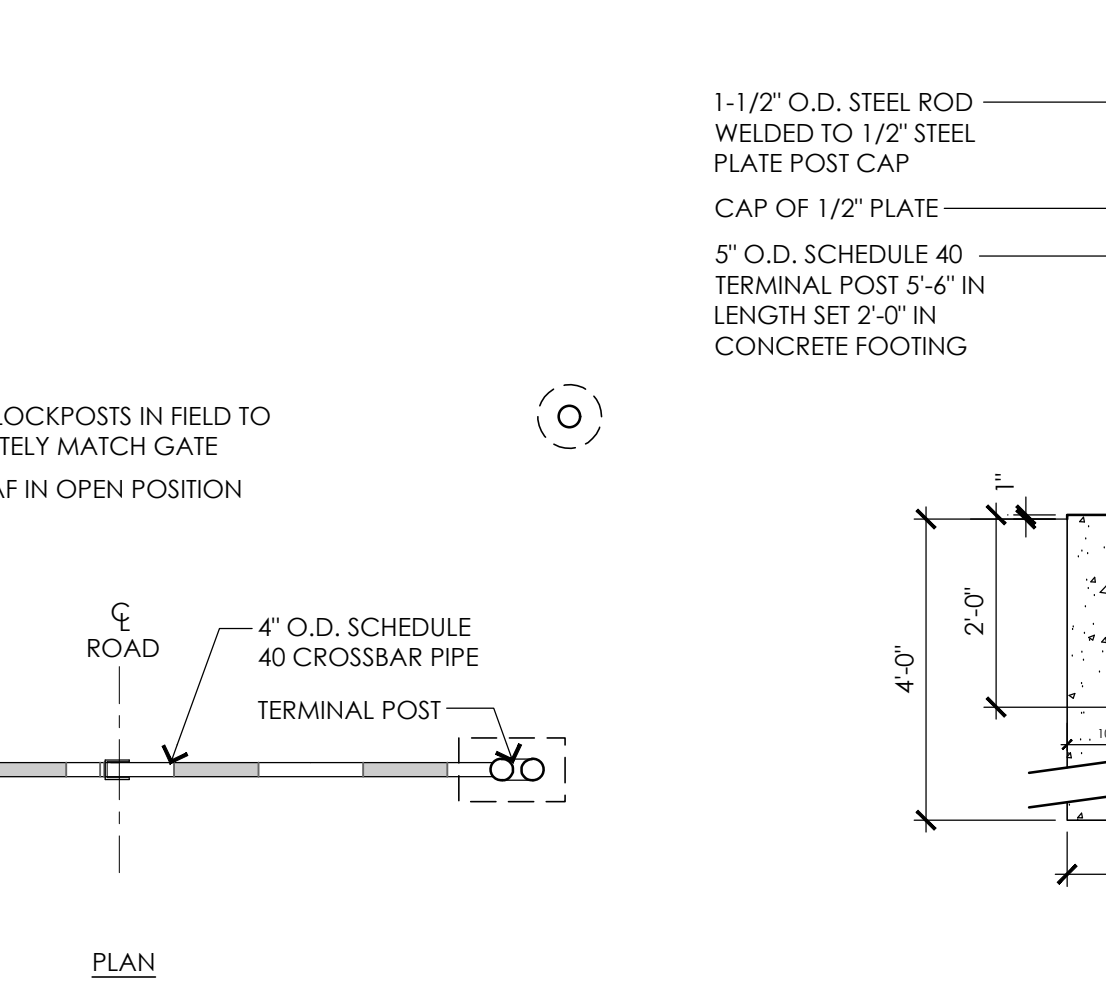
7 MOUNTABLE GRANITE CURB
 NOT TO SCALE



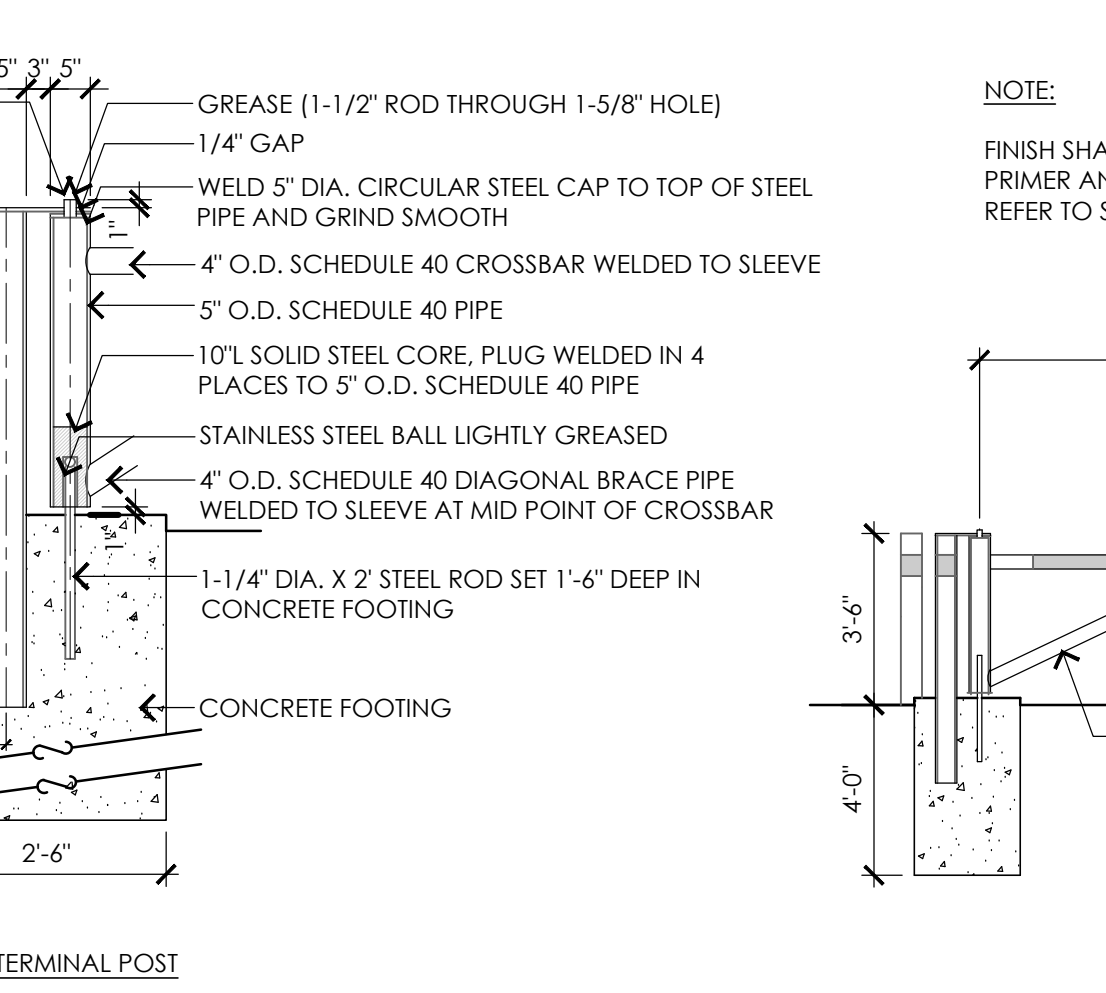
8 ALTERNATE #2: MOUNTABLE GRANITE CURB
 NOT TO SCALE



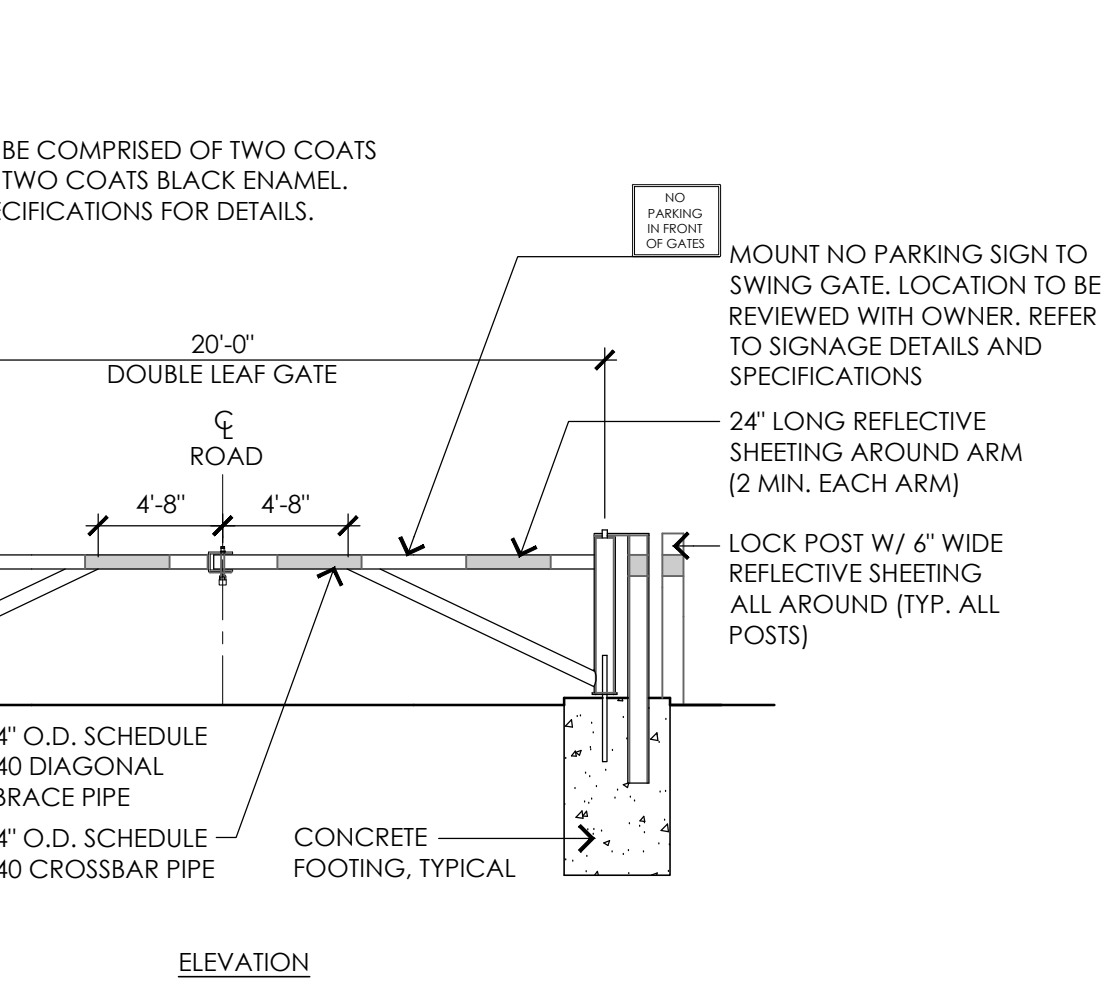
9 VEHICULAR CONTROL GATE
 NOT TO SCALE



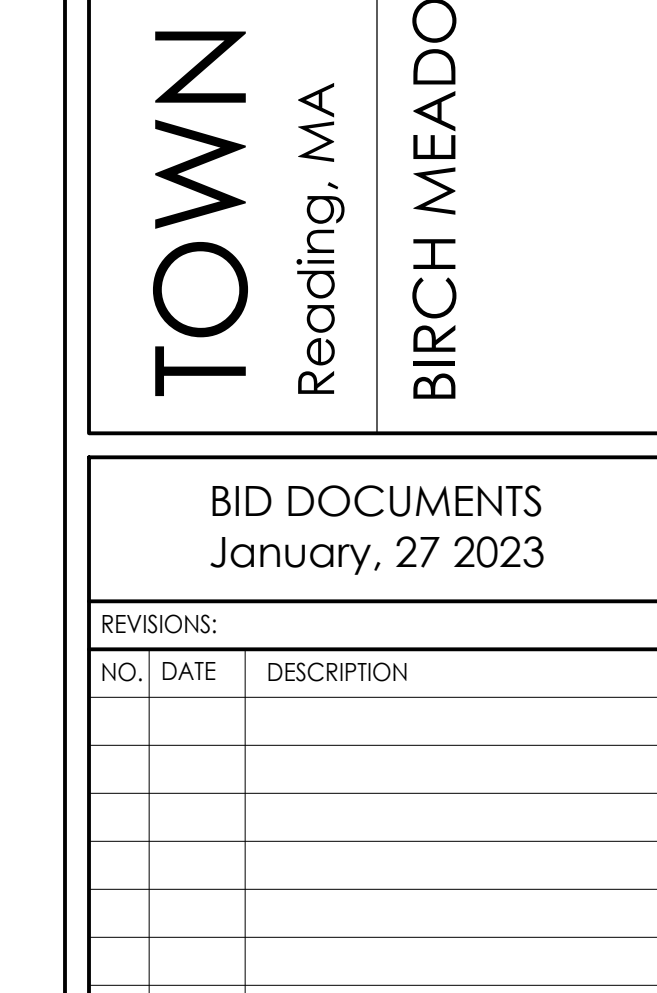
10 BITUMINOUS PAVING TO STONE DUST TRANSITION
 NOT TO SCALE



11 WOOD GUARDRAIL
 NOT TO SCALE



12 BITUMINOUS CONCRETE CURB
 NOT TO SCALE



CONSULTANTS

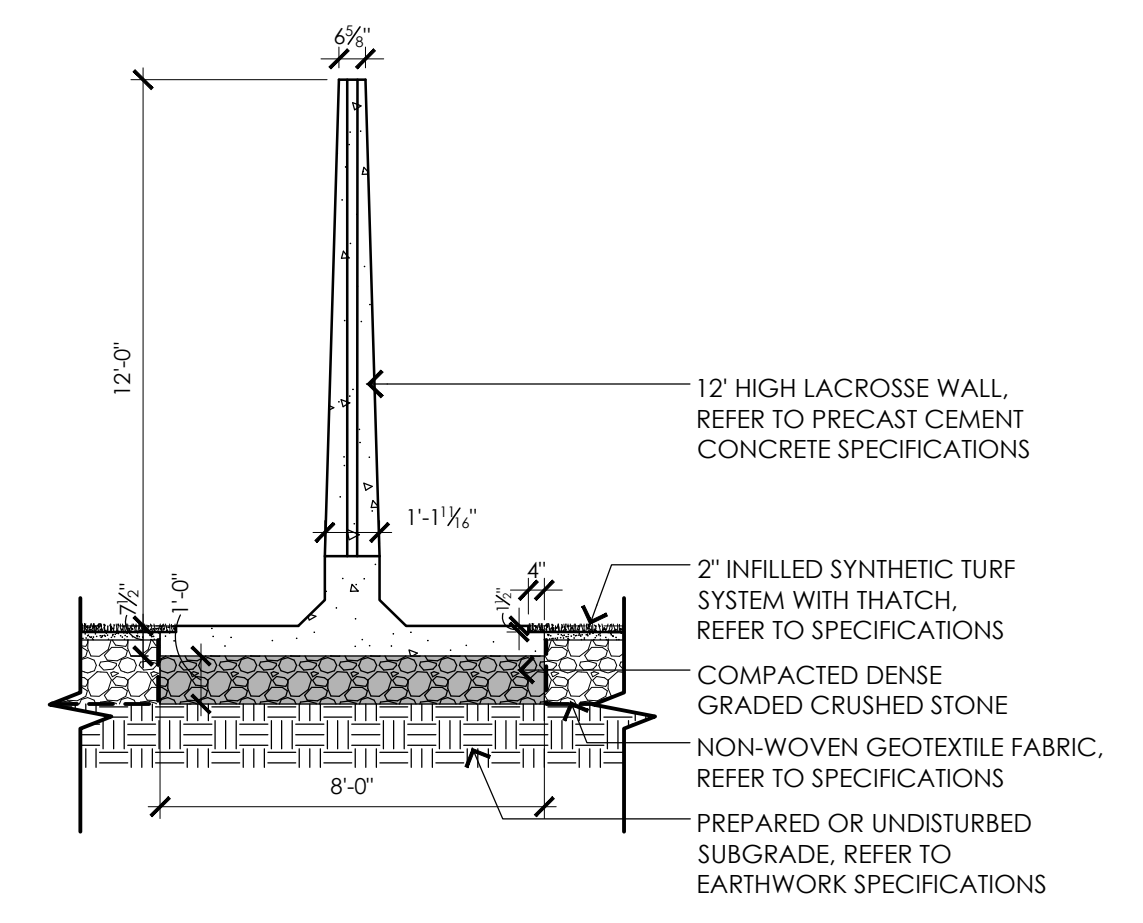
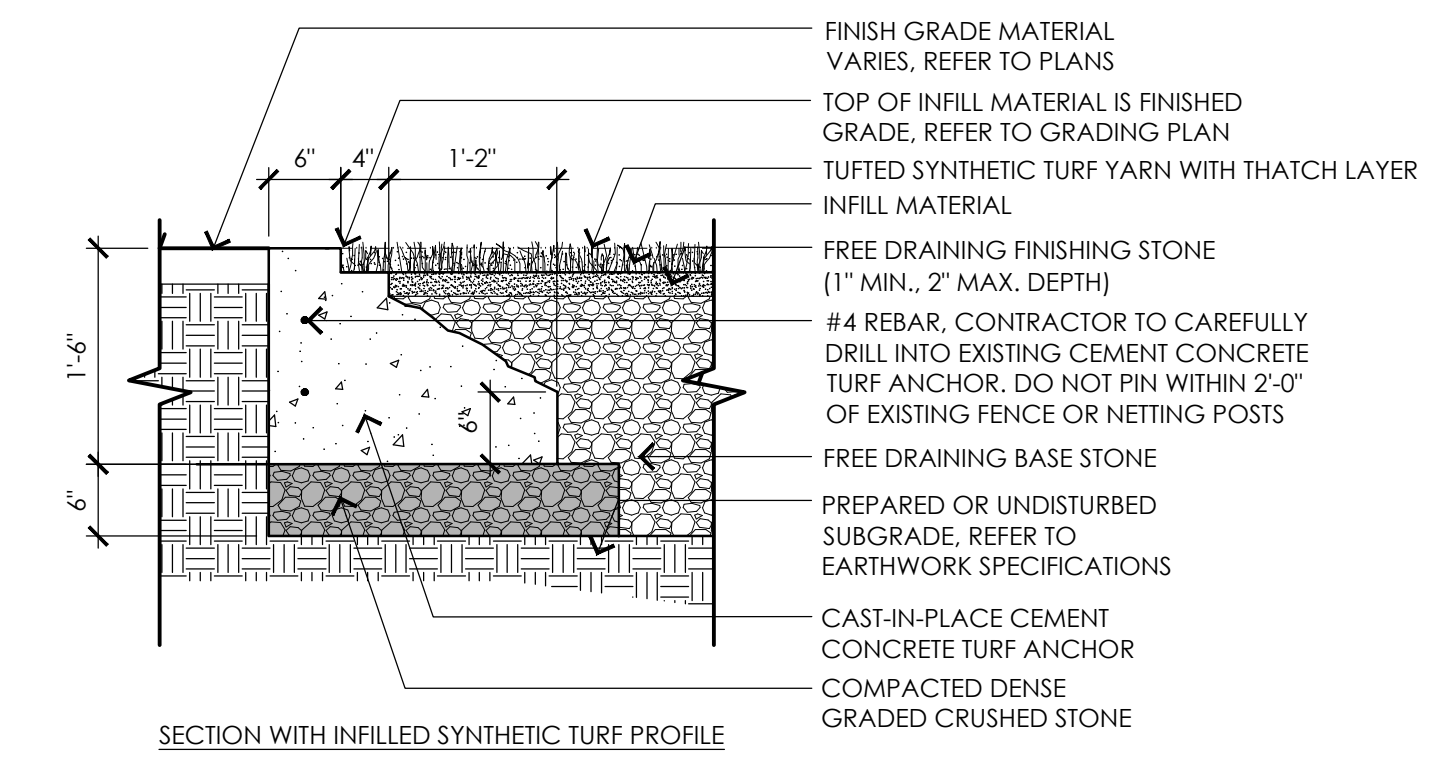
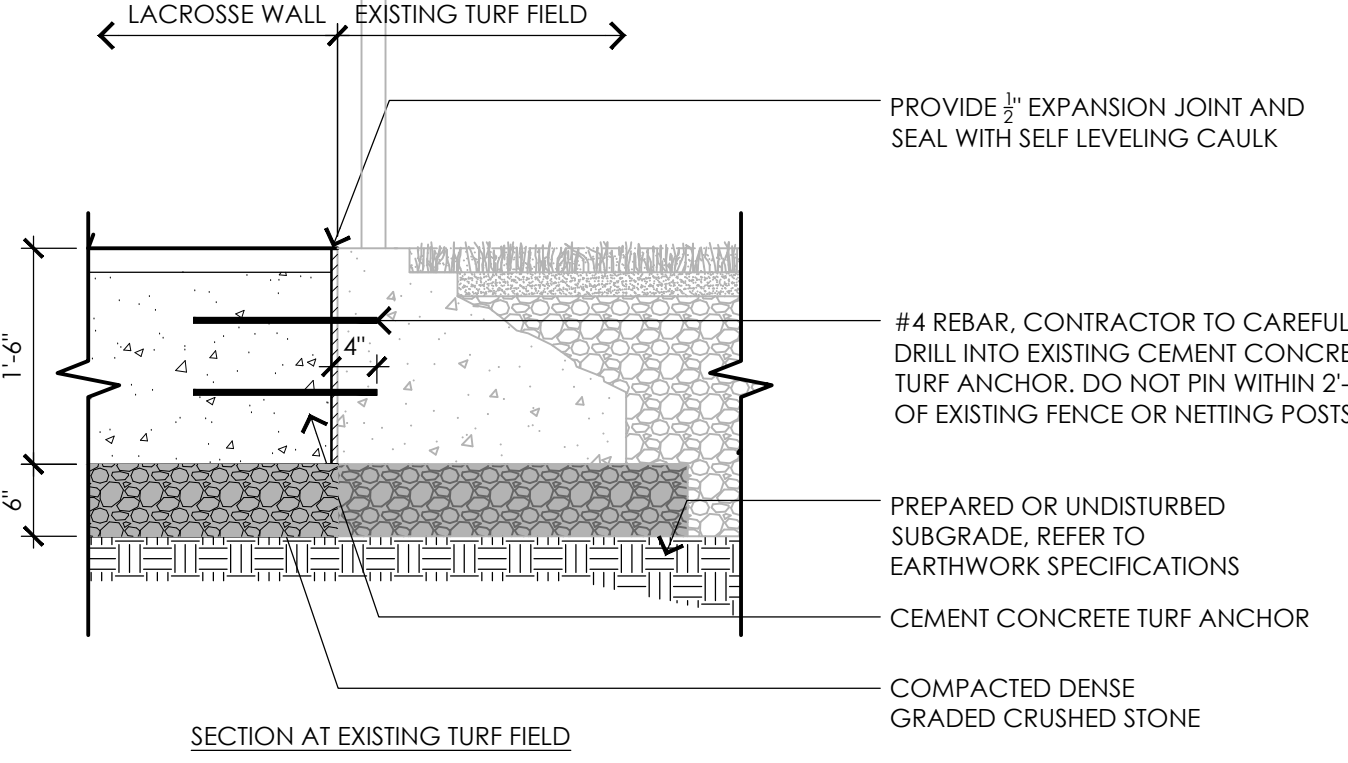
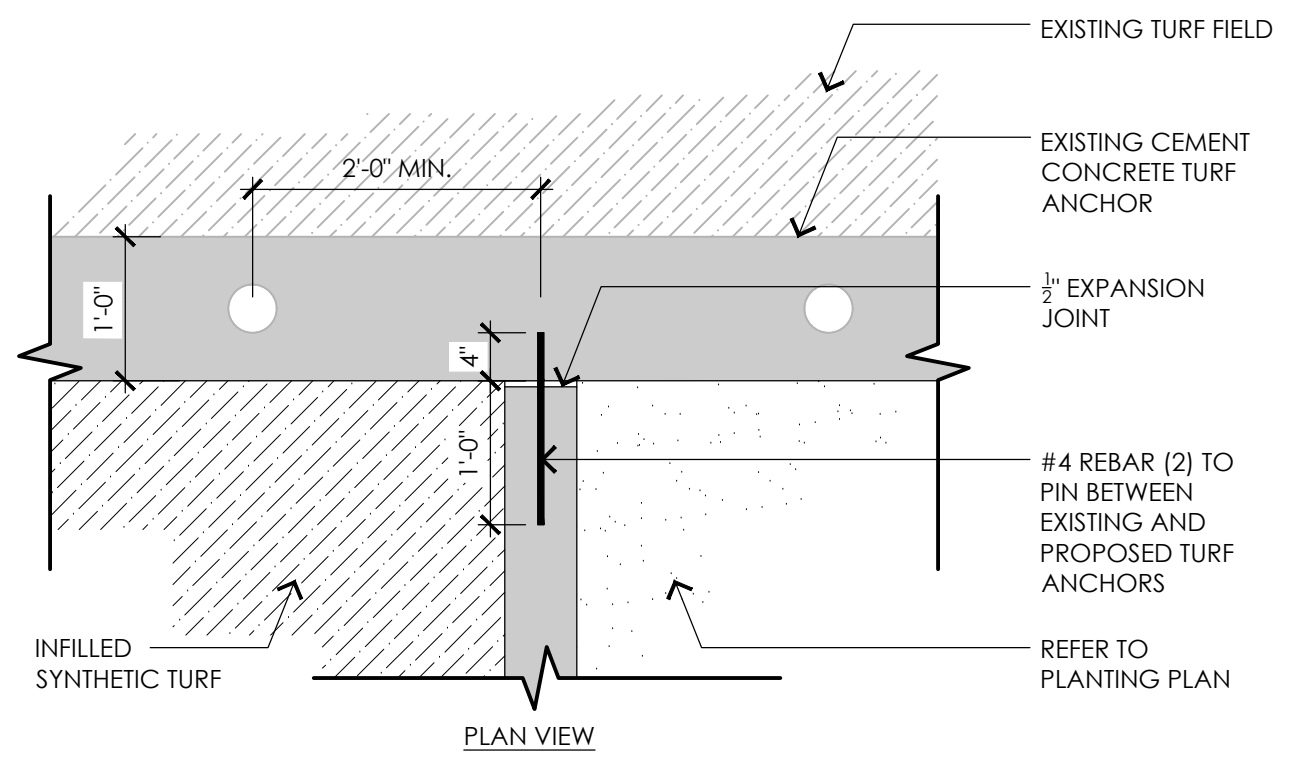
ARCHITECT -
OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
NVS ENGINEERS

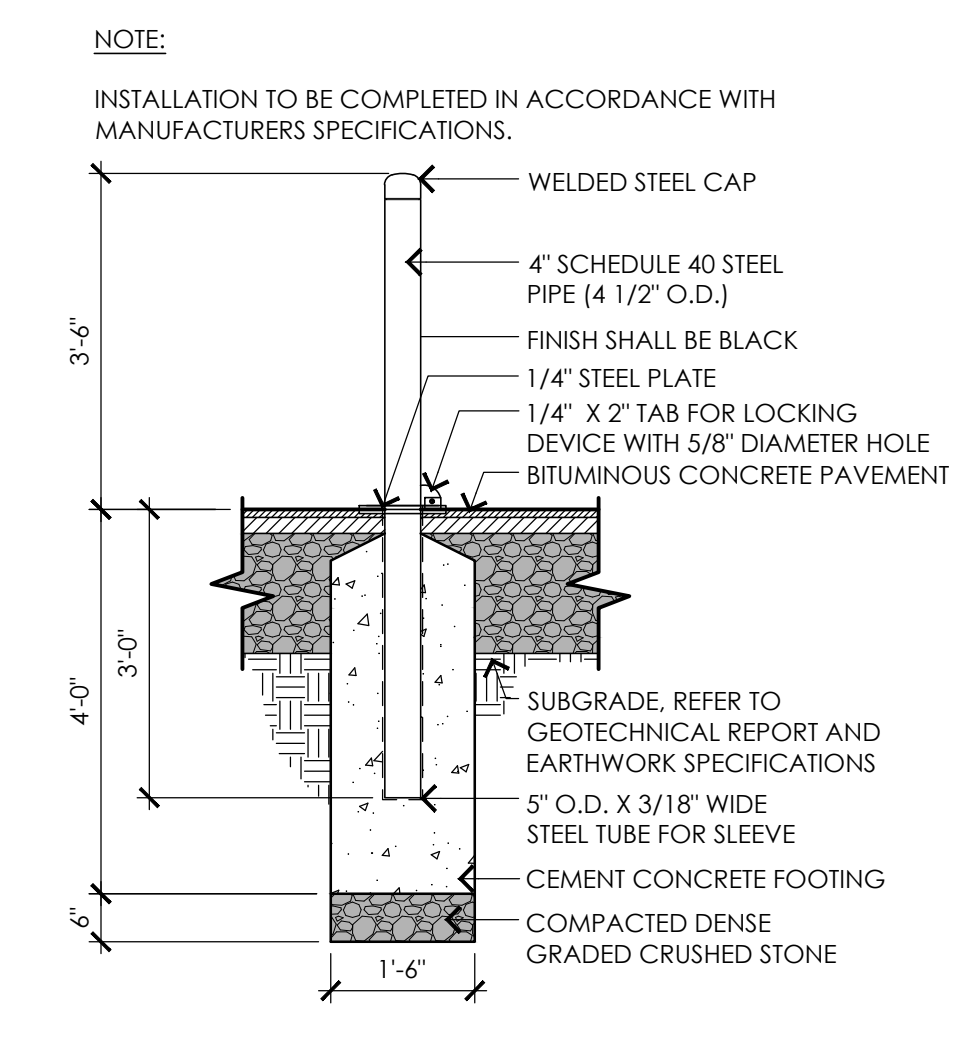
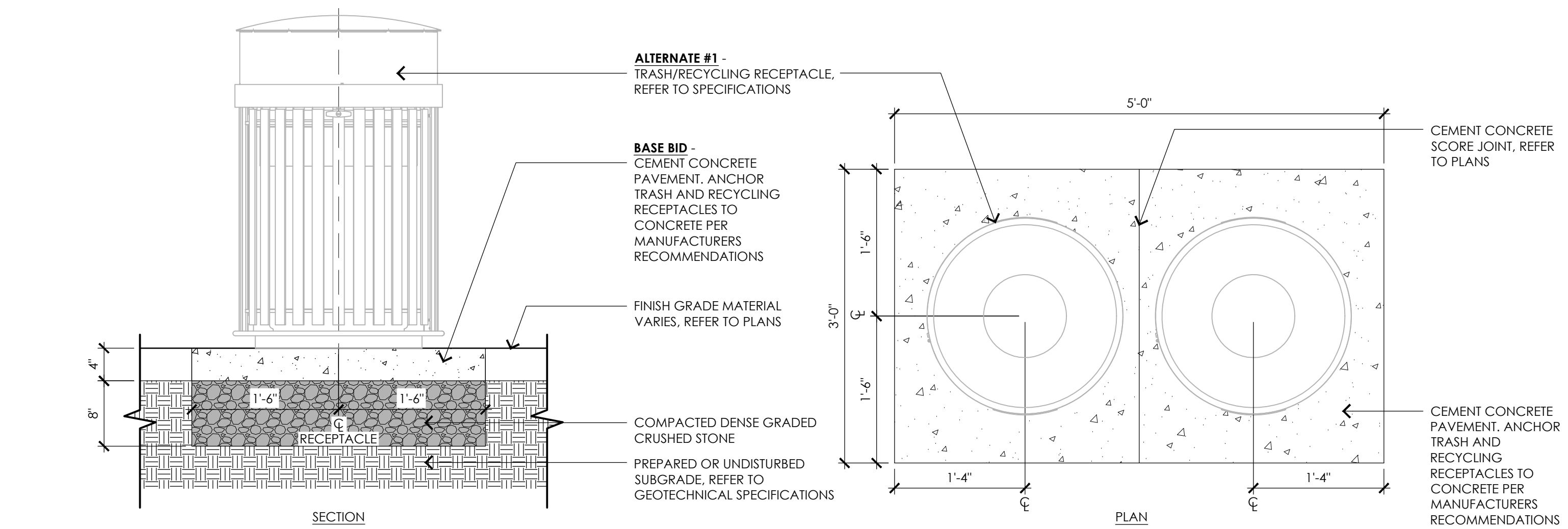
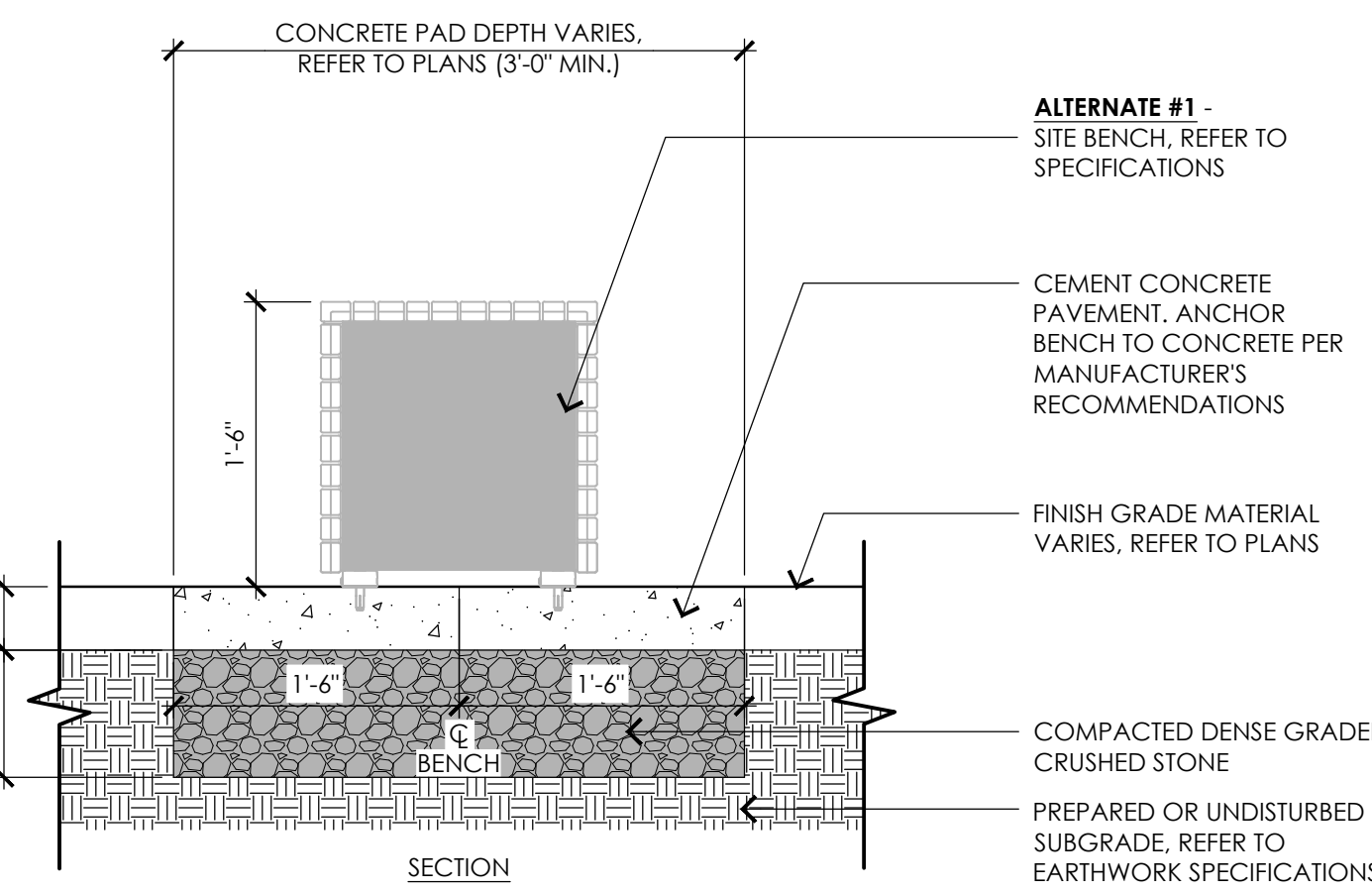
WETLAND DELINEATION-
EPSILON ASSOCIATES, INC.

SURVEY -
REED LAND SURVEY, INC.



1 INFILLED SYNTHETIC TURF AND CEMENT CONCRETE TURF ANCHOR AT LACROSSE WALL
NOT TO SCALE

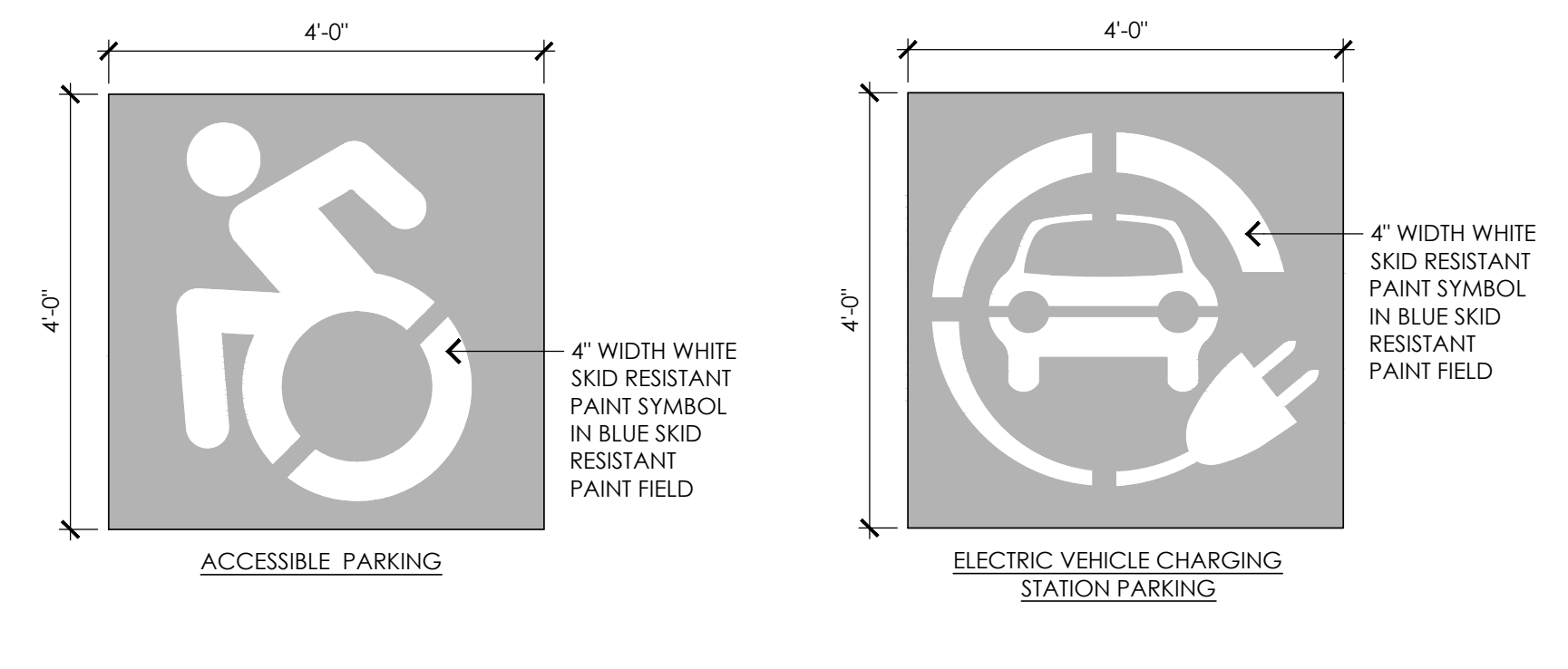
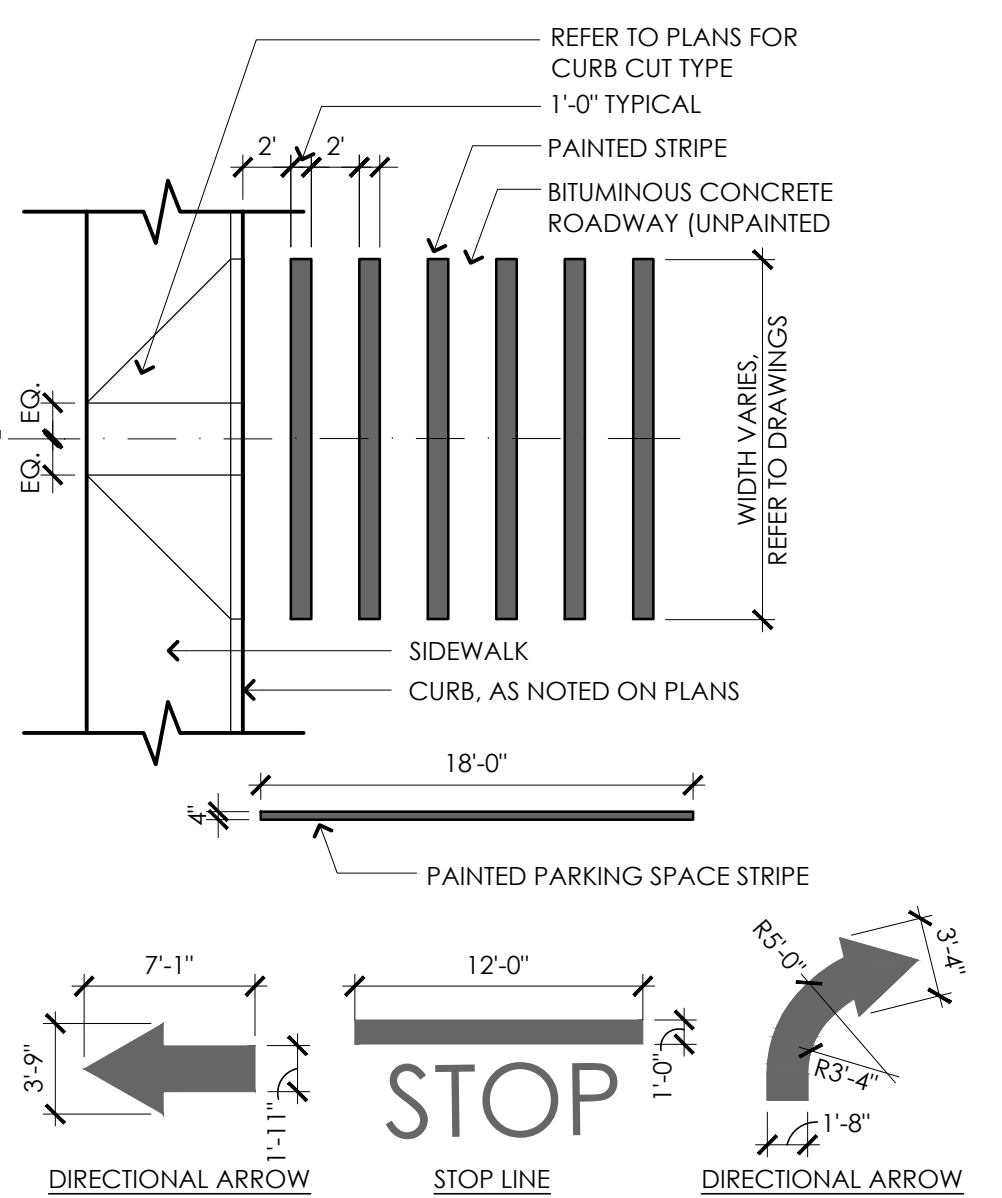
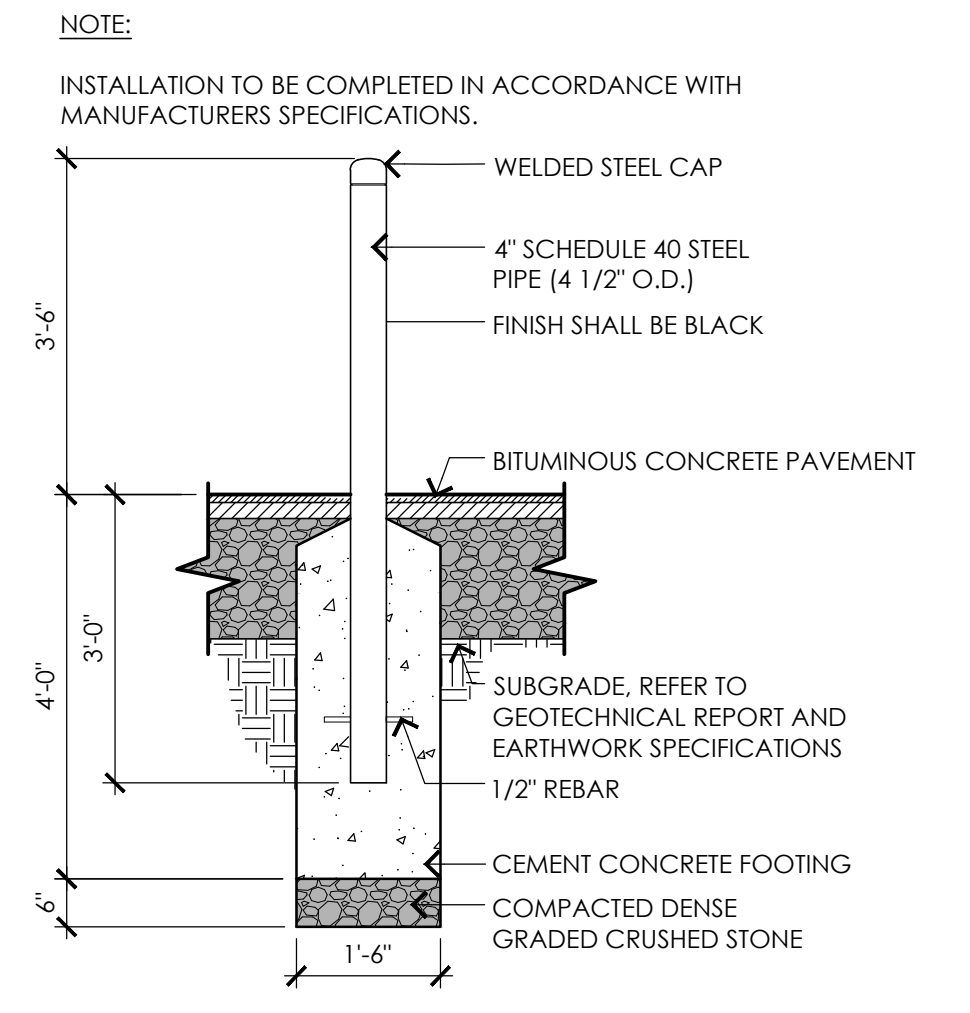
2 PRECAST CEMENT CONCRETE LACROSSE WALL
NOT TO SCALE



3 ALTERNATE #1 - SITE BENCH
NOT TO SCALE

4 ALTERNATE #1 - TRASH/RECYCLING RECEPTACLES
NOT TO SCALE

5 REMOVABLE BOLLARD
NOT TO SCALE



6 BOLLARD
NOT TO SCALE

7 CROSSWALK / PARKING LOT STRIPING
NOT TO SCALE

8 PAVEMENT MARKINGS
NOT TO SCALE

TOWN OF READING
Reading, MA
BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

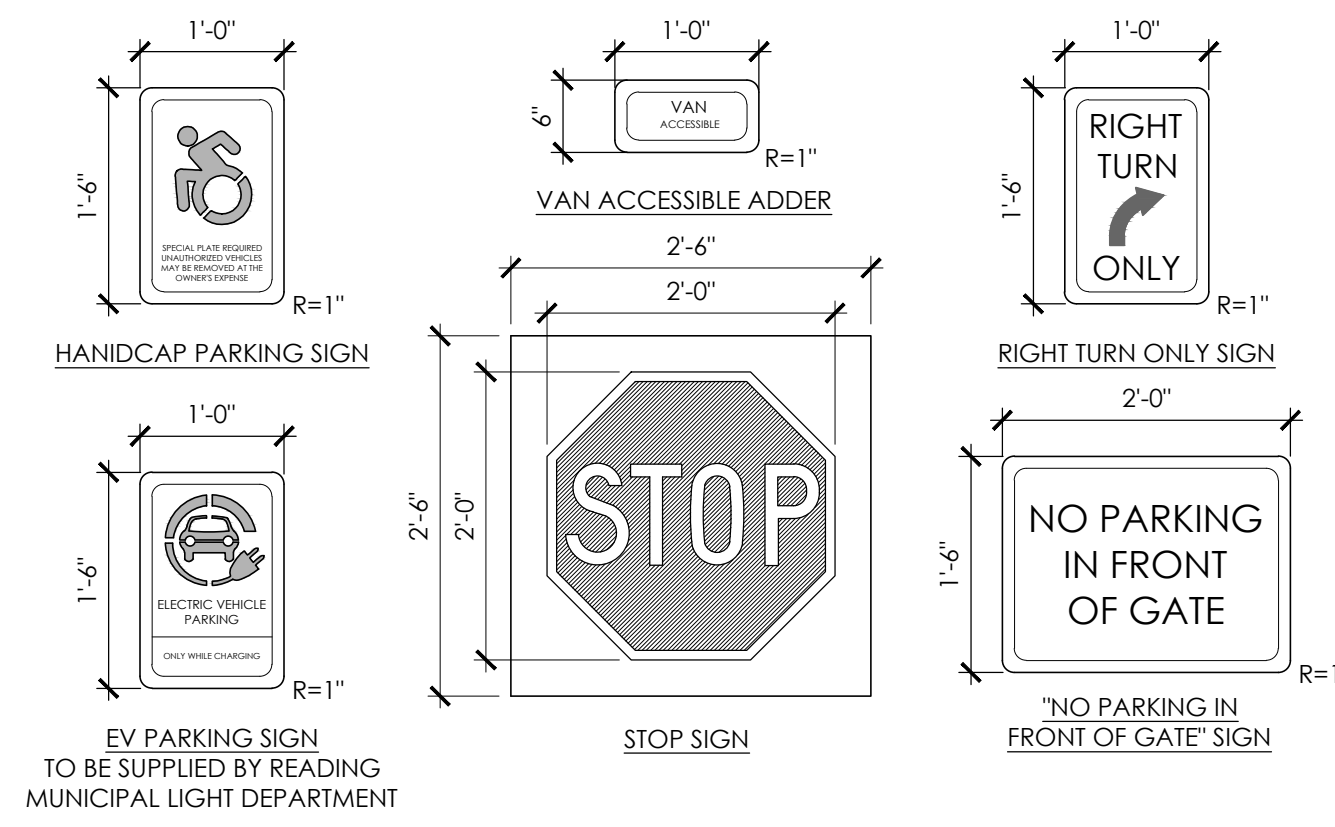
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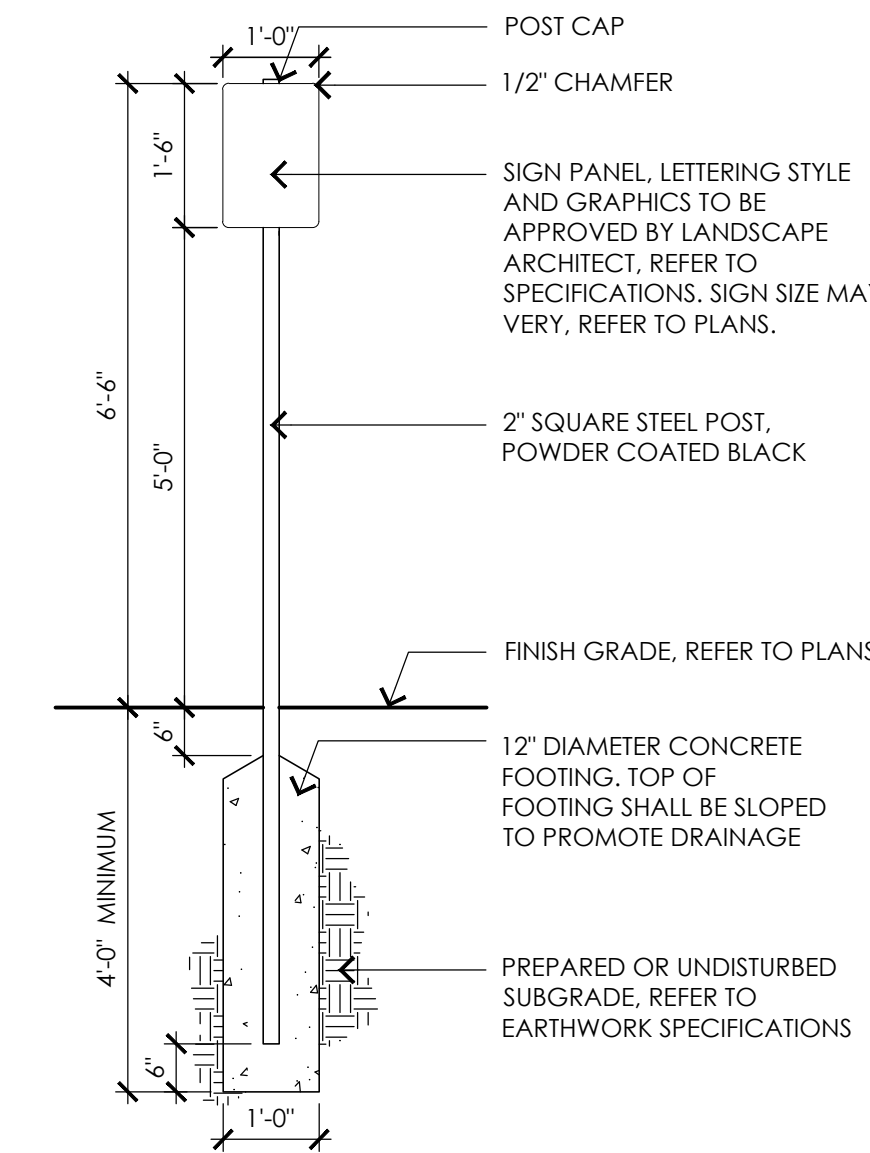
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SHEET NO.:
L5.2

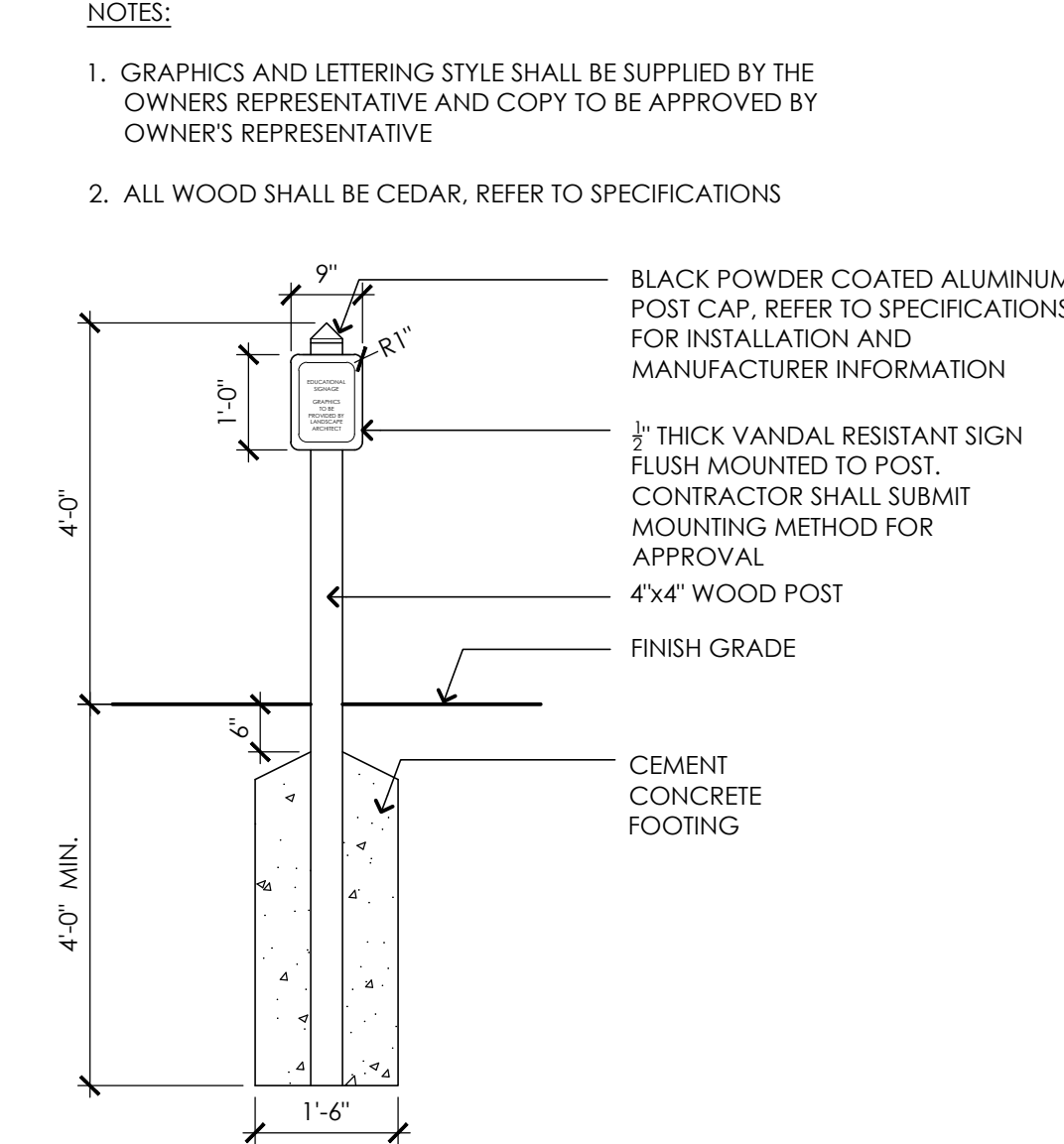
- NOTES:**
1. ALL TEXT, COLORS, FONTS, AND DIMENSIONS SHALL BE REVIEWED BY LANDSCAPE ARCHITECT AND THE OWNER.
 2. GRAPHICS AND LETTERING STYLE SHALL BE SUPPLIED BY THE LANDSCAPE ARCHITECT AND COPY TO BE APPROVED BY LANDSCAPE ARCHITECT.
 3. CONTRACTOR SHALL SUBMIT MOUNTING METHOD FOR APPROVAL.
 4. ALL SIGN MOUNTING MECHANISMS SHALL BE PAINTED BLACK.



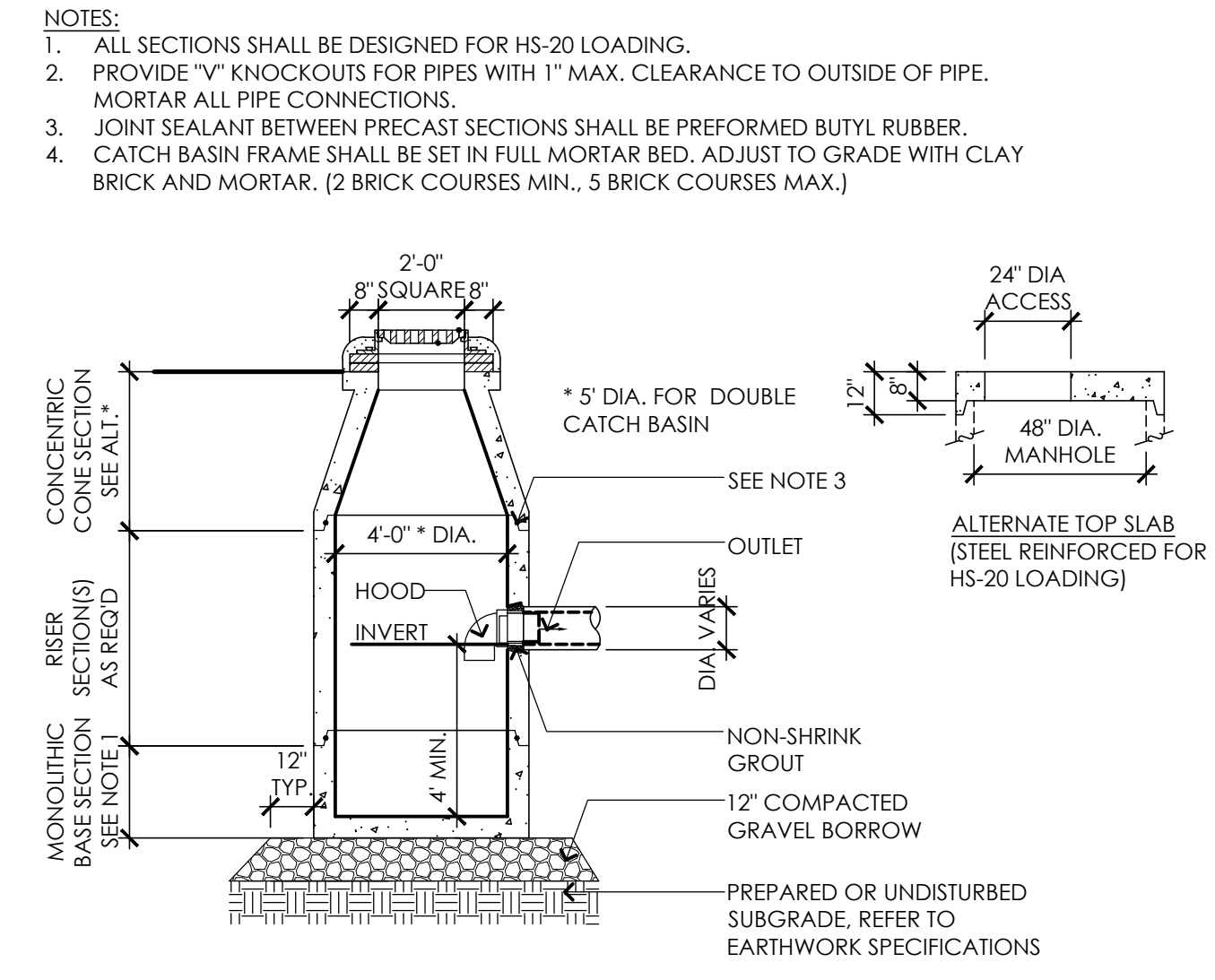
1 SIGNAGE POST AND PANELS
NOT TO SCALE



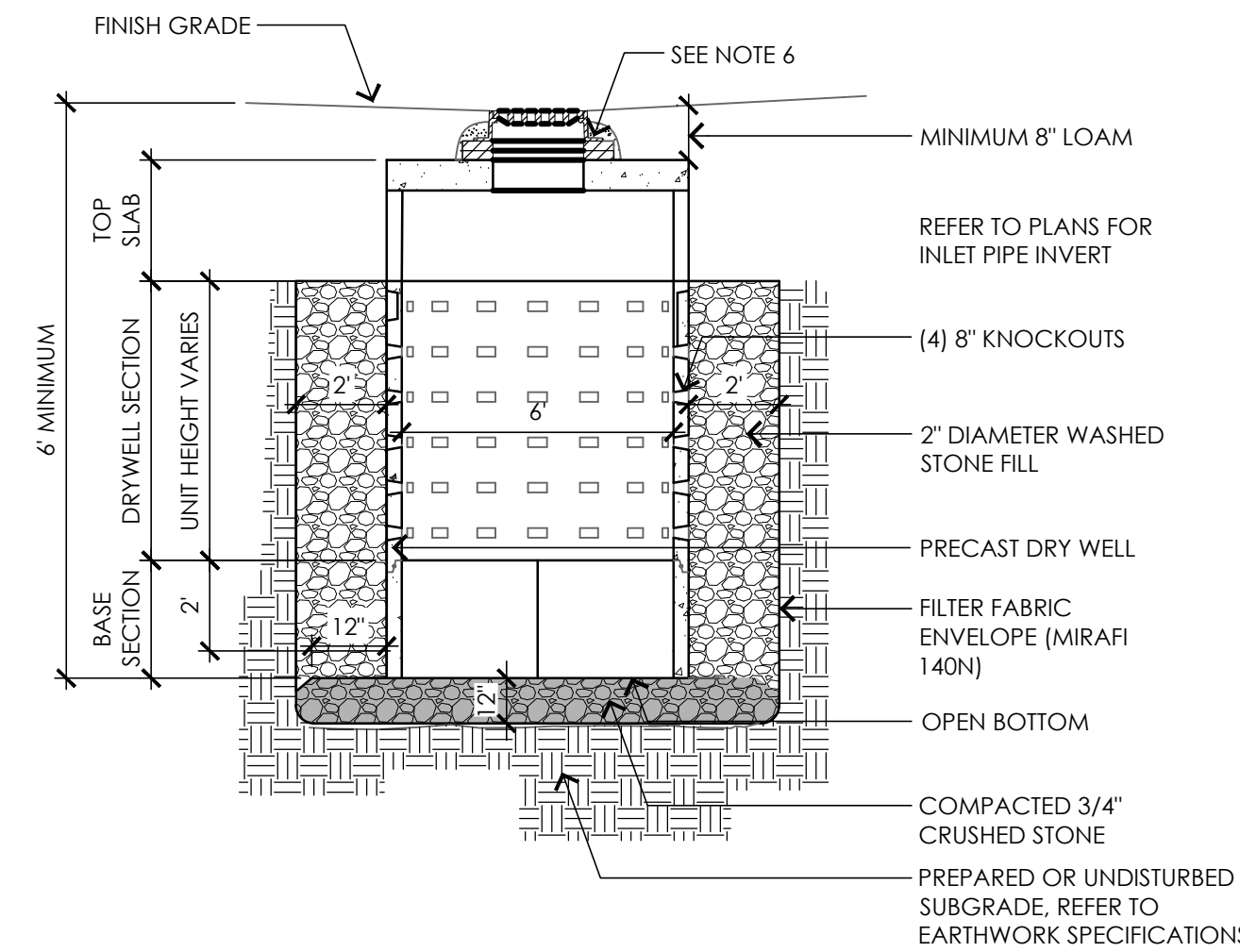
2 EDUCATIONAL SIGNAGE
NOT TO SCALE



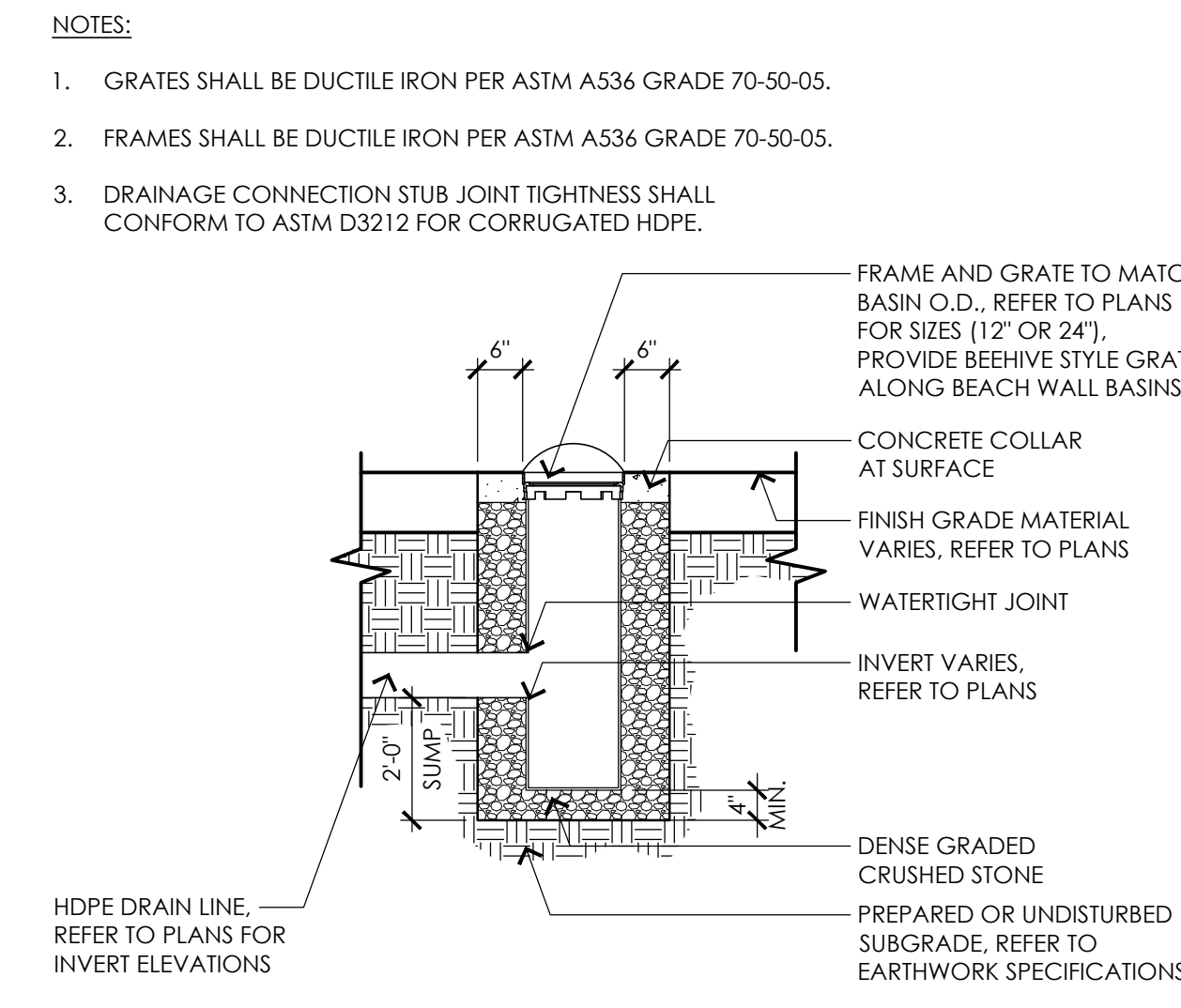
3 CATCH BASIN
NOT TO SCALE



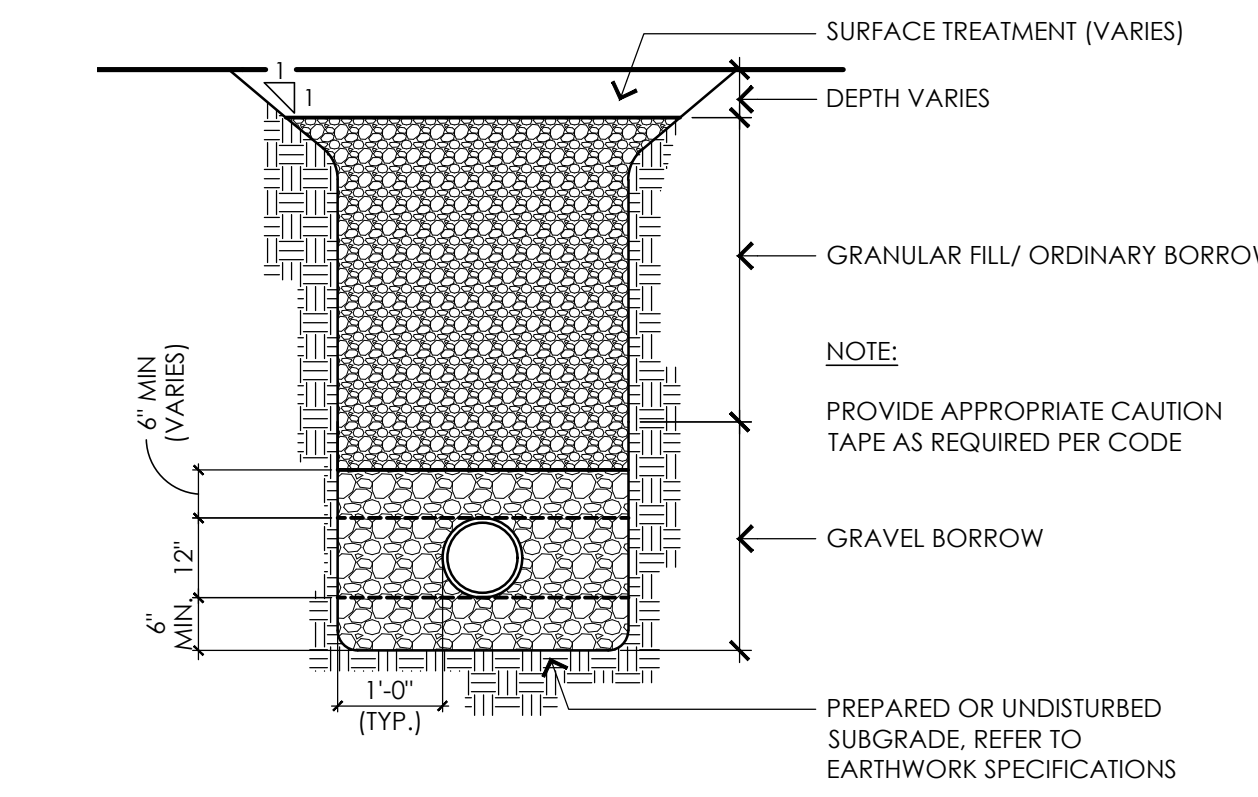
- NOTES:**
1. BASE SECTION SHALL BE MONOLITHIC WITH 6" INSIDE DIAMETER.
 2. ALL PRECAST COMPONENTS SHALL BE DESIGNED FOR HS-20 LOADING.
 3. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE II CEMENT.
 4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR HS-20 LOADING.
 5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 1" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
 6. STANDARD MANHOLE FRAME SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSE MINIMUM, 5 BRICK COURSE MAXIMUM)



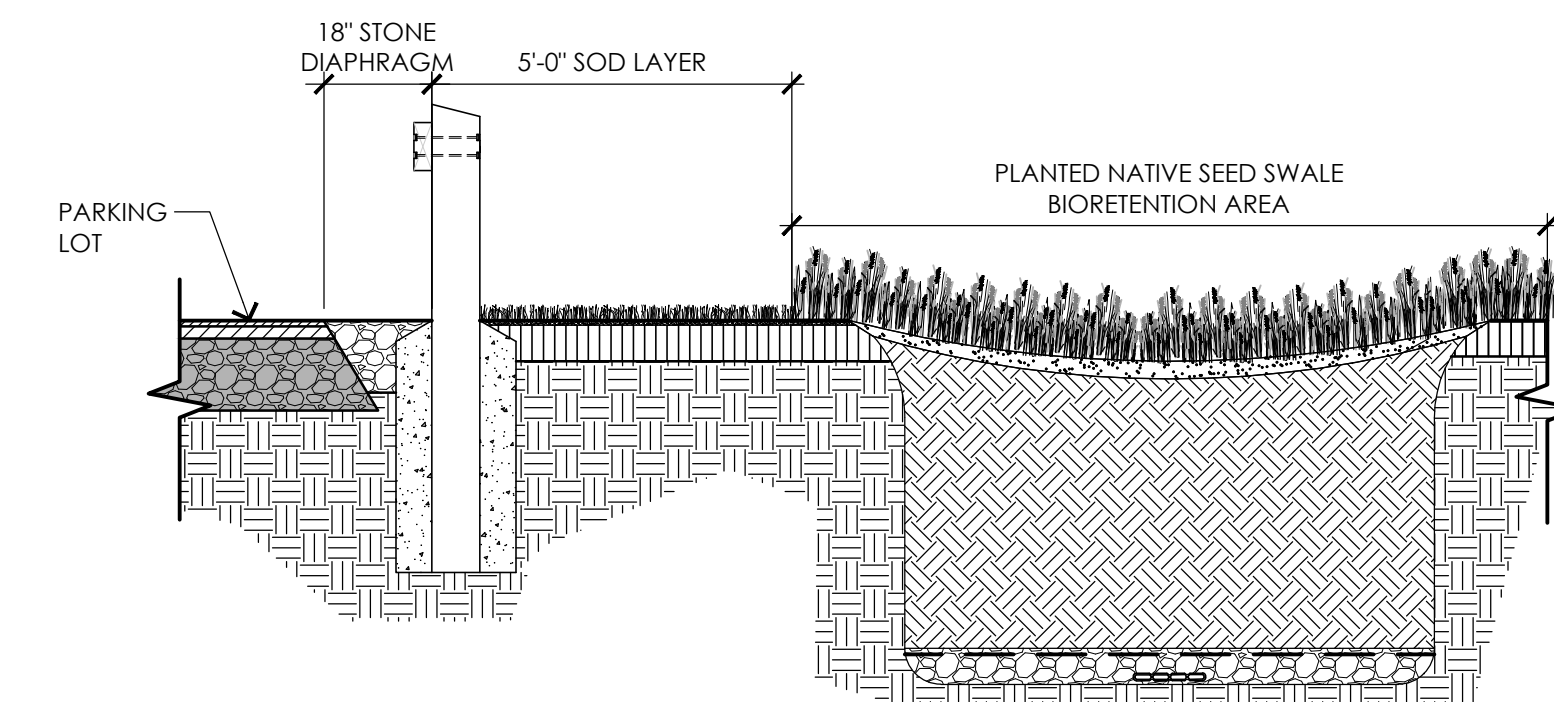
4 LEACHING BASIN
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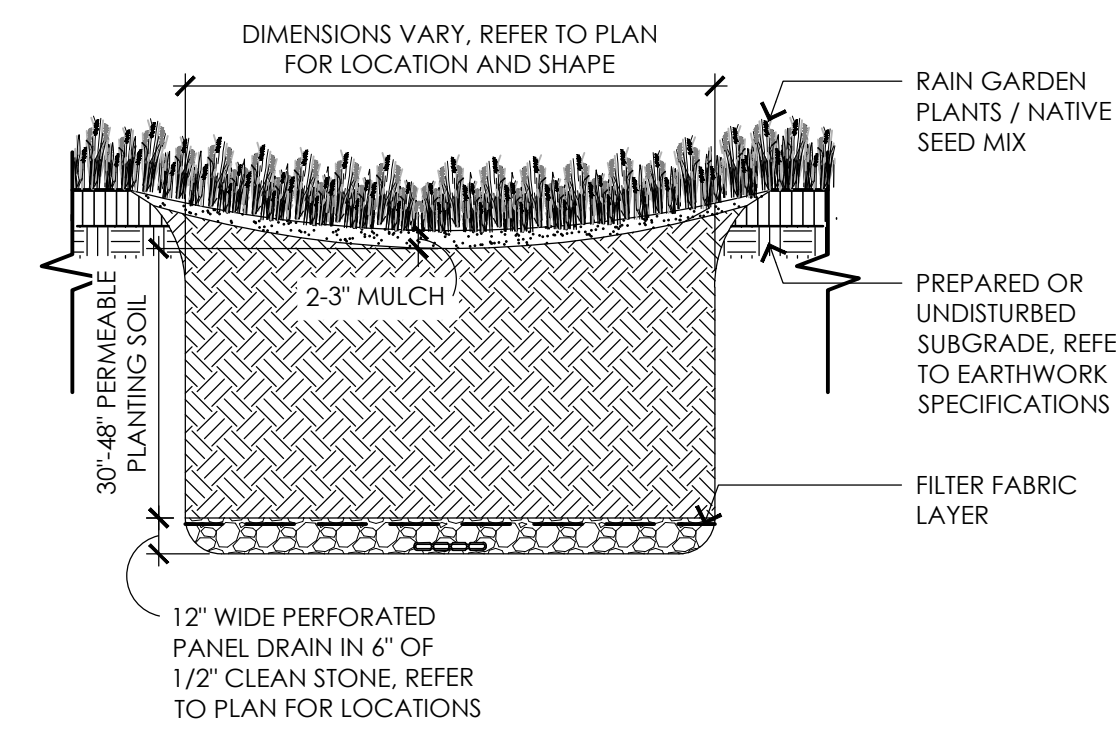
5 AREA DRAIN
NOT TO SCALE



6 UTILITY TRENCH
NOT TO SCALE



7 BIORETENTION / RAIN GARDEN PRETREATMENT SECTION
NOT TO SCALE



8 BIORETENTION / RAIN GARDEN
NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
MEGAN E. BUCZYNSKI
 CIVIL
 No. 47392
 REGISTERED PROFESSIONAL ENGINEER
 M.E. Buczynski
 12/21/2022

CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN

MECHANICAL/PLUMBING ENGINEER -
 BUILDING ENGINEERING RESOURCES, INC.

ELECTRICAL ENGINEER -
 NV5 ENGINEERS

WETLAND DELINEATION-
 EPSILON ASSOCIATES, INC.

SURVEY -
 REED LAND SURVEY, INC.

TOWN OF READING
 Reading, MA
 BIRCH MEADOW PARK | PHASE 1 RENOVATIONS

BID DOCUMENTS
 January, 27 2023

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SCALE: AS NOTED
 PROJECT NO.: 22014.00
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 DRAWN: MJD
 CHECKED: EPM/SRC

SEAL:

SHEET TITLE:
 DETAIL SHEET III

SHEET NO:
L5.3

CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN

ELECTRICAL ENGINEER -
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 Reading, MA
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BID DOCUMENTS
 January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: NTS

PROJECT NO.: 0220154

FILE:

DRAWN: MYM

CHECKED: KEG

SEAL:

SHEET TITLE:

ELECTRICAL
 LEGEND AND
 SCHEDULES

SHEET NO:

E0.0

LIGHTING FIXTURE SCHEDULE - LED									
TYPE	MANUFACTURERS	CATALOG NUMBER	DESCRIPTION	COLOR	CRI	LUMENS	INPUT		REMARKS
							WATTS	VOLTS	
S1	LITHONIA	MR1-LED-42C-350-40K-SR4-MVOLT POLE: RSA-12-4-5C-PT-DBB	SINGLE HEAD LED AREA LIGHT MOUNTED ON 12' POLE TYPE IV DISTRIBUTION	4000K	85	5,074	49	277	DARK BRONZE FINISH MOUNTED ON 3' POLE BASE
S2	LITHONIA	MR POLE: RSA-12-4-5C-PT-DBB	DOUBLE HEAD LED AREA LIGHT MOUNTED ON 12' POLE TYPE IV DISTRIBUTION	4000K	85	5,074	98	277	DARK BRONZE FINISH MOUNTED ON 3' POLE BASE
S3	LITHONIA	MRPLED-42C-700MA-4000K-SR2-MVOLT-SF-DBBXBD POLE: RSA-12-4-5C-PT-DBB	LED AREA LIGHT MOUNTED ON 12' ROUND POLE TYPE II DISTRIBUTION	4000K	80	8,026	100	MVOLT	DARK BRONZE FINISH.
S4	LITHONIA	MRPLED-42C-700MA-4000K-SR4-MVOLT-SF-DBBXBD POLE: RSA-10-4-5C-PT-DBB	LED AREA LIGHT MOUNTED ON 10' ROUND POLE TYPE IV DISTRIBUTION	4000K	80	7,943	100	MVOLT	DARK BRONZE FINISH.

NOTES:

- NOTES 2-3 APPLY TO ALL APPLICABLE LIGHTING FIXTURES. THE REMARKS COLUMN SHALL NOTE ADDITIONAL REQUIREMENTS.
- FIXTURES SPECIFIED WITH CATALOG NUMBERS ARE THE BASIS OF DESIGN AND ESTABLISH QUALITY LEVEL FOR EQUAL FIXTURES FROM MANUFACTURERS LISTED WITHOUT CATALOG NUMBERS. WHERE ONLY ONE MANUFACTURER LISTED, THERE SHALL BE NO SUBSTITUTION.
- VERIFY EXACT MOUNTING CONDITIONS AND PROVIDE APPROPRIATE ACCESSORIES AND HARDWARE TO ACCOMMODATE REQUIREMENTS.

ELECTRICAL DEMOLITION NOTES

- REFER TO THE CIVIL/LANDSCAPE DRAWINGS FOR THE EXTENT OF THE DEMOLITION SCOPE OF WORK AND AREA. THE DEMOLITION PLANS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED. THE ELECTRICAL SCOPE MAY EXTEND BEYOND THE AREA DEFINED BY THE ARCHITECTURAL DEMOLITION LIMITS TO FULLY COMPLY WITH VARIOUS REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THE ELECTRICAL DEMOLITION PLANS ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED. DISCONNECT/REMOVE DEVICES AND EQUIPMENT LOCATED ON WALLS AND/OR CEILINGS TO BE REMOVED. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING THE DEMOLITION.
- PERFORM ELECTRICAL DEMOLITION WORK AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN COOPERATION WITH THE OTHER TRADES AND AS SCHEDULED AND APPROVED BY THE OWNER'S REPRESENTATIVE. DISCONNECT AND MAKE SAFE ALL ELECTRICAL EQUIPMENT IDENTIFIED FOR REMOVAL ON THE ELECTRICAL, CIVIL AND LANDSCAPE PLANS.
- THE LOCATIONS OF EXISTING EQUIPMENT, EQUIPMENTS, CONDUITS, ETC ARE SHOWN IN AN APPROXIMATE WAY ONLY. VISIT THE SITE PRIOR TO SUBMISSION OF THE BIDS AND COMMENCEMENT OF WORK TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF THE WORK.
- POWER OUTAGES CAUSED BY DEMOLITION THAT AFFECT OTHER AREAS SHALL BE HELD TO A MINIMUM. SHUTDOWNS SHALL BE COORDINATED WITH USERS AND THE OWNER. NIGHT, WEEKEND, AND/OR HOLIDAY TIME REQUIRED TO PERFORM ELECTRICAL DEMOLITION WORK OR NEW ELECTRICAL WORK SHALL BE CARRIED AS PART OF THE CONTRACT COST.
- CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH CIRCUITS AND FEEDERS WITHIN THE AREA OF DEMOLITION SCOPE PRIOR TO DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS IDENTIFIED FOR REMOVAL SHALL BE TRACED AND LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE LIMIT IS AFFECTED. THERE SHALL BE NO INTERRUPTION OF SERVICES OUTSIDE THE DEMOLITION AREA WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE.
- DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS TO THEIR POINTS OF ORIGIN WITHIN THE AREA OF DEMOLITION SCOPE.
- PROMPTLY REPAIR ANY DAMAGE CAUSED DURING/BY THE EXECUTION OF WORK. DAMAGE INCLUDES BUT IS NOT LIMITED TO DESTRUCTION OF ITEMS INTENDED TO REMAIN OR TO BE SALVAGED.
- EXERCISE CARE WITH EQUIPMENT THAT IS TO BE RELOCATED OR TURNED OVER TO THE OWNER. EXAMINE THE EQUIPMENT BEFORE REMOVAL IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE TO DETERMINE ITS CONDITION. DELIVER OWNER-RETAINED EQUIPMENT TO AN ON-SITE LOCATION DESIGNATED BY THE OWNER AND OBTAIN ACKNOWLEDGMENT OF RECEIPT IN ORIGINAL CONDITION.
- ALL ITEMS REMOVED SHALL BE OFFERED TO THE OWNER FOR SALVAGE. IF THE OWNER DOES NOT TAKE POSSESSION, DISPOSE OF THE ITEMS IN A SAFE AND LEGAL MANNER. ALL ITEMS CLASSIFIED AS HAZARDOUS SHALL BE DISPOSED AS HAZARDOUS WASTES AND A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PROVIDED TO THE OWNER.
- NOTIFY UTILITY COMPANIES IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO DEMOLITION. VERIFY THAT THE UTILITIES HAVE BEEN DISCONNECTED, CAPPED AND MADE SAFE PRIOR TO DEMOLITION.
- ENSURE THE SAFE PASSAGE OF PERSONS IN AND AROUND THE SITE DURING DEMOLITION. PREVENT INJURY TO PERSONS AND DAMAGE TO PROPERTY. PROVIDE ADEQUATE SHORING AND BRACING TO PREVENT COLLAPSE. IMMEDIATELY REPAIR DAMAGED PROPERTY TO THE CONDITION BEFORE BEING DAMAGED. TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST.
- ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC. SHALL BE INCLUDED IN THIS CONTRACT.

BRANCH CIRCUIT & FEEDER LEGEND

- BRANCH CIRCUIT OR FEEDER CONCEALED IN FINISHED AREAS
- BRANCH CIRCUIT OR FEEDER TURNING UP TOWARDS OBSERVER
- BRANCH CIRCUIT OR FEEDER TURNING DOWN AWAY FROM OBSERVER
- CONDUIT STUBBED ABOVE CEILING
- BRANCH CIRCUIT HOME RUN TICKS INDICATE QUANTITY OF CONDUCTORS, GROUND CONDUCTORS ARE NOT INDICATED. NO TICKS INDICATES 2#12 & 1#12G IN 3/4" MINIMUM. R22A-1,3,5 INDICATES PANEL AND CIRCUIT DESIGNATION FROM WHICH HOMERUN SHALL ORIGINATE. EACH CIRCUIT SHALL BE 20A-1P (20AMP SINGLE POLE) UNLESS NOTED OTHERWISE.
- FLEXIBLE CONNECTION TO EQUIPMENT. RACEWAY AND CONDUCTOR RATING TO MATCH ASSOCIATED BRANCH CIRCUIT OR FEEDER

ONE LINE SYMBOLS LEGEND

- CIRCUIT BREAKER, FIXED
 "XXAF" INDICATES FRAME SIZE "XXAT" INDICATES TRIP
- TRANSFORMER
- 3 PHASE, 3 WIRE DELTA CONNECTION
- 3 PHASE, 4 WIRE WYE SOLIDLY GROUNDED
- PANELBOARD

SITE LEGEND

- ELECTRIC HAND HOLE
- TELEPHONE HAND HOLE
- UNDERGROUND ELECTRIC
 "UE-EX" INDICATES EXISTING
- UNDERGROUND TELEPHONE
- OVERHEAD ELECTRIC
 "OE-EX" INDICATES EXISTING
- OVERHEAD TELEPHONE
- UNDERGROUND SECTION, REFER TO SECTION DETAIL.
 "A" INDICATES DETAIL LETTER
 "F" INDICATES DRAWING NUMBER

MOTOR & CONTROLS LEGEND

- DISCONNECT SWITCH RATED 30AMP, 3-POLE, IN NEMA TYPE 1 ENCLOSURE, UNLESS OTHERWISE NOTED
 "3R" - INDICATES NEMA TYPE 3R ENCLOSURE
 "2P" - INDICATES 2 POLE SINGLE PHASE DISCONNECT
 "60AS" - INDICATES 60A SWITCH
- FUSED DISCONNECT SWITCH, 3-POLE, IN NEMA TYPE 1 ENCLOSURE, UNLESS OTHERWISE NOTED.
 "3R" - INDICATES NEMA TYPE 3R ENCLOSURE
 "60AS" - INDICATES 60AMP SWITCH
 "60AF" - INDICATES 60AMP FUSES
- ENCLOSED CIRCUIT BREAKER

EXISTING EQUIPMENT LEGEND

- EXISTING EQUIPMENT TO REMAIN
- EXISTING EQUIPMENT TO BE REMOVED
- EXISTING EQUIPMENT TO BE RELOCATED
- NEW LOCATION OF EXISTING RELOCATED EQUIPMENT
- EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT TO BE INSTALLED ON EXISTING BRANCH/FEEDER
- EXISTING EQUIPMENT FOR INFORMATION ONLY - INDICATED BY SYMBOL WITH LIGHT AND OUT OF FUNCTION LINE TYPE
- EXISTING EQUIPMENT TO BE REWORKED - INDICATED BY SYMBOL WITH DASHED AND IN FUNCTION LINE TYPE

LIGHTING FIXTURE LEGEND

- LIGHTING FIXTURE (SEE LIGHTING FIXTURE SCHEDULE)
 "L51" - INDICATES LIGHTING FIXTURE TYPE
 "6" - INDICATES CIRCUIT NUMBER
- LIGHTING FIXTURE
- LIGHTING FIXTURE WALL MOUNTED
- LIGHTING FIXTURE SHADING INDICATES FIXTURE EMERGENCY (LIFE SAFETY) POWER SOURCE
- POLE MOUNTED LIGHTING FIXTURE
- POLE MOUNTED SPORTS LIGHTING FIXTURE.
 "F1" INDICATES FIXTURE TYPE
 "2" INDICATES CIRCUIT NUMBER

SWITCH LEGEND

- SINGLE POLE SWITCH, RATED 20A, 120/277V
- LOW VOLTAGE SWITCH
- OCCUPANCY SENSOR, RECESS WALL MOUNTED
 "O1" INDICATES SINGLE CIRCUIT OUTPUT
- OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY (ULTRASONIC,PASSIVE INFRARED)
 "O1" INDICATES TYPE AS DEFINED IN NOTES/SCHEDULES.
- PHOTOCELL
- TIMECLOCK

WIRING DEVICE LEGEND

- DUPLEX RECEPTACLE, GROUNDING TYPE, RATED 20A, 125V
 "5" - INDICATES CIRCUIT NUMBER
 "GFI" - INDICATES INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
 "WP" - INDICATES WEATHERPROOF. PROVIDE "IN USE" COVER AND CAST ALUMINUM BOX.
 "USB" - INDICATES TYPE C/IA USB CHARGING PORT
- JUNCTION BOX
- PULLBOX

ABBREVIATIONS

AMP	AMPERE	KWH	KILOWATT HOURS
AC	ALTERNATING CURRENT	LTG	LIGHTING
ADA	AMERICAN WITH DISABILITIES ACT	MCB	MAIN CIRCUIT BREAKER
AF	AMPERE FRAME	MEC	MASSACHUSETTS ELECTRICAL CODE
AFF	ABOVE FINISHED FLOOR	M/G	MOTOR/GENERATOR SET
AFG	ABOVE FINISHED GRADE	MH	MANHOLE
AIC	AMPERE INTERRUPTING CAPACITY	MLO	MAIN LUGS ONLY
AL	ALUMINUM	MTD	MOUNTED
AT	AMPERE TRIP	MTG	MOUNTING
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED CONTACT
AWG	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE
B	BURIED	NO	NORMALLY OPEN CONTACT
C	CONDUIT	NTS	NOT TO SCALE
CA	CABLE	#	NUMBER
CATV	CABLE TELEVISION	OPD	OVER CURRENT PROTECTION DEVICE
CCTV	CLOSED CIRCUIT TELEVISION SYSTEM	POS	PROVIDED UNDER OTHER SECTIONS
CB	CIRCUIT BREAKER	PVC	POLYVINYL CHLORIDE
CKT	CIRCUITS	PWR	POWER
CPU	CENTRAL PROCESSING UNIT	RGS	RIGID GALVANIZED STEEL
CL	CENTERLINE	RMS	ROOT MEAN SQUARE VALUE
dB	DECIBEL	RPM	REVOLUTIONS PER MINUTE
DC	DIRECT CURRENT	SPD	SURGE PROTECTIVE DEVICE
DWG	DRAWING	SN	SOLID NEUTRAL
EC	ELECTRICAL CONTRACTOR	SWBD	SWITCHBOARD
EMT	ELECTRIC METALLIC TUBING	TB	TERMINAL BLOCK
FDR	FEEDER	TEL	TELEPHONE
FLMT	FLEXIBLE LIQUID TIGHT METALLIC TUBING	TERMN	TERMINAL
FREQ	FREQUENCY	TSP	TWISTED SHIELDED-PAIR
GEC	GROUNDING ELECTRODE CONDUCTOR	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
GFI	GROUND FAULT INTERRUPTING	TYP	TYPICAL
GND	GROUND	UG	UNDERGROUND
HP	HANDHOLE	UNO	UNLESS NOTED OTHERWISE
HP	HORSEPOWER	UPS	UNINTERRUPTIBLE POWER SUPPLY
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	UTP	UNSHIELDED TWISTED-PAIR
HZ	HERTZ	V	VOLTS
IG	ISOLATED GROUND	VA	VOLT-AMPERE
JB	JUNCTION BOX	VSD	VARIABLE SPEED DRIVE
KVA	KILOVOLT-AMPERE	W	WATTS
KW	KILOWATT	WP	WEATHERPROOF

CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN
 ELECTRICAL ENGINEER -
 NVS ENGINEERS
 WELL AND DELINEATION -
 EPSILON ASSOCIATES, INC.
 SURVEY -
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TOWN OF READING
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 BIRCH MEADOW PARK | PHASE I RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: 1" = 20'-0"
 PROJECT NO.: 0220154
 FILE:
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 CHECKED: KEG

SEAL:

SHEET TITLE:
 ELECTRICAL
 SITE PLAN
 PART A
 SHEET NO:

E1.0

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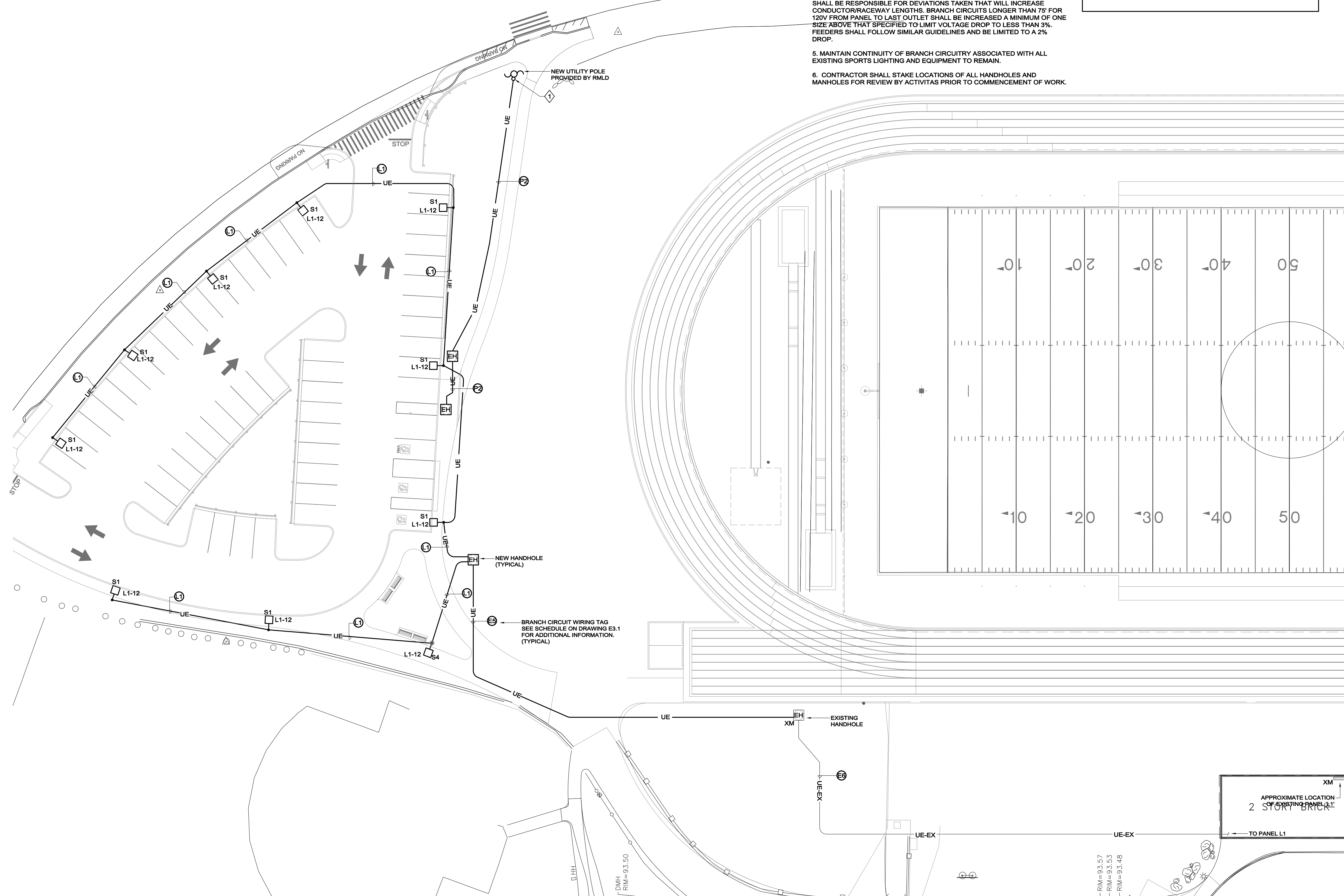
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2. REFER TO CIVIL/LANDSCAPE DRAWINGS FOR ASSOCIATED NOTES, DETAILS AND EXACT LOCATIONS OF ALL SPORTS LIGHTING AND HANDHOLES.
3. CIRCUIT NUMBERS DENOTE CIRCUITING INTENT. EXACT NUMBER DESIGNATIONS SHALL BE DETERMINED IN THE FIELD AND REFLECTED ON THE AS BUILT DRAWINGS. INTERCONNECTING BRANCH WIRING SHALL BE SIZED EQUAL TO THE HOMERUN UNLESS NOTED OTHERWISE.
4. VOLTAGE DROP HAS BEEN CONSIDERED IN THE DESIGN OF ALL BRANCH CIRCUITRY AND FEEDER SIZES BASED ON EQUIPMENT LAYOUTS AND SHORTEST CONDUCTOR/RACEWAY ROUTING. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS TAKEN THAT WILL INCREASE CONDUCTOR/RACEWAY LENGTHS. BRANCH CIRCUITS LONGER THAN 75' FOR 120V FROM PANEL TO LAST OUTLET SHALL BE INCREASED A MINIMUM OF ONE SIZE ABOVE THAT SPECIFIED TO LIMIT VOLTAGE DROP TO LESS THAN 3%. FEEDERS SHALL FOLLOW SIMILAR GUIDELINES AND BE LIMITED TO A 2% DROP.
5. MAINTAIN CONTINUITY OF BRANCH CIRCUITRY ASSOCIATED WITH ALL EXISTING SPORTS LIGHTING AND EQUIPMENT TO REMAIN.
6. CONTRACTOR SHALL STAKE LOCATIONS OF ALL HANDHOLES AND MANHOLES FOR REVIEW BY ACTIVITAS PRIOR TO COMMENCEMENT OF WORK.

KEYNOTES

- ① SEE POLE RISER DETAIL E501 ON DRAWING E3.1 FOR ADDITIONAL INFORMATION.
- ② PATHWAY LIGHTING SHALL BE CONTROLLED VIA CONTACTOR. SEE DETAIL ON DRAWING E3.0 FOR ADDITIONAL INFORMATION.

NOTES:

- 1 REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.



CONSULTANTS

ARCHITECT -
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 SITE PLAN
 PART B

SHEET NO:

E1.1

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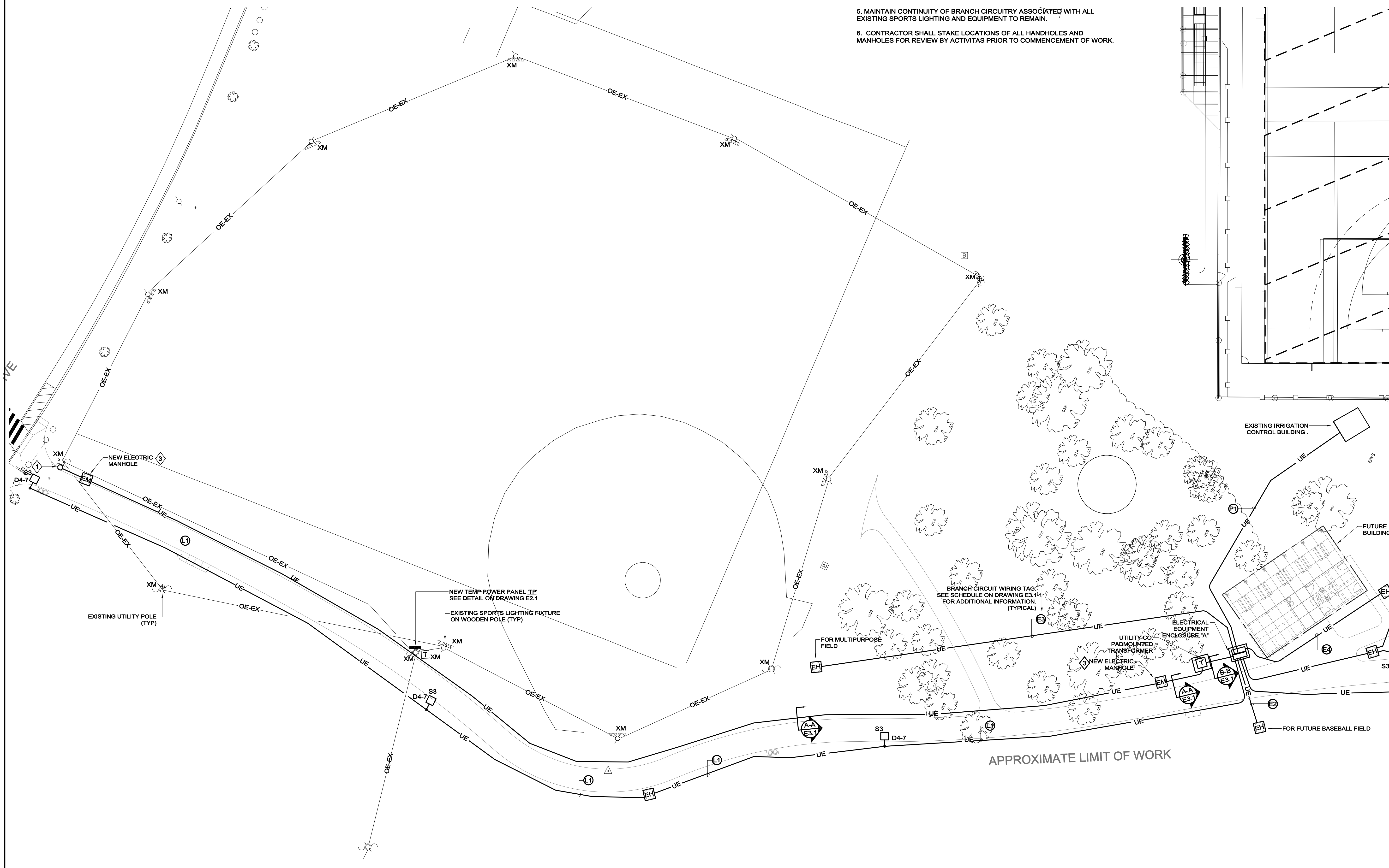
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KEYNOTES

- | | |
|---|---|
| ① | SEE POLE RISER DETAIL E501 ON DRAWING E3.1 FOR ADDITIONAL INFORMATION. |
| ② | PATHWAY LIGHTING SHALL BE CONTROLLED VIA CONTACTOR. SEE DETAIL ON DRAWING E3.0 FOR ADDITIONAL INFORMATION. |
| ③ | MANHOLE SHALL BE PROVIDED IN ACCORDANCE WITH RMLD STANDARDS. REFER TO DETAIL E507 ON DRAWING E3.1 FOR ADDITIONAL INFORMATION. |

NOTES:

- REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.



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SEAL:

SHEET TITLE:
 ELECTRICAL
 SITE PLAN
 PART C

SHEET NO:

E1.2

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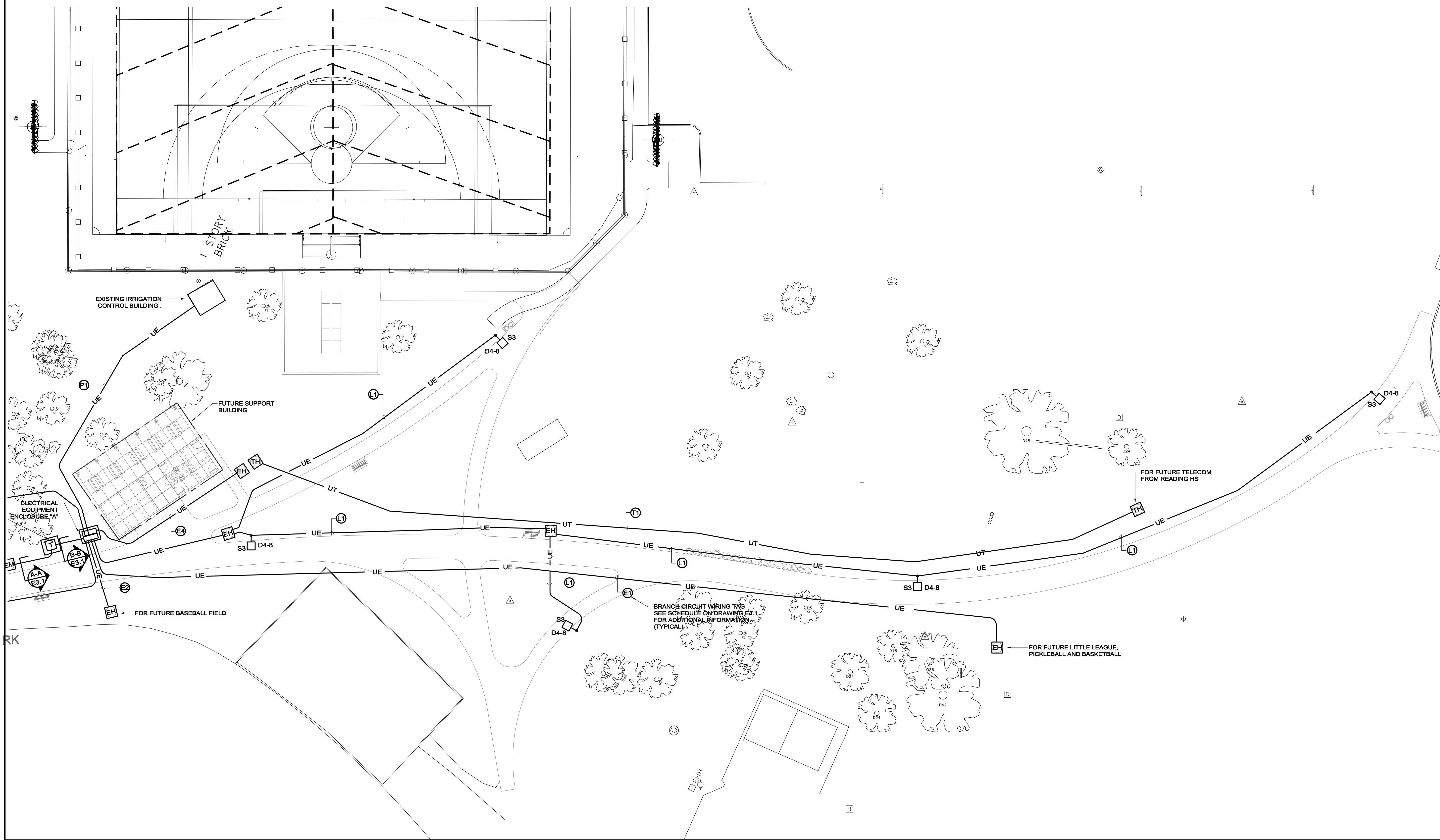
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2. REFER TO CIVIL/LANDSCAPE DRAWINGS FOR ASSOCIATED NOTES, DETAILS AND EXACT LOCATIONS OF ALL SPORTS LIGHTING AND HANDHOLES.
3. CIRCUIT NUMBERS DENOTE CIRCUITING INTENT. EXACT NUMBER DESIGNATIONS SHALL BE DETERMINED IN THE FIELD AND REFLECTED ON THE AS BUILT DRAWINGS. INTERCONNECTING BRANCH WIRING SHALL BE SIZED EQUAL TO THE HOMERUN UNLESS NOTED OTHERWISE.
4. VOLTAGE DROP HAS BEEN CONSIDERED IN THE DESIGN OF ALL BRANCH CIRCUITRY AND FEEDER SIZES BASED ON EQUIPMENT LAYOUTS AND SHORTEST CONDUCTOR/RACEWAY ROUTING. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS TAKEN THAT WILL INCREASE CONDUCTOR/RACEWAY LENGTHS. BRANCH CIRCUITS LONGER THAN 75' FOR 120V FROM PANEL TO LAST OUTLET SHALL BE INCREASED A MINIMUM OF ONE SIZE ABOVE THAT SPECIFIED TO LIMIT VOLTAGE DROP TO LESS THAN 3%. FEEDERS SHALL FOLLOW SIMILAR GUIDELINES AND BE LIMITED TO A 2% DROP.
5. MAINTAIN CONTINUITY OF BRANCH CIRCUITRY ASSOCIATED WITH ALL EXISTING SPORTS LIGHTING AND EQUIPMENT TO REMAIN.
6. CONTRACTOR SHALL STAKE LOCATIONS OF ALL HANDHOLES AND MANHOLES FOR REVIEW BY ACTIVITAS PRIOR TO COMMENCEMENT OF WORK.

KEYNOTES

1	SEE POLE RISER DETAIL E501 ON DRAWING E3.1 FOR ADDITIONAL INFORMATION.
2	PATHWAY LIGHTING SHALL BE CONTROLLED VIA CONTACTOR. SEE DETAIL ON DRAWING E3.0 FOR ADDITIONAL INFORMATION.
3	MANHOLE SHALL BE PROVIDED IN ACCORDANCE WITH RMLD STANDARDS. REFER TO DETAIL E507 ON DRAWING E3.1 FOR ADDITIONAL INFORMATION.

NOTES:

1. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.



CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN

ELECTRICAL ENGINEER -
 NV5 ENGINEERS

WELL AND DELINEATION -
 EPSILON ASSOCIATES, INC.

SURVEY -
 REED LAND SURVEY, INC.

TOWN OF READING
 Reading, MA

BIRCH MEADOW PARK | PHASE I RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: NTS

PROJECT NO.: 0220154

FILE:

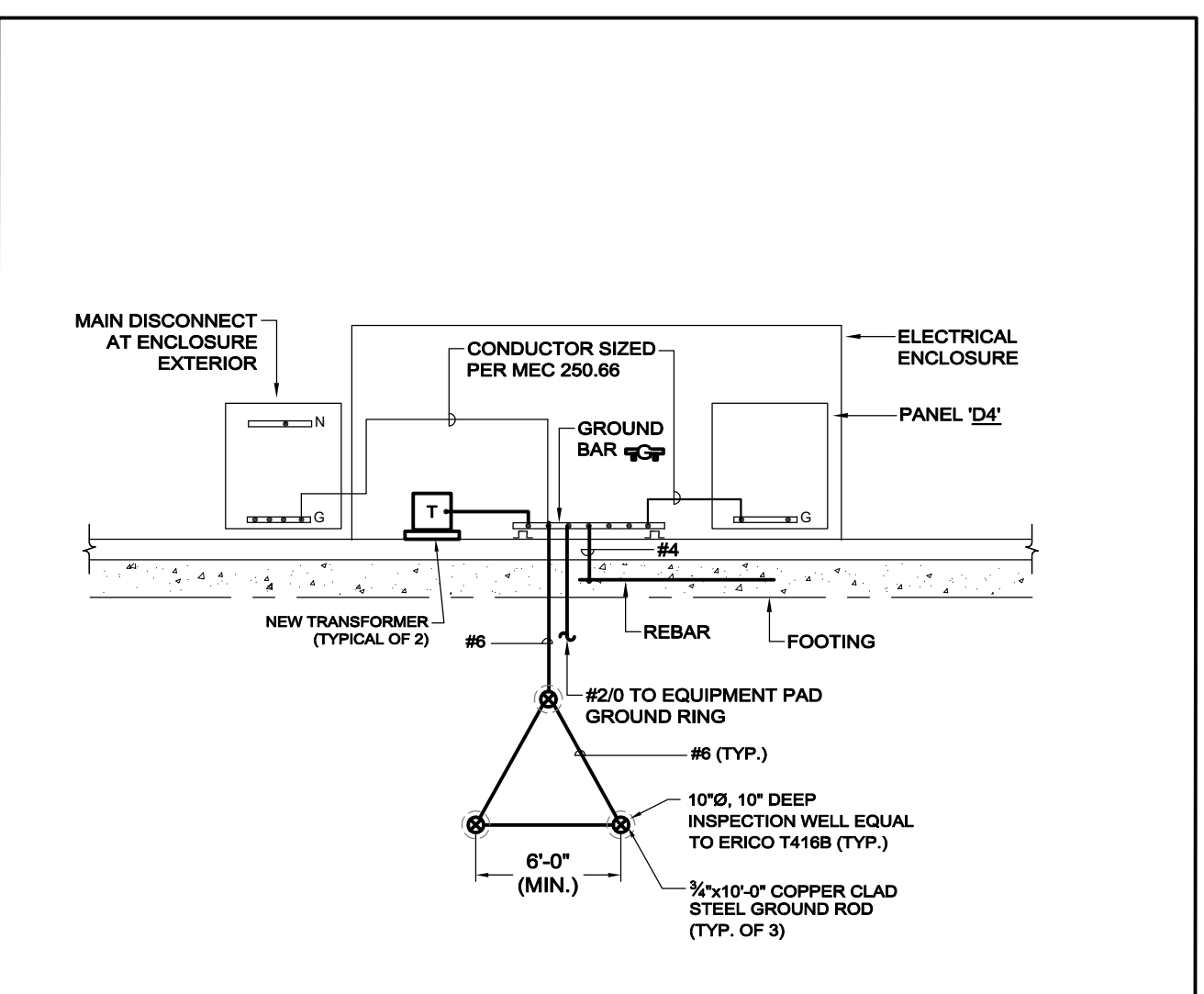
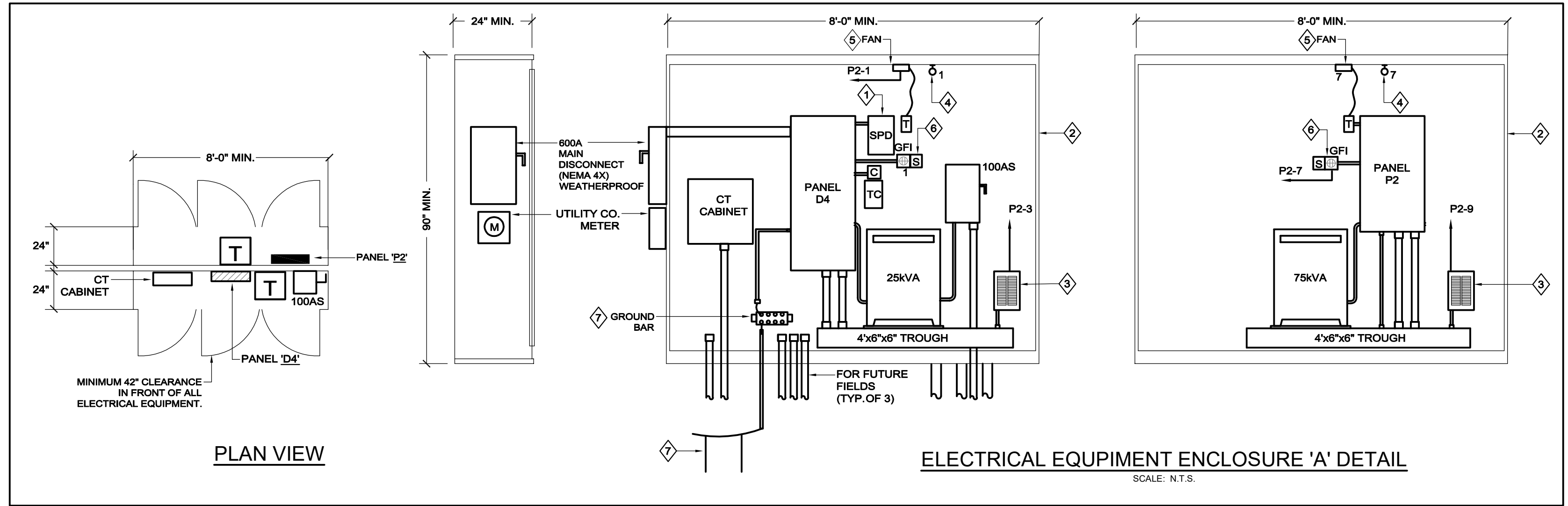
DRAWN: MYM

CHECKED: KEG

SEAL:

SHEET TITLE:
ELECTRICAL ONE-LINE DIAGRAM, SCHEDULES + DETAILS

SHEET NO:
E2.0



NOTES:

- THIS DRAWING IS INTENDED TO ILLUSTRATE GROUNDING REQUIREMENTS. REFER TO MEC ARTICLE 250 FOR ADDITIONAL DETAILS.
- ALL CONNECTIONS SHALL BE EXOTHERMIC WELDS WITH THE EXCEPTION OF MECHANICAL LUGS IN THE SERVICE ENTRANCE EQUIPMENT.
- WALL MOUNTED COPPER 4"x12"x2" GROUND BUS SHALL BE EQUAL TO ERICO EGB-A144248B.

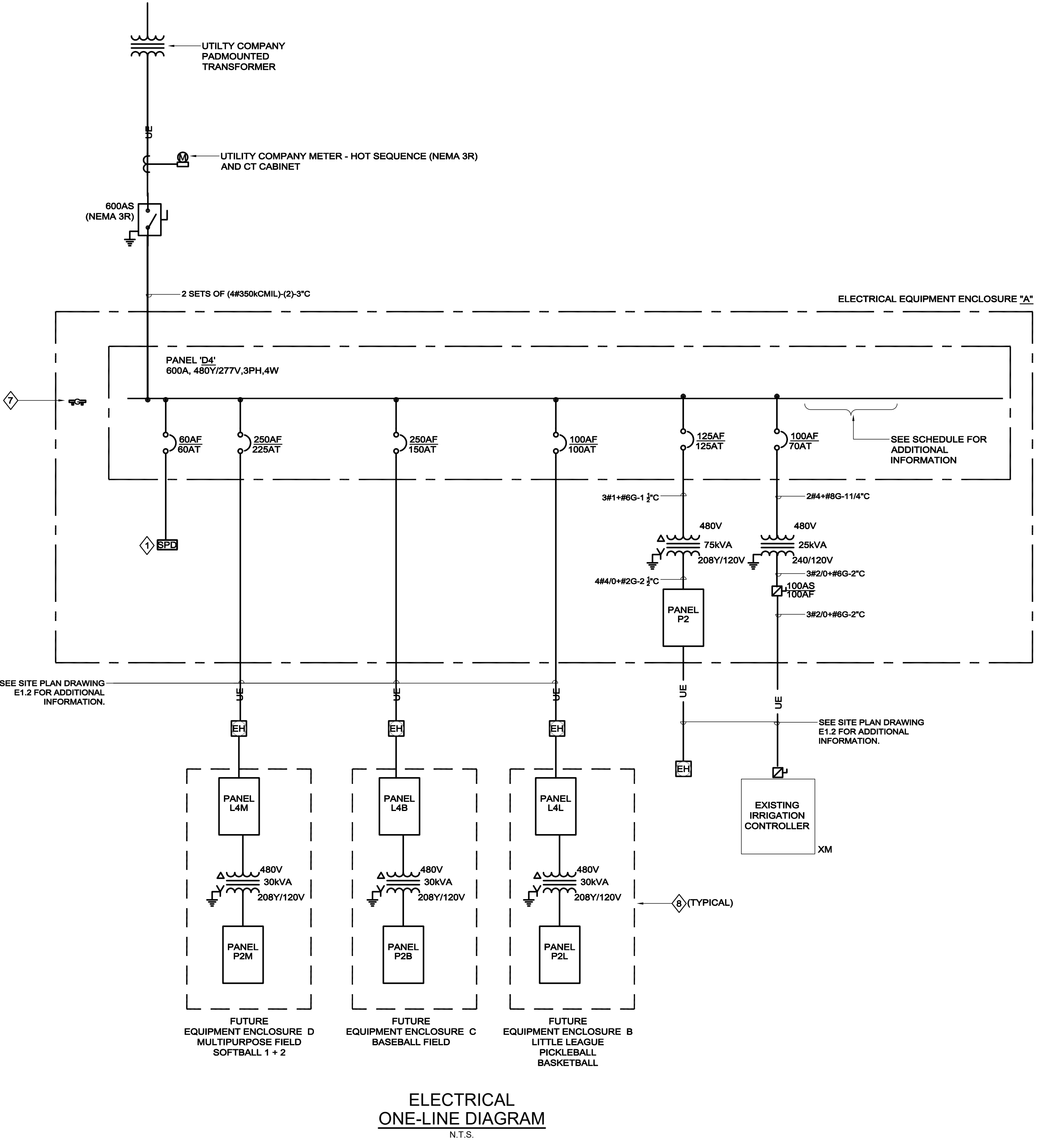
NV5 **ELECTRIC PANEL ENCLOSURE GROUNDING ELECTRODE DETAIL** **E001**

KEYNOTES

- SERVICE ENTRANCE SPD SHALL HAVE A MAXIMUM SURGE RATING CAPACITY OF 125KA PER MODE (250KA PER PHASE). SPD SHALL BE INDIVIDUALLY MOUNTED IN A NEMA 1 ENCLOSURE CONNECTED TO THE SERVICE VIA A 60A-3P CIRCUIT BREAKER. PROVIDE WITH INDICATING LAMPS, SURGE COUNTER AND FORM C CONTACT FOR CONNECTION TO THE BUILDING AUTOMATION SYSTEM AS A GENERAL ALARM. SPD SHALL BE TO SERIES AS MANUFACTURED BY CURRENT TECHNOLOGY, LM SERIES BY LIEBERT OR CPS SERIES FROM CUTLER HAMMER.
- ENCLOSURE SHALL BE CUSTOM FABRICATED, LOCKABLE TWO DOOR STAINLESS STEEL FREE STANDING PADMOUNTED VENTILATED ENCLOSURE AS MANUFACTURED BY HOFFMAN WATERSHED SERIES OR APPROVED EQUAL. ENCLOSURE SHALL BE EQUIPPED WITH EXHAUST FAN AND HEATER AS ILLUSTRATED. PROVIDE STAINLESS STEEL FEET TO ELEVATE ENCLOSURE 1" ABOVE PAD. CONTRACTOR SHALL CONFIRM EXACT DIMENSIONS OF ENCLOSURE BASED ON ACTUAL EQUIPMENT SIZE AND ENCLOSURE MANUFACTURER'S RECOMMENDATIONS. PROVIDE DIMENSIONED DRAWING FOR REVIEW BY ENGINEER PRIOR TO PURCHASE.
- PROVIDE 800W UNIT HEATER WITH INTEGRAL THERMOSTAT
- PROVIDE VAPORTIGHT WEATHERPROOF LED FIXTURE AS MANUFACTURED BY HUBBELL # VV11VX2-VBLU15LGVCG-15-19WLED OR APPROVED EQUAL.
- PROVIDE COMPACT 10" COOLING FAN RATED AT 36W/560CFM, 120V-1Ø WITH CORD/PLUG ASSEMBLY AND TEMPERATURE CONTROL SWITCH. PROVIDE RAN BRACKET AND FINGER GUARD/FILTER KIT. FAN SHALL BE MANUFACTURED BY HOFFMAN # A10AFTN-ABRT110-ASARD10.
- GROUND FAULT RECEPTACLE AND LIGHT SWITCH IN TWO GANG WEATHERPROOF ENCLOSURE.
- BOND THE GROUNDING CONDUCTOR AND GROUND ELECTRODE CONDUCTOR ONLY. NO NEUTRAL TO GROUND BONDING.
- FUTURE EQUIPMENT SHOWN FOR REFERENCE ONLY.
- PROVIDE GROUNDING ELECTRODE TO EQUIPMENT GROUND CONNECTION ONLY. NO NEUTRAL BOND.
- PROVIDE NEW CIRCUIT BREAKER IN EXISTING PANEL AS INDICATED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING BREAKERS. PROVIDE TYPEWRITTEN UPDATED PANEL DIRECTORY AND RE-BALANCE LOAD TO WITHIN 10% PHASE TO PHASE UPON COMPLETION OF WORK.

NOTES:

- REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.



DISTRIBUTION BOARD SCHEDULE

TAG: D4 VOLT: 480Y/277 3 PHASE 4 WIRE
 BUS: 600 AMPS MAIN: 600 AMPS AIC: 65,000 AMPS SYM

CIRCUIT NUMBER	LOAD DESIGNATION	OVERCURRENT DEVICE			LOAD		REMARKS
		FRAME	TRIP	POLE	KVA	HP	
1	SPD	100	60	3			
2	FUTURE MULTIPURPOSE	250	225	3	147		NOTE 2
3	FUTURE BASEBALL	250	150	3	87		NOTE 2
4	FUTURE LITTLE LEAGUE	100	100	3	60		NOTE 2
5	PANEL P2	125	125	3	32		
6	EXIST IRRIGATION CNTRL	100	70	2	25		
7	PATHWAY LIGHTING	20	20	1	1.0		
8	PATHWAY LIGHTING	20	20	1	1.0		
9	SPARE	100	100	3			
10	SPARE	150	150	3			
11	SPARE	125	125	3			
12	SPARE	250		3			
13	SPARE	250		3			
14	SPARE	250		3			
CONNECTED KVA =					353		

NOTES:

- PROVIDE LUGS TO ACCOMMODATE FEEDER SIZES AS IDENTIFIED ON THE RISER DIAGRAM FOR SUPPLY AND ALL LOADS. (THIS NOTE APPLICABLE TO ALL TERMINATIONS.)
- PROVIDE ADJUSTABLE TRIP BREAKER.

NEW PANELBOARD SCHEDULE

PANEL P2 VOLT: 208Y/120 MOUNT: SURFACE GROUND BUS: Y
 MAIN: 225AMCB AMP: 225 AIC: 10,000 ISOLATED GROUND BUS: N
 PHWIRE: 3/4 LOC: ENCL A 200% NEUTRAL: N

CR	AMPS/ POLES	DESCRIPTION OF LOAD	LOAD KVA	LOAD BY PHASE, KVA			LOAD KVA	DESCRIPTION OF LOAD	AMPS/ POLES	CR
				A	B	C				
1	20/1	ENCLOSURE LIGHT/REC/FAN	0.50	10.50			10.50		2	2
3	20/1	ENCLOSURE HEATER	0.80		10.80		10.80	FOR FUTURE PANEL P2R	100/3	4
5	20/1	SPARE				10.00	10.00		20/1	6
7	20/1	ENCLOSURE LIGHT/REC/FAN	0.50	0.50					20/1	8
9	20/1	ENCLOSURE HEATER	0.80		0.80				20/1	10
11	20/1	SPARE				0.00	0.00		20/1	12
13	20/1	SPARE				0.00	0.00		20/1	14
15	20/1	SPARE				0.00	0.00		20/1	16
17	20/1	SPARE				0.00	0.00		SPACE	18
19	20/1	SPARE				0.00	0.00		SPACE	20
21	20/1	SPARE				0.00	0.00		SPACE	22
23	20/1	SPARE				0.00	0.00		SPACE	24
25	20/1	SPARE				0.00	0.00		SPACE	26
27	20/1	SPARE				0.00	0.00		SPACE	28
29	20/1	SPARE				0.00	0.00		SPACE	30
31	20/1	SPARE				0.00	0.00		SPACE	32
33	20/1	SPARE				0.00	0.00		SPACE	34
35	20/1	SPARE				0.00	0.00		SPACE	36
37	20/1	SPARE				0.00	0.00		SPACE	38
39	20/1	SPARE				0.00	0.00		SPACE	40
41	20/1	SPARE				0.00	0.00		SPACE	42
CONNECTED KVA BY PHASE:				11.00	11.60	10.00		TOTAL CONNECTED KVA	32.60	
									DEMAND FACTOR	0.80
									TOTAL DEMAND KVA	26.08
									TOTAL DEMAND AMPERES:	72.39

EXISTING PANELBOARD SCHEDULE

PANEL L1 VOLT: 480Y/277 MOUNT: SURFACE GROUND BUS: Y
 MAIN: MLO AMP: 400 AIC: 14,000 ISOLATED GROUND BUS: N
 PHWIRE: 3/4 LOC: ENCL A 200% NEUTRAL: N

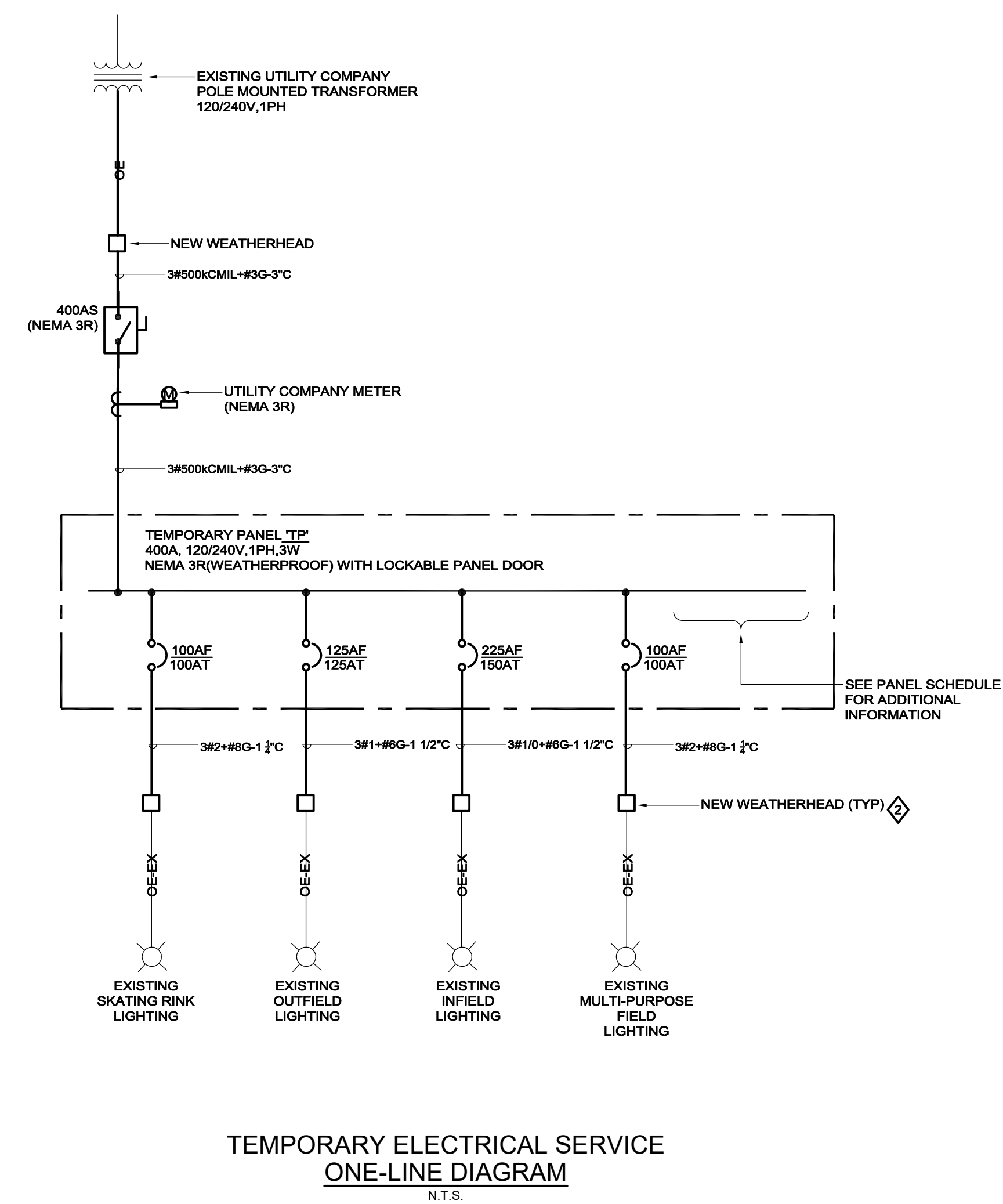
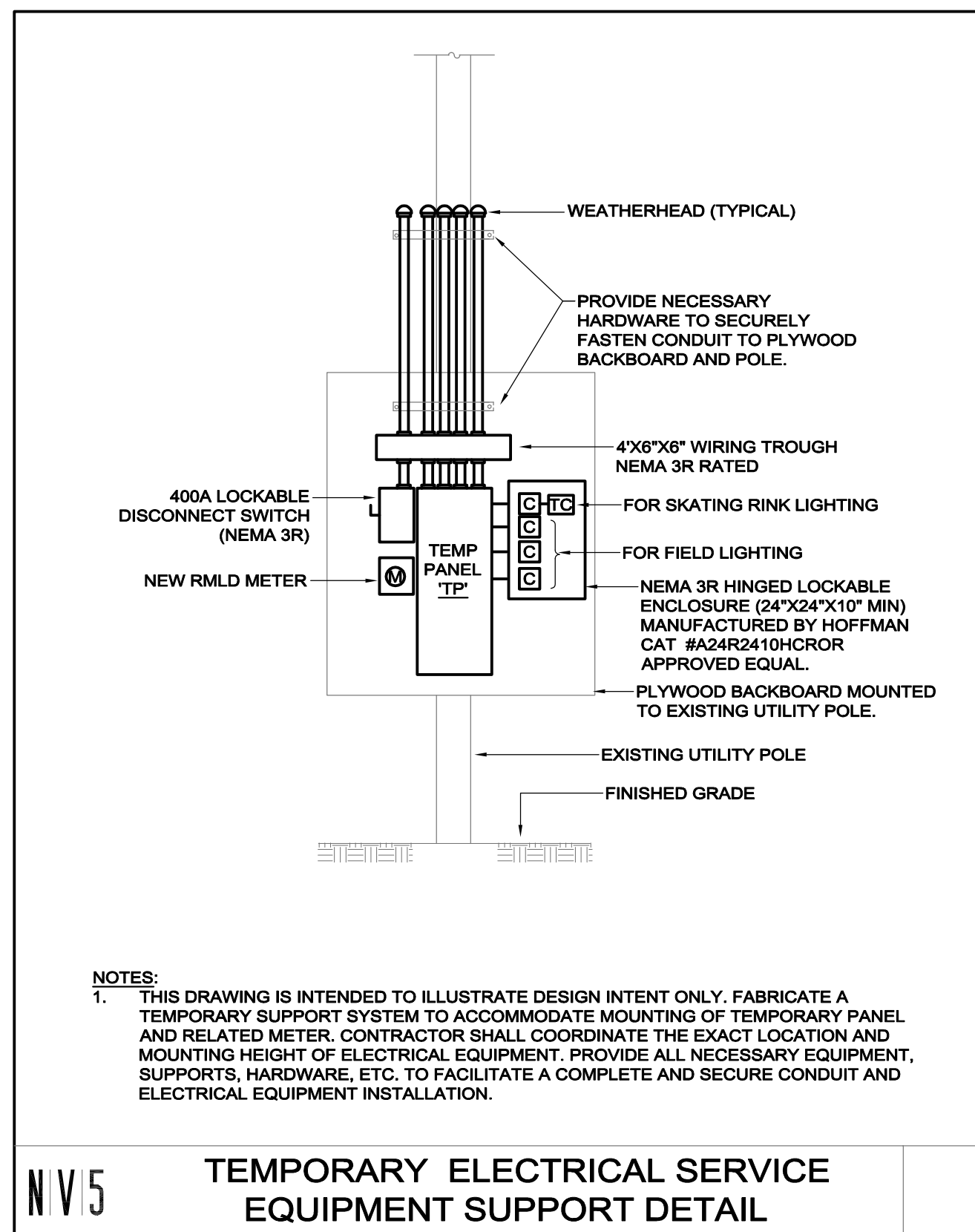
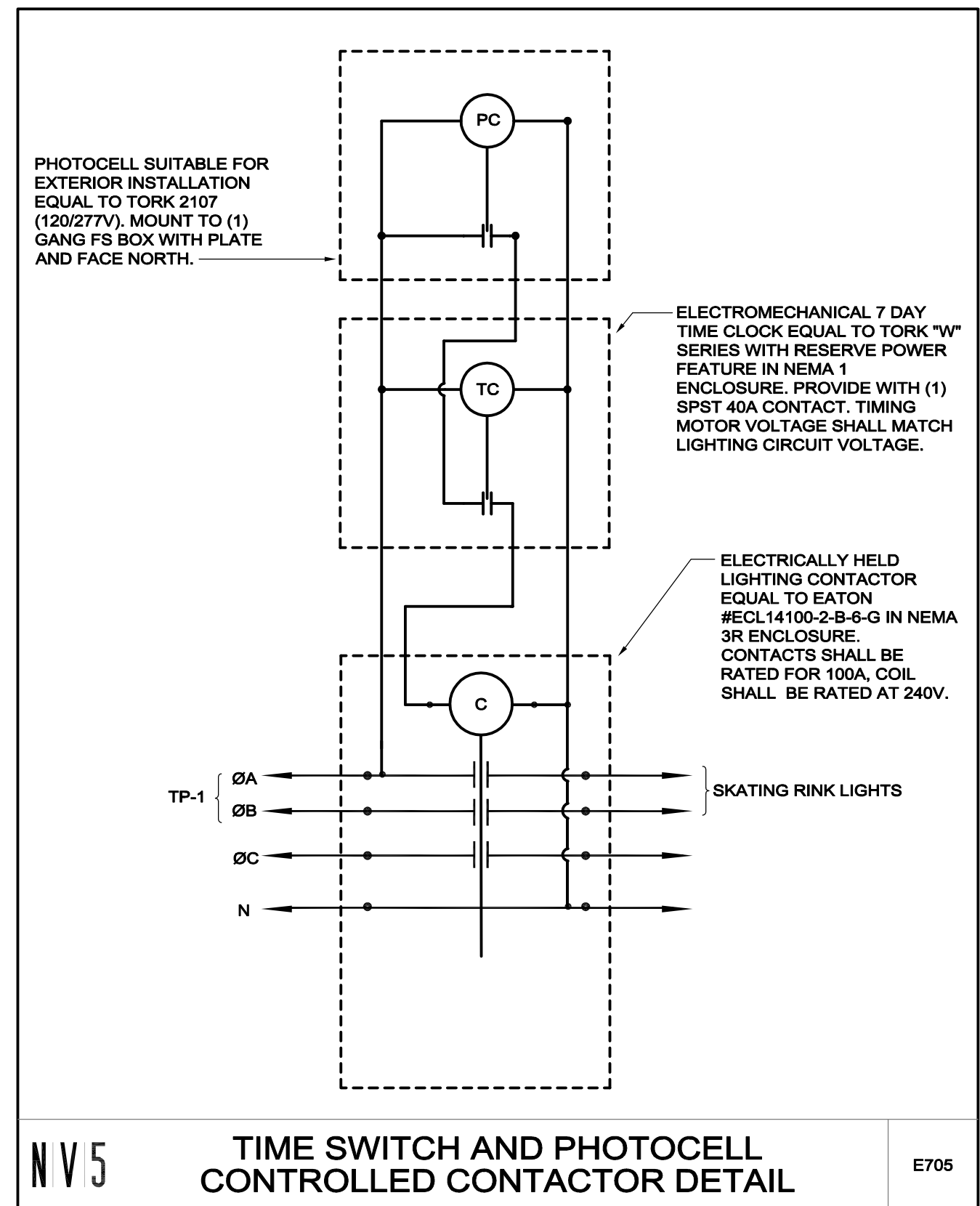
CR	AMPS/ POLES	DESCRIPTION OF LOAD	LOAD KVA	LOAD BY PHASE, KVA			LOAD KVA	DESCRIPTION OF LOAD	AMPS/ POLES	CR
				A	B	C				
1		SPACE		0.00				SPACE		2
3		SPACE			0.00			SPACE		4
5		SPACE				0.00		SPACE		6
7		SPACE			0.00			SPACE		8
9		SPACE				0.00		SPACE		10
11		SPACE				1.00	1.00	PARKING LOT LIGHTING	20/1	12
13		SPACE		5.40			5.40		20/1	14
14		SPACE			5.40		5.40	SPORTS F1 (FOOTBALL)	30/3	16
15		SPACE				5.45	5.40		20/1	18
17	20/2	POLE F1 (SECURITY)	0.05		0.10		0.05	POLE F2 (SECURITY)	20/2	20
21	20/2	POLE F3 (TRACK)	0.90		0.95		0.05	POLE F4 (TRACK)	20/2	22
23	20/2	POLE F3 (TRACK)	0.90			1.80	0.90	POLE F4 (TRACK)	20/2	24
25	20/1	FLAGPOLE LIGHTS	0.10	1.00			0.90		20/1	26
27	20/1	SITE LIGHTING S1				0.90	0.90	FIELD LTS (LAX/SOCCER)	100/2	28
29		SPACE				0.90	0.90		30	30
31		SPACE		5.40	10.80		5.40		30	32
33	30/3	SPORTS F2 (FOOTBALL)	5.40			10.80	5.40	SPORTS F4 (FOOTBALL)	30/3	34
35		SPACE		5.40			10.80	5.40		36
37		SPACE		5.40	42.20		36.80		38	38
39	30/3	SPORTS F3 (FOOTBALL)	5.40		42.20		36.80	PANEL LAA	225/3	40
41		SPACE		5.40			38.80		183.90	42
CONNECTED KVA BY PHASE:				59.50	60.25	64.15	38.80	TOTAL CONNECTED KVA	183.90	
									DEMAND FACTOR	1.00
									TOTAL DEMAND KVA	183.90
									TOTAL DEMAND AMPERES:	221.20

REVISIONS:

NO.	DATE	DESCRIPTION

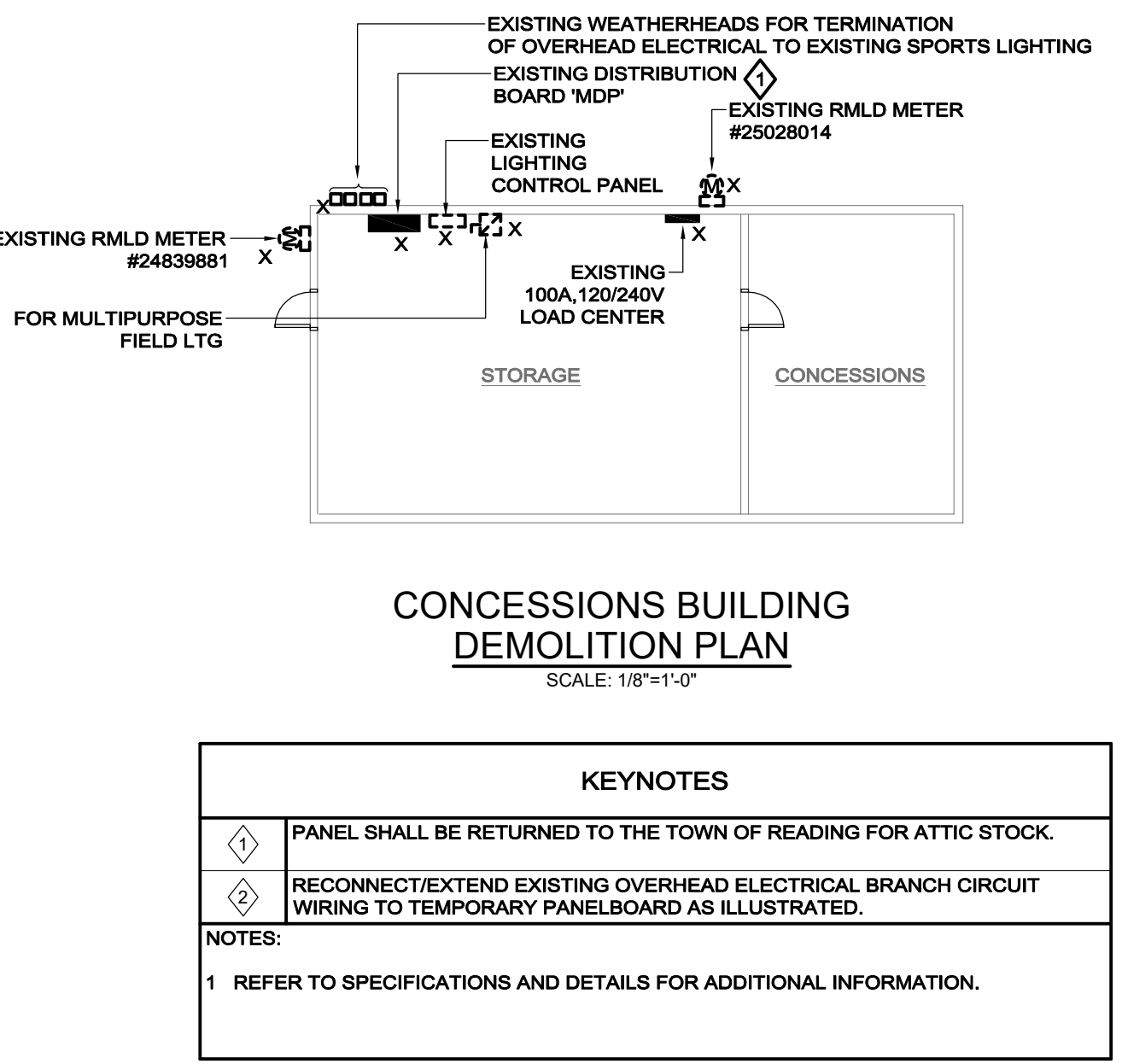
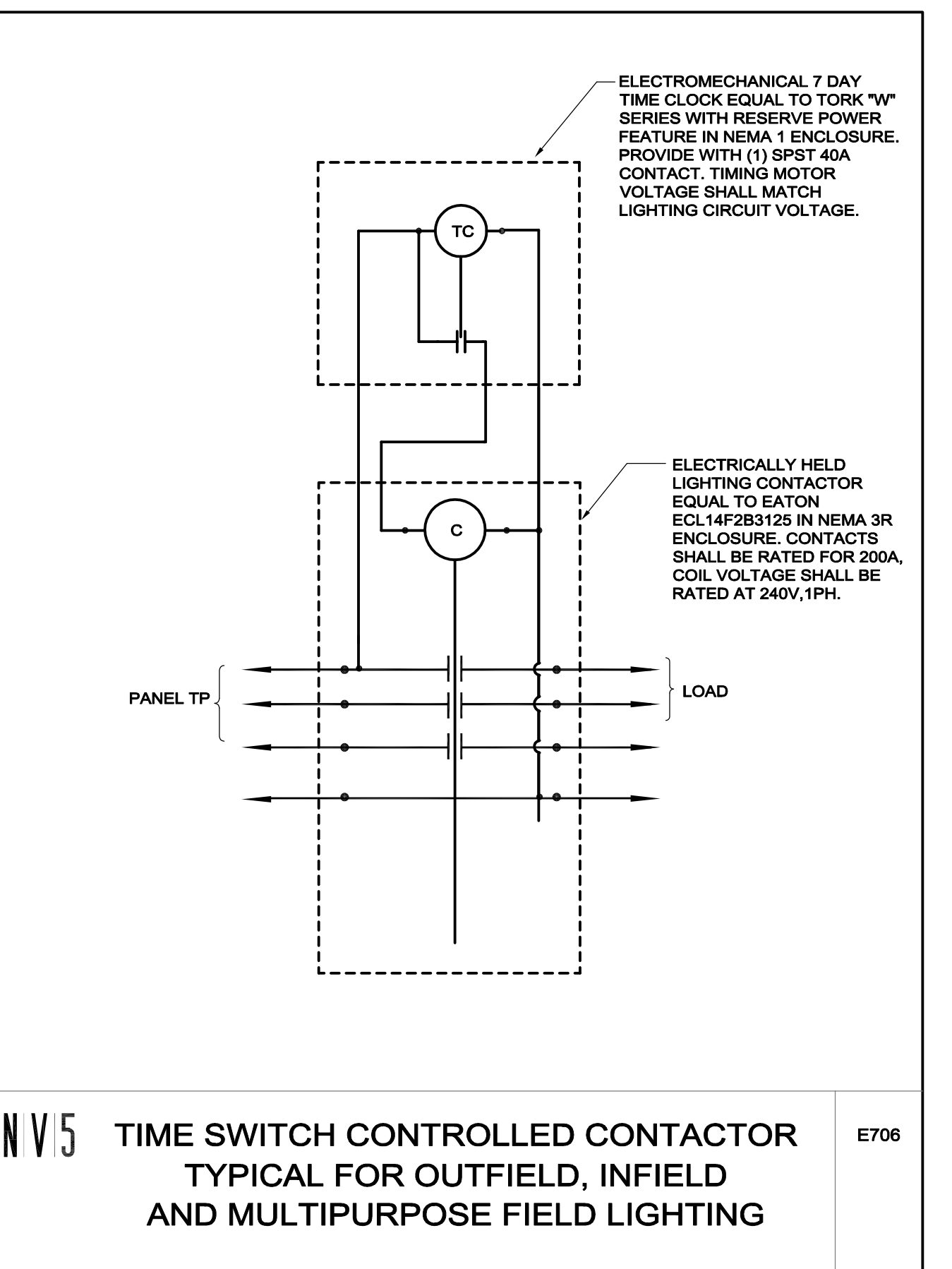
SCALE:	NTS
PROJECT NO.:	0220154
FILE:	
DRAWN:	MVM
CHECKED:	KEG

SEAL:



TEMPORARY POWER PANELBOARD SCHEDULE

PANEL	MAN	MLO	VOLTS 120/240				MOUNT SURFACE		GROUND BUS Y		
			BUS 400				AC 10,000				
			PHWIRE 1 PH, 3 W				LOC EXTERIOR				
OR	AMPS/ POLES	DESCRIPTION OF LOAD	LOAD KVA	LOAD BY PHASE KVA		LOAD KVA	DESCRIPTION OF LOAD	AMPS/ POLES	CIR		
1	100/2	SKATING RINK LIGHTING	0.00					INFIELD LIGHTS	150/2	2	
3						0.00				4	
5	125/2	OUTFIELD LIGHTS	0.00					MULTIPURPOSE FIELD LIGHTS	100/2	6	
7										8	
9	100/2	IRRIGATION SHED	0.00					SPACE		10	
11						0.00		SPACE		12	
13		SPACE	0.00					SPACE		14	
15		SPACE	0.00			0.00		SPACE		16	
17		SPACE	0.00					SPACE		18	
19		SPACE	0.00			0.00		SPACE		20	
21		SPACE	0.00					SPACE		22	
23		SPACE	0.00					SPACE		24	
25		SPACE	0.00			0.00		SPACE		26	
27		SPACE	0.00					SPACE		28	
29		SPACE	0.00					SPACE		30	
31		SPACE	0.00			0.00		SPACE		32	
33		SPACE	0.00					SPACE		34	
35		SPACE	0.00					SPACE		36	
37		SPACE	0.00			0.00		SPACE		38	
39		SPACE	0.00					SPACE		40	
41		SPACE	0.00					SPACE		42	
								TOTAL CONNECTED KVA		0.00	
								DEMAND FACTOR		1.00	
								TOTAL DEMAND KVA		0.00	
								TOTAL AMPERES		0.00	



CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN

ELECTRICAL ENGINEER -
 NV5 ENGINEERS

WELL AND DELINEATION -
 EPSILON ASSOCIATES, INC.

SURVEY -
 REED LAND SURVEY, INC.

TOWN OF READING
 Reading, MA
 BIRCH MEADOW PARK | PHASE I RENOVATIONS

BID DOCUMENTS
 January, 27 2023

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: NTS

PROJECT NO.: 0220154

FILE:

DRAWN: MYM

CHECKED: KEG

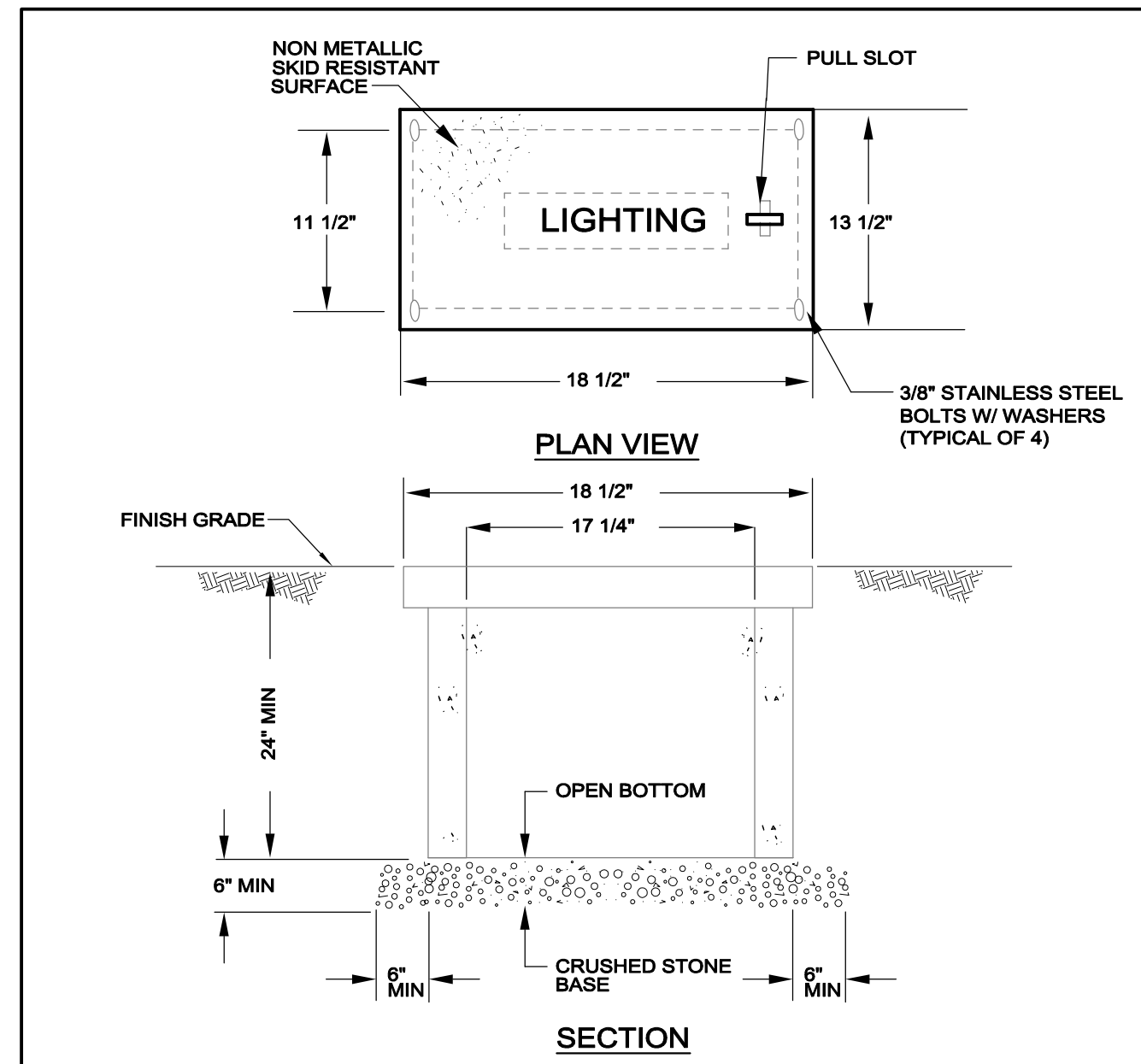
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ELECTRICAL
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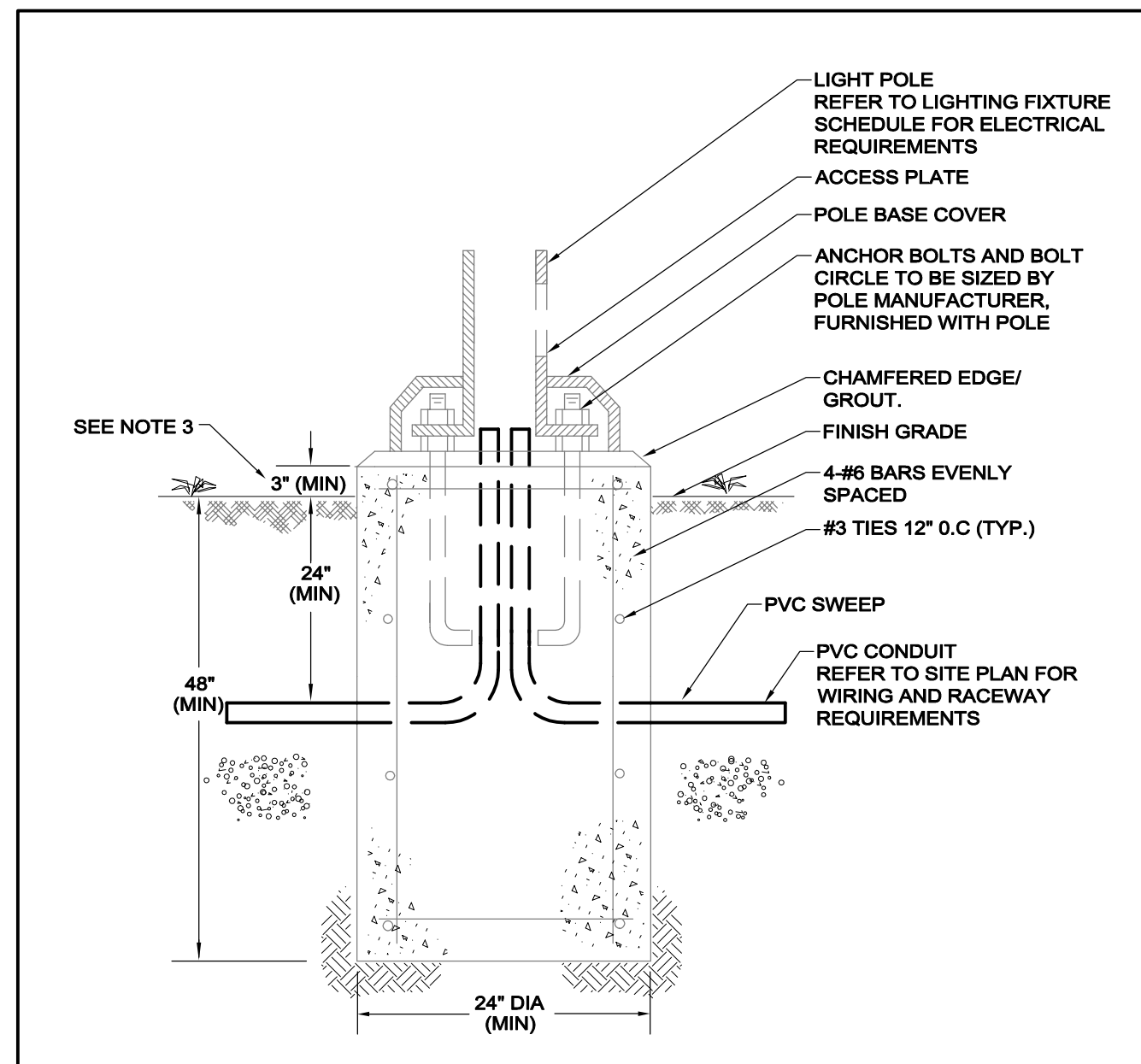
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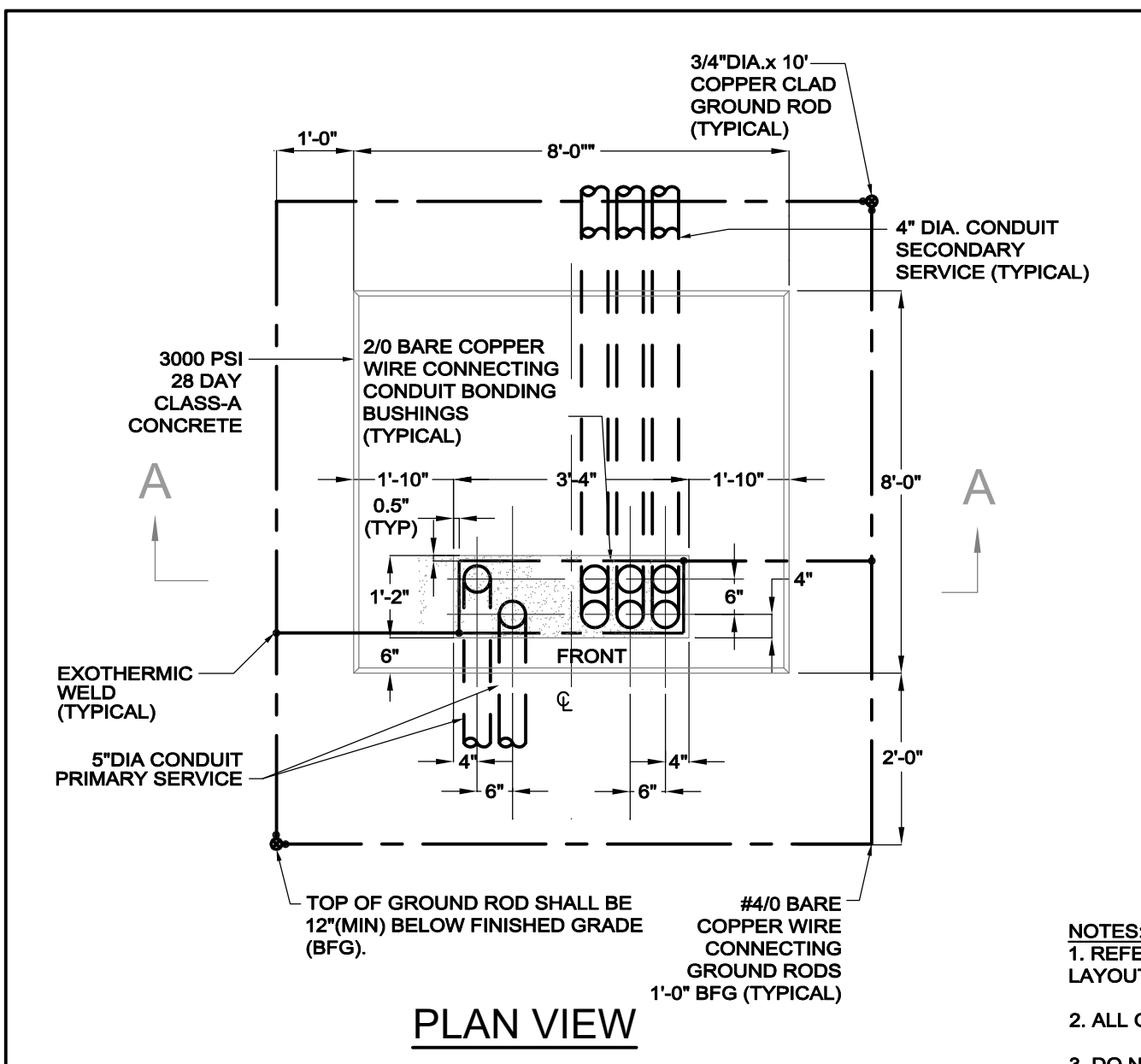
NOTES:
 1. THIS IS A TYPICAL DETAIL. REFER TO DRAWING FOR ACTUAL DIMENSIONS OF HANDHOLE WHICH MAY DEVIATE FROM THESE DIMENSIONS. REFER TO THE SITE PLAN FOR QUANTITY OF CONDUITS AND THE "SERVICE" REQUIRED ON THE COVER.
 2. THIS HANDHOLE IS INTENDED FOR NON-DELIBERATE VEHICULAR TRAFFIC ONLY, ANSI TIER 22 (22,500 POUND DESIGN LOAD)
 3. HANDHOLE SHALL BE PREFABRICATED POLYMER CONCRETE AGGREGATE EQUAL TO QUAZITE OR EQUAL PRE CAST CONCRETE CONSTRUCTION.

NV5 TYPICAL PREFABRICATED HANDHOLE DETAIL E505



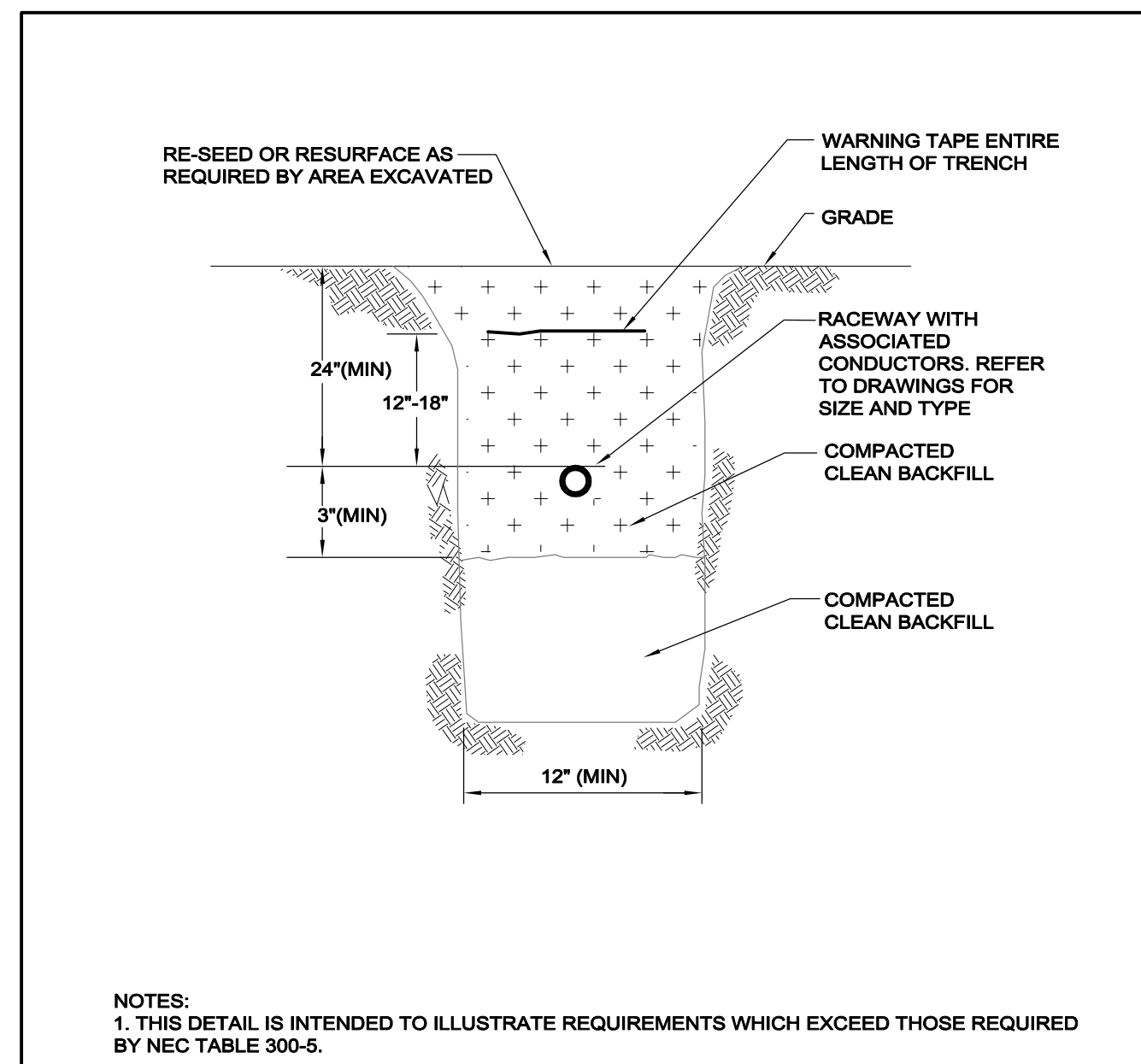
NOTES:
 1. BASE DETAIL PROVIDED TO INDICATE GENERAL INTENT OF THE ELECTRICAL INSTALLATION. MODIFY BASE DEPTH AND DIAMETER TO ACCOMMODATE LIGHTING FIXTURE AND SOIL CHARACTERISTICS.
 2. COORDINATE ANCHOR BOLT PLACEMENT WITH GENERAL CONTRACTOR. POLE BASE EXCAVATION FORMING, REBAR AND CONCRETE BY G.C.
 3. ELEVATION ABOVE FINISH GRADE SHALL BE 3" FOR INSTALLATIONS IN ISLANDS/PERIMETERS AND 3" IN PAVED AREA UNLESS OTHERWISE NOTED.

NV5 SITE LIGHTING POLE BASE DETAIL E514



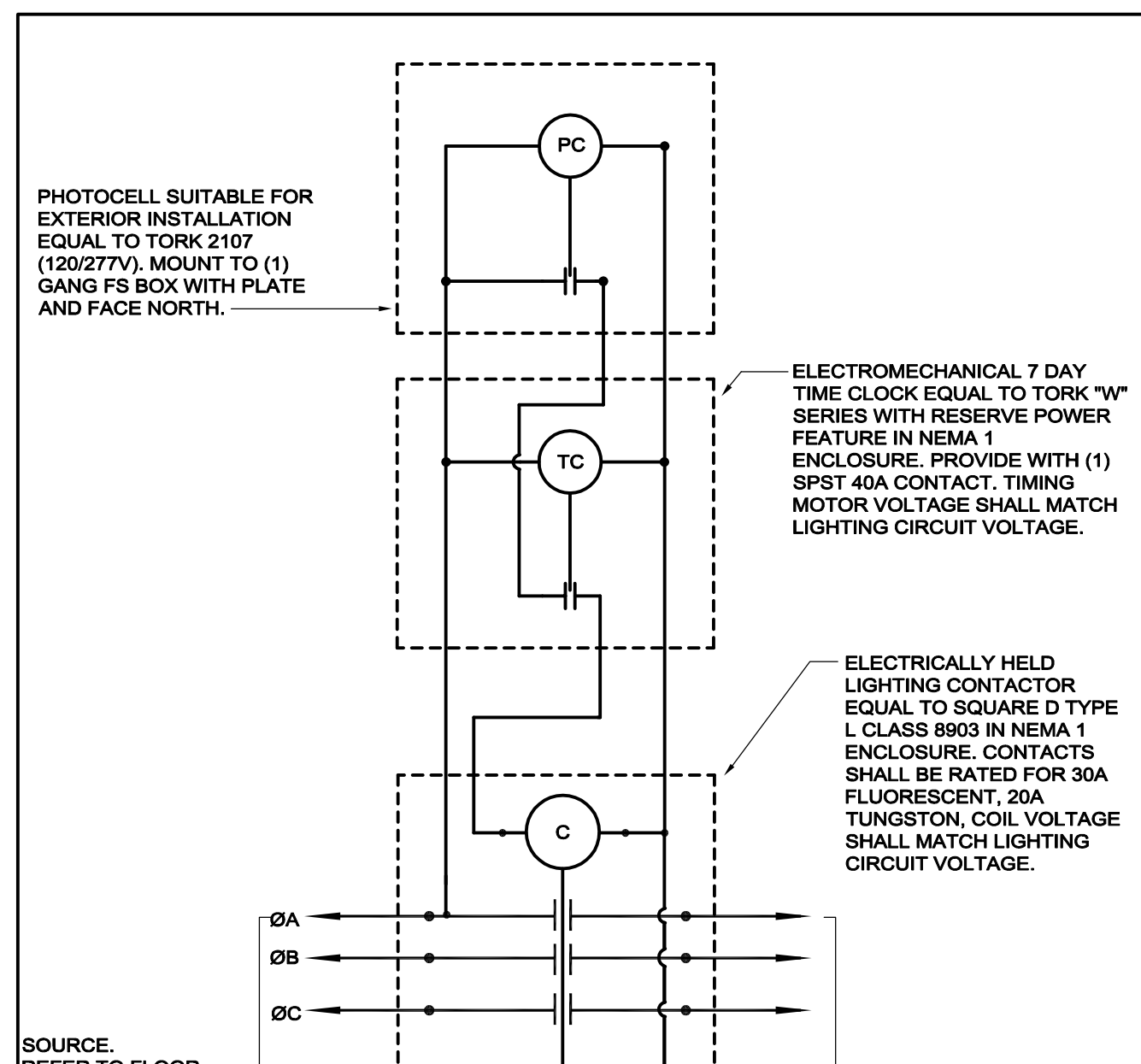
NOTES:
 1. REFER TO EXACT UTILITY COMPANY REQUIREMENTS FOR MODIFICATIONS THAT MAY BE REQUIRED TO THIS PAD LAYOUT.
 2. ALL GROUND GRID CONNECTIONS SHALL BE EXOTHERMIC WELD.
 3. DO NOT ALLOW PRIMARY AND SECONDARY CONDUITS TO CROSS EACH OTHER INSIDE OR OUTSIDE THE PAD. LOCATE SECONDARY CONDUITS AS FAR TO THE RIGHT AS POSSIBLE IN THE PAD OPENING.
 4. ALL QUARTER BENDS (PRIMARY AND SECONDARY) SHALL BE GALVANIZED STEEL SCHEDULE 40 WITH GROUNDING BUSHINGS. CAP ALL CONDUIT ENDS TO PREVENT MOISTURE AND DEBRIS FROM ENTERING CONDUITS PRIOR TO TRANSFORMER INSTALLATION.

NV5 TRANSFORMER PAD DETAIL THREE PHASE 112.5 THRU 750 KVA E508

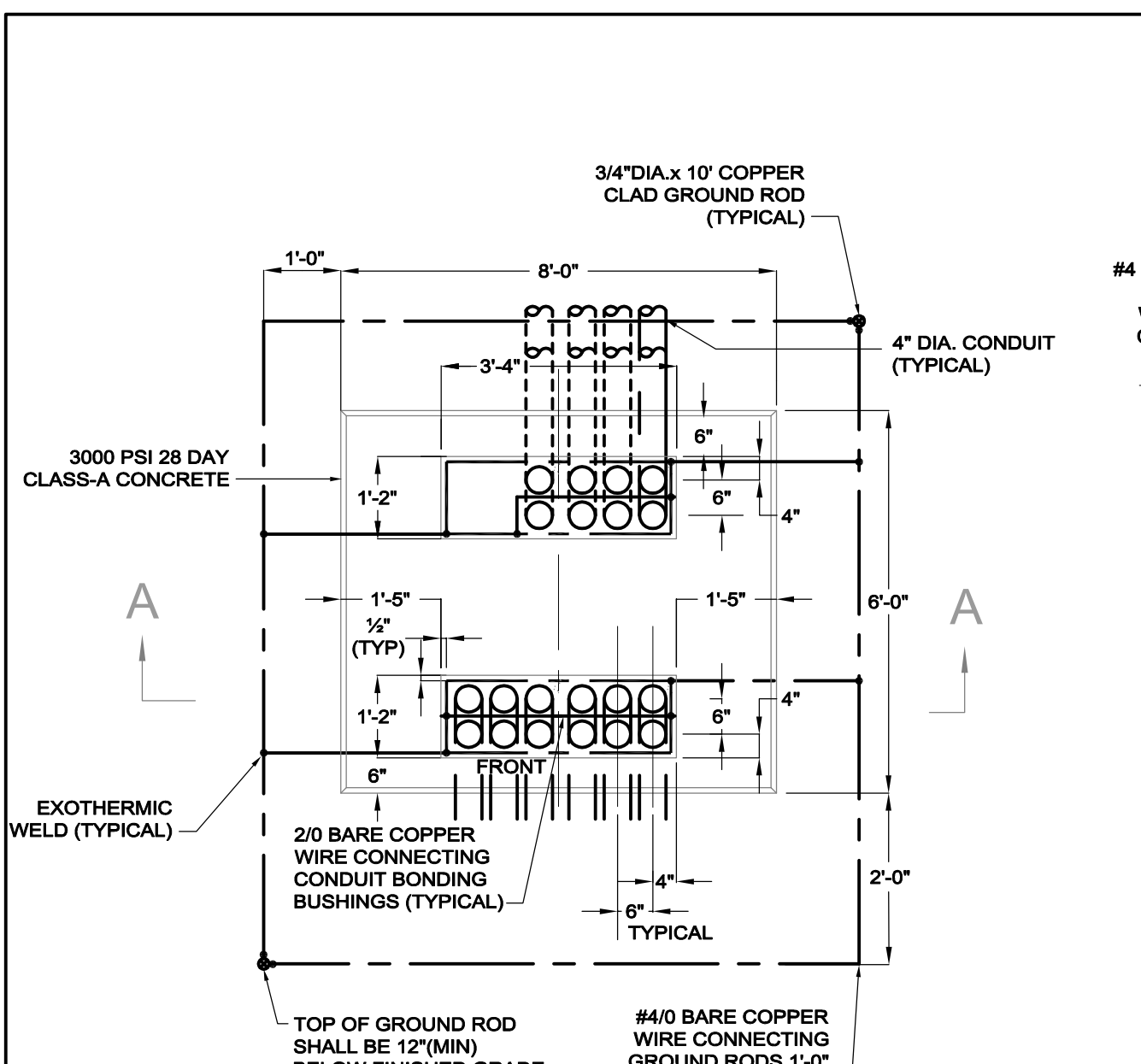


NOTES:
 1. THIS DETAIL IS INTENDED TO ILLUSTRATE REQUIREMENTS WHICH EXCEED THOSE REQUIRED BY NEC TABLE 300-5.
 2. WARNING TAPE SHALL BE DETECTABLE TYPE FOIL BACKED 4MIL POLYETHYLENE WITH FADE RESISTANT "BURIED ELECTRIC LINE BELOW" A MINIMUM OF 18 INCHES ABOVE THE BURIED SERVICE. TAPE SHALL BE EQUAL TO T&B NAF-0708.
 3. ALL ROADWAY CROSSING SHALL BE ENCASED WITH A MINIMUM OF 2 INCHES OF CONCRETE (TOP BOTTOM AND SIDES) EXTENDING A MINIMUM OF 2 FEET BEYOND EACH SIDE OF CROSSING.
 4. ALL CONDUIT RISERS SHALL UTILIZE LONG RADIUS GALVANIZED RIGID STEEL SWEEPS.

NV5 BURIED CONDUIT DETAIL E513



NV5 TIME SWITCH AND PHOTOCCELL CONTROLLED CONTACTOR DETAIL E705



NOTES:
 1. REFER TO EXACT INSTALLATION REQUIREMENTS OF THE CABINET MANUFACTURER FOR MODIFICATIONS THAT MAY BE REQUIRED TO THIS PAD LAYOUT. ACCOMMODATE ALL NECESSARY HARDWARE FOR FASTENING CABINET TO PAD.
 2. ALL GROUND GRID CONNECTIONS SHALL BE EXOTHERMIC WELD.
 3. CAP ALL CONDUIT ENDS TO PREVENT MOISTURE AND DEBRIS FROM ENTERING CONDUITS PRIOR TO CABINET INSTALLATION.

NV5 ELECTRICAL ENCLOSURE "A" EQUIPMENT PAD DETAIL E510

CONSULTANTS

ARCHITECT -
 OCO ARCHITECTURE :: DESIGN
 ELECTRICAL ENGINEER -
 NV5 ENGINEERS
 WELL AND DELINEATION -
 EPSILON ASSOCIATES, INC.
 SURVEY -
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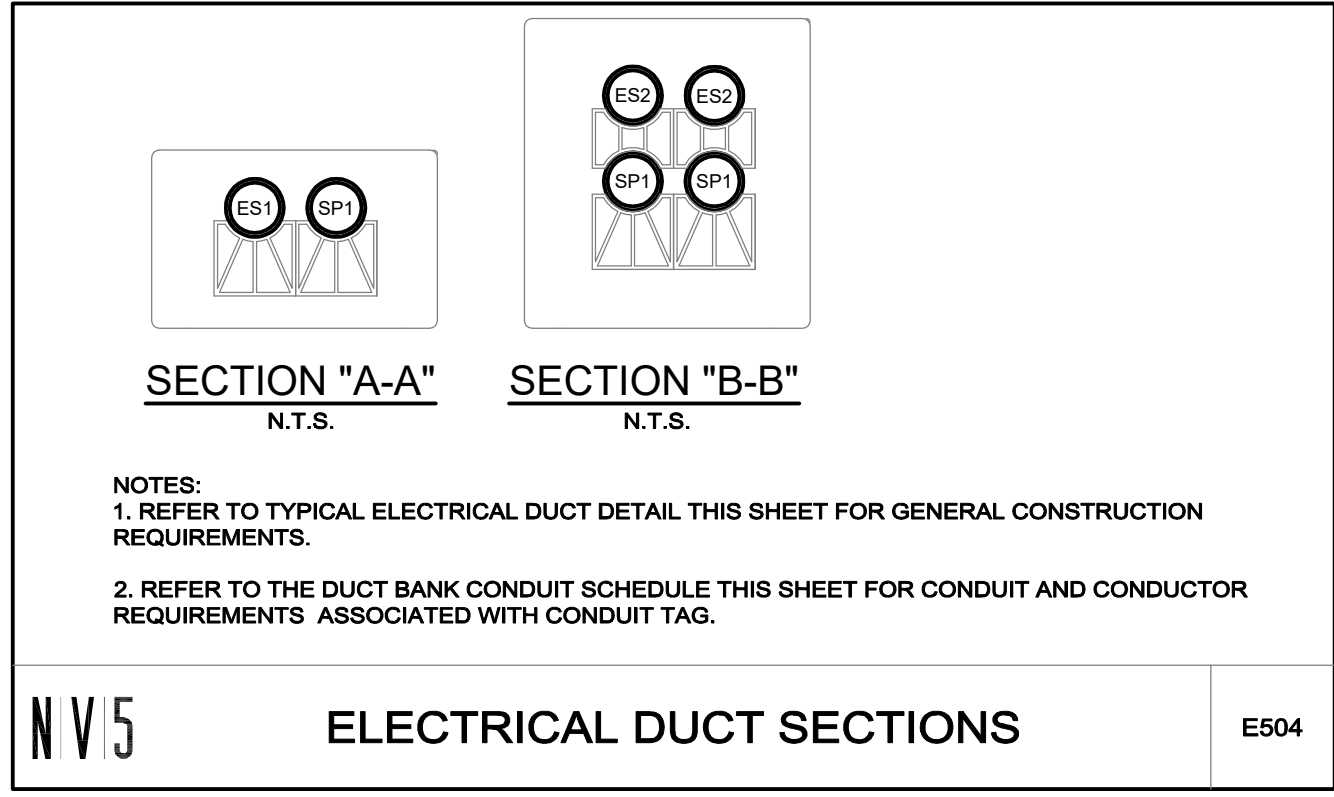
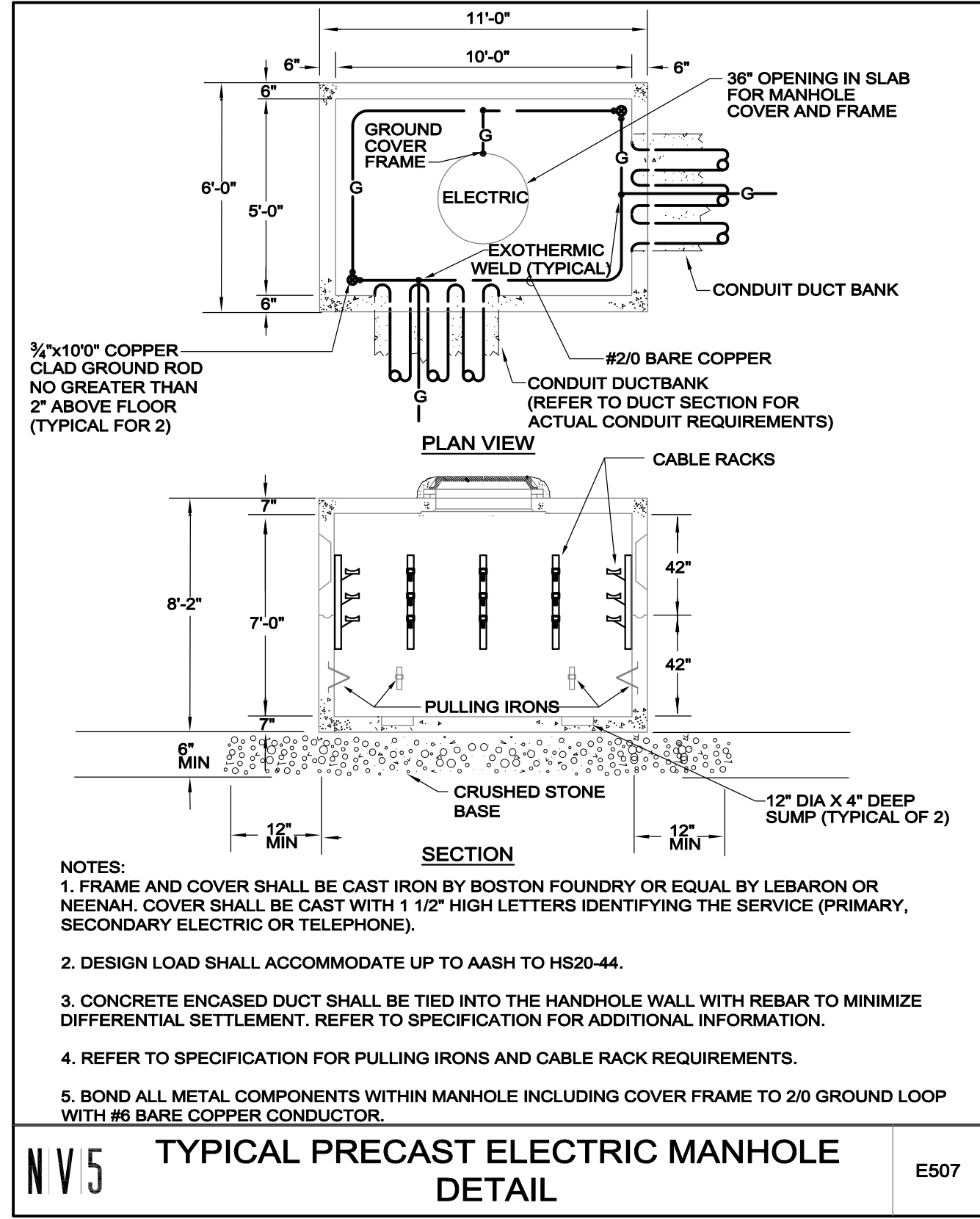
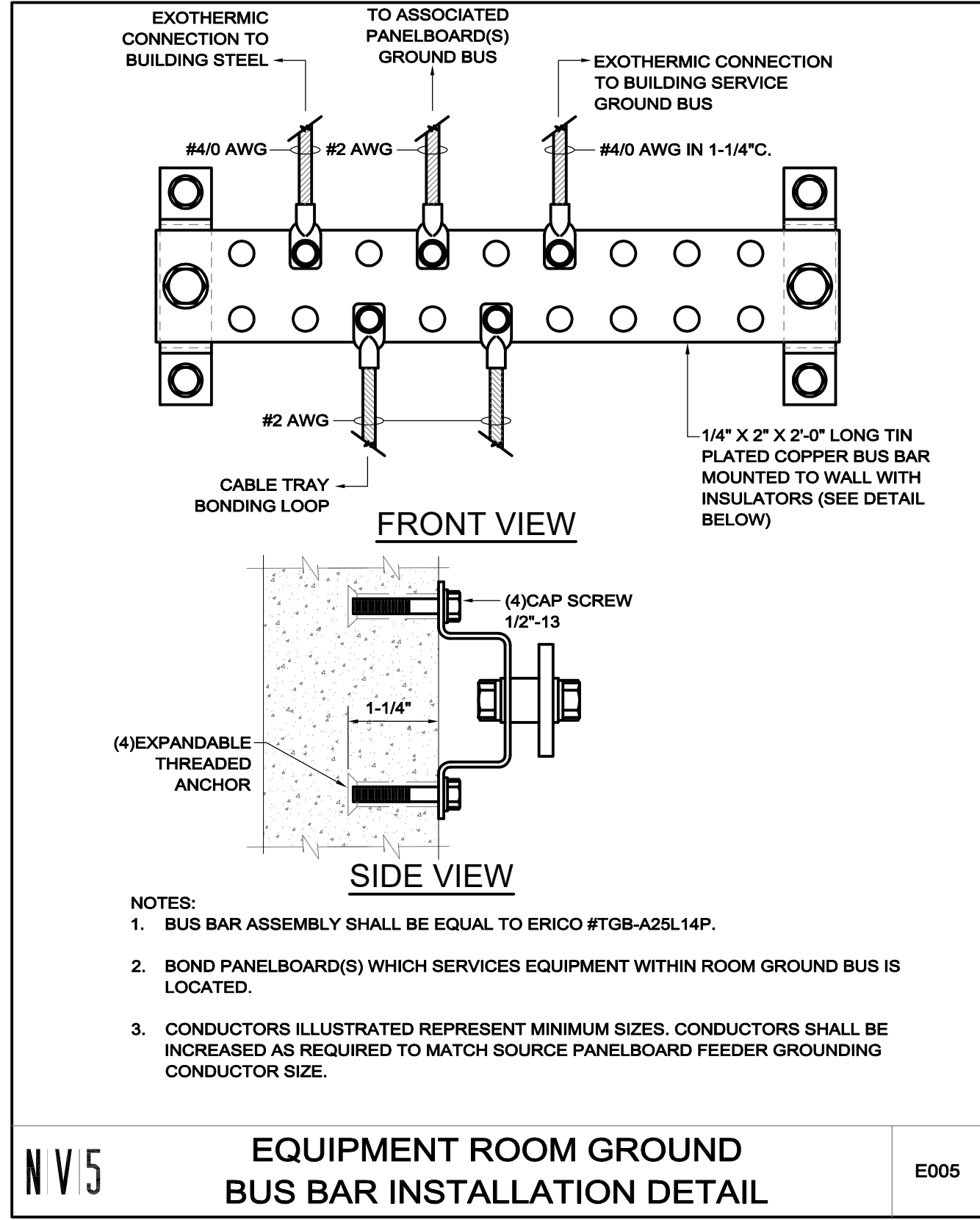
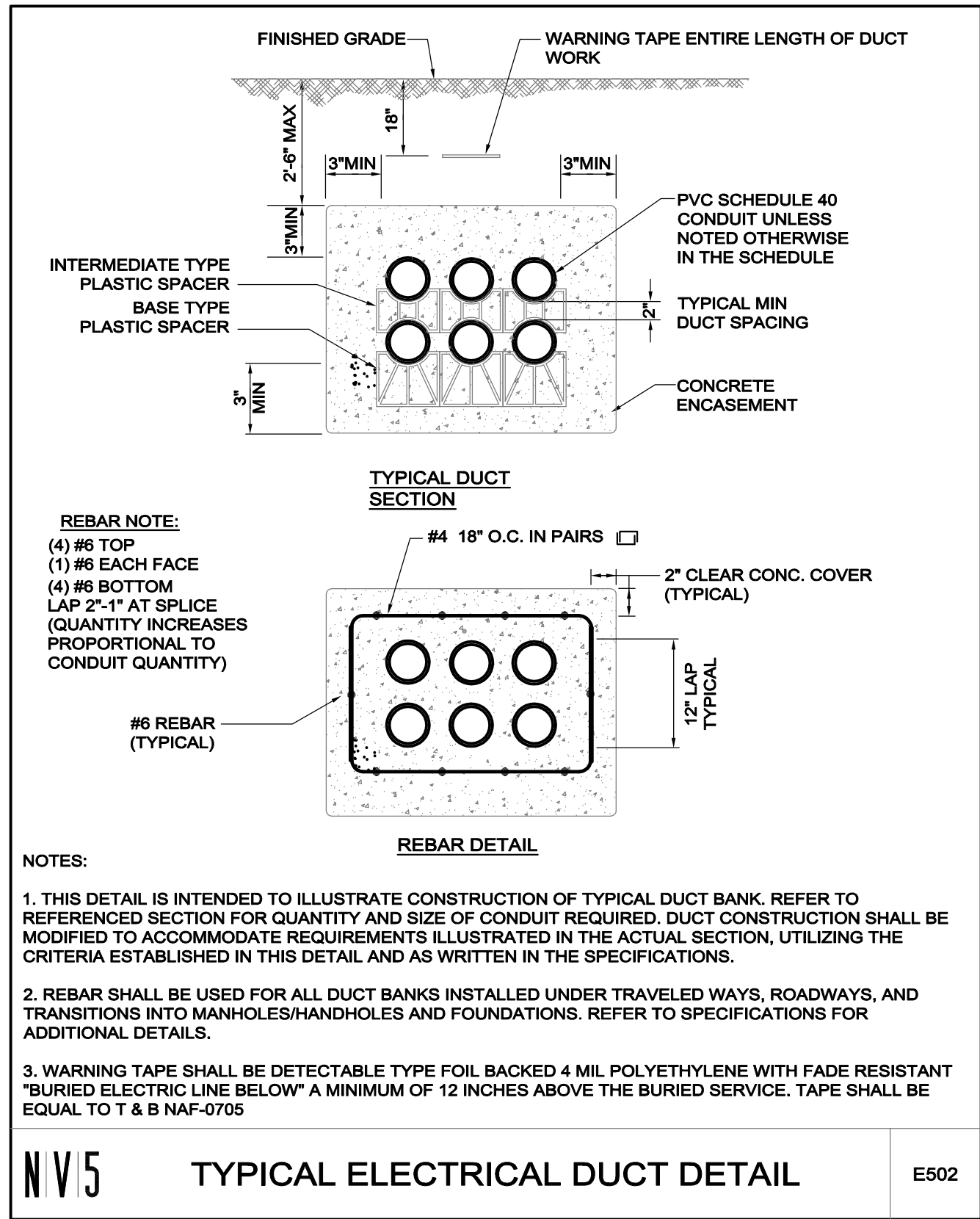
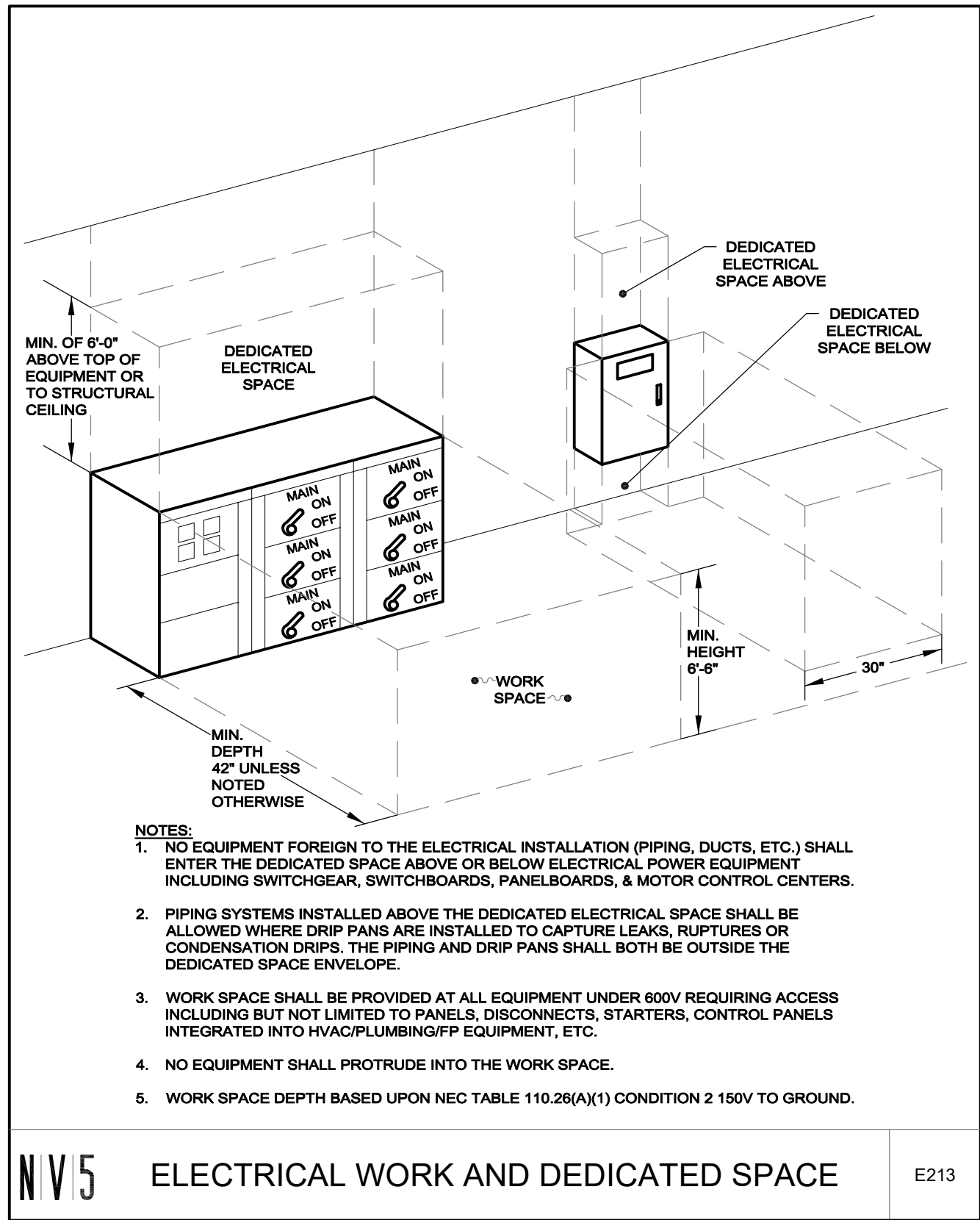
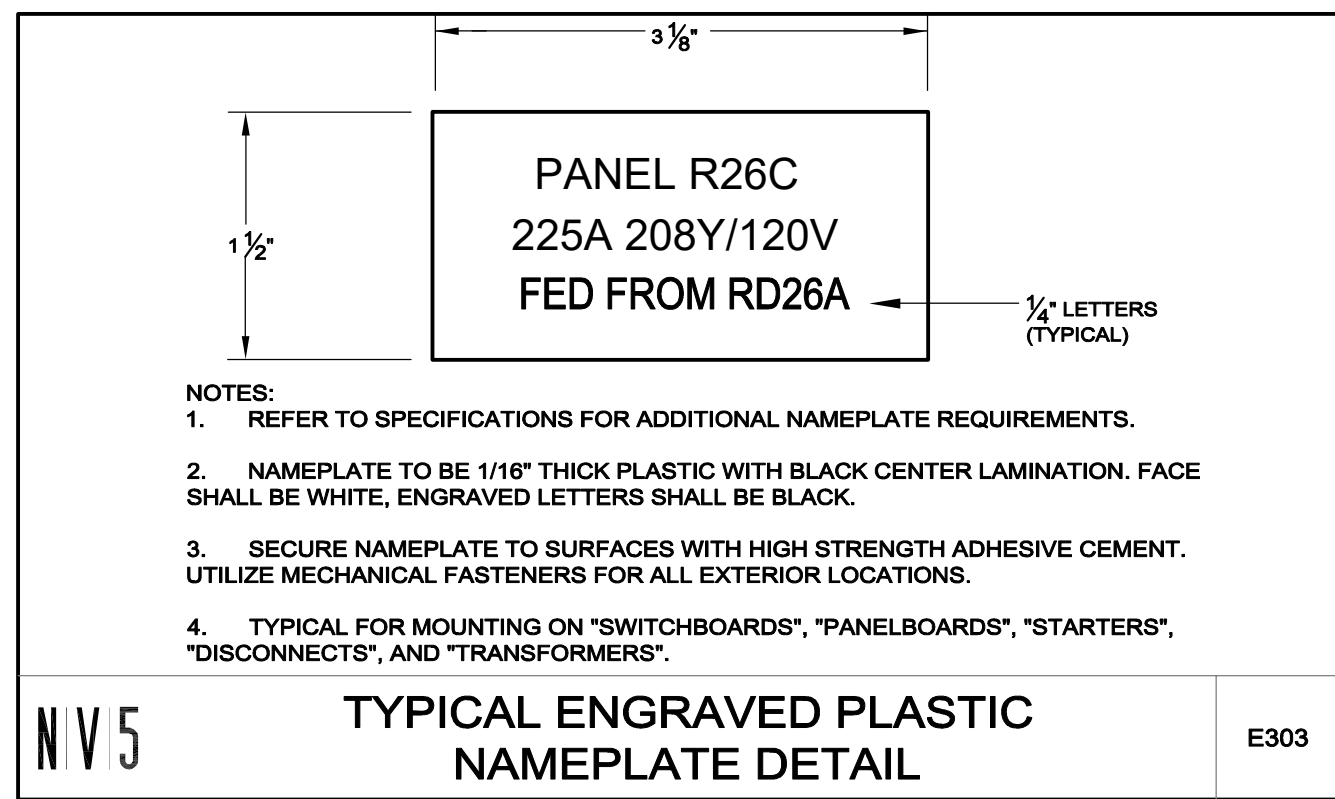
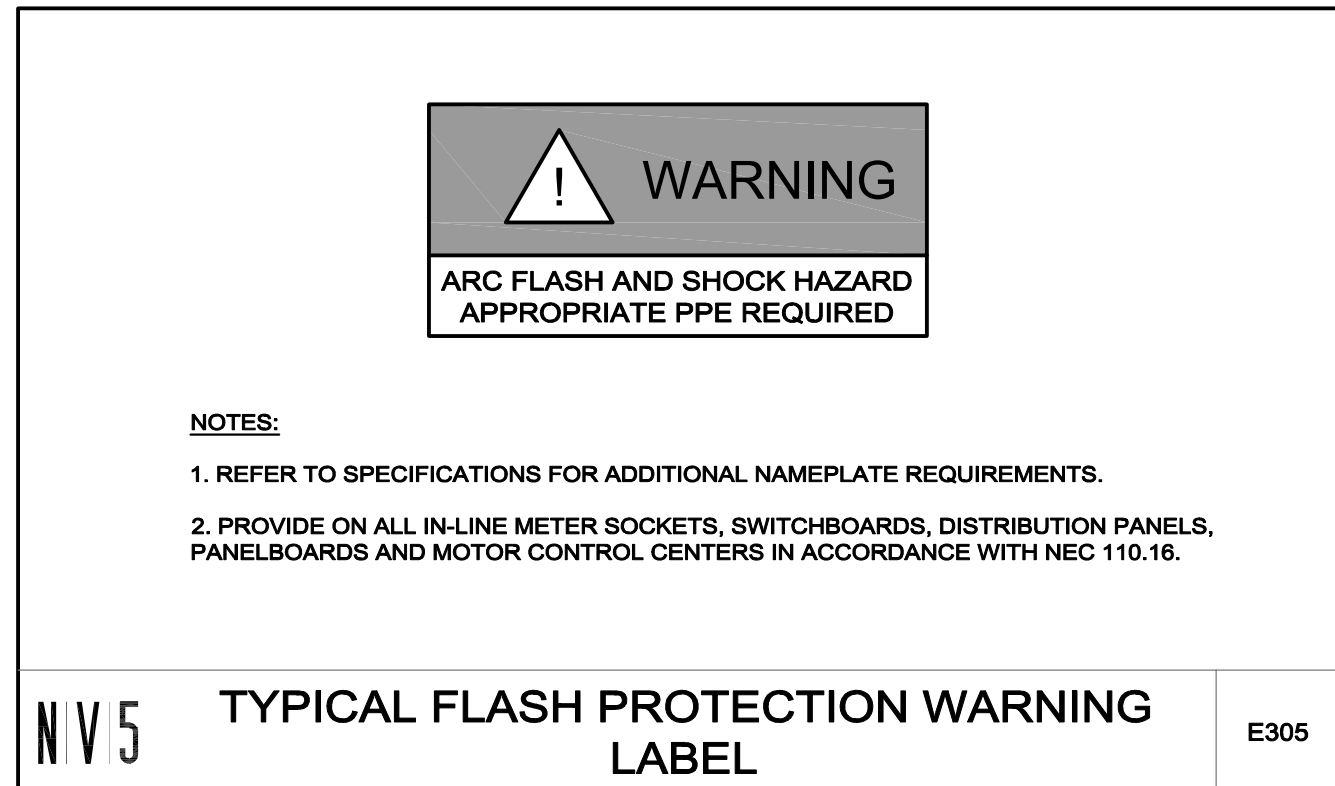
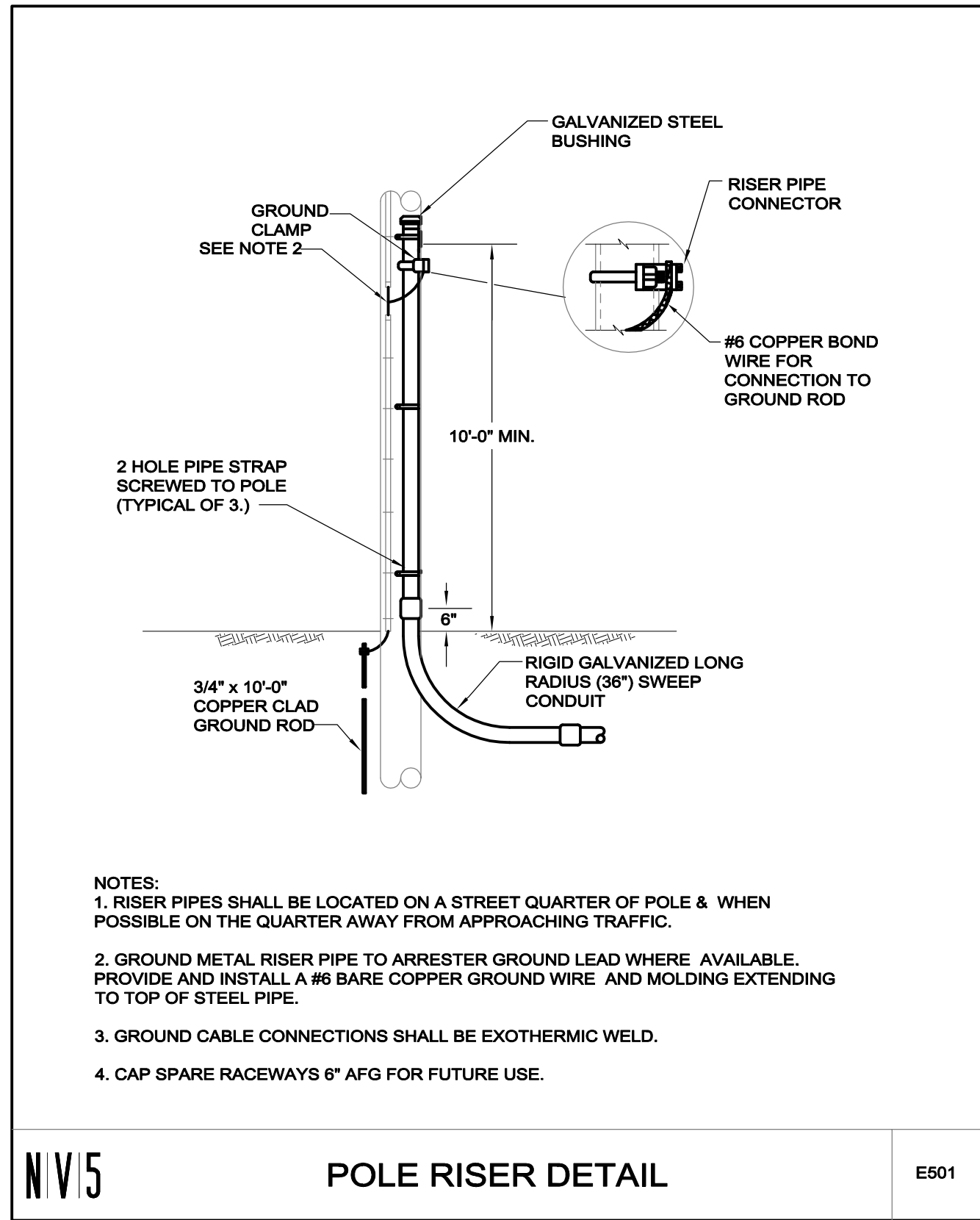
NO.	DATE	DESCRIPTION

SCALE: NTS
 PROJECT NO.: 0220154
 FILE:
 DRAWN: MYM
 CHECKED: KEG

SEAL:

SHEET TITLE:
 ELECTRICAL
 DETAILS + SCHEDULES

SHEET NO:
E3.1



DUCT BANK CONDUIT SCHEDULE

TAG	DESCRIPTION	CONDUIT	CONDUCTORS	REMARKS
ES1	PRIMARY ELECTRIC	4"	3#2(15kV)+#2G(600V)	NOTE 7
ES2	SECONDARY ELECTRIC	3"	4#350kCMIL	
SP1	SPARE	4"		NOTE 6

NOTES:
 1. REFER TO DUCT BANK SECTIONS FOR CORRESPONDING CONDUIT AND CONDUCTOR.
 2. REFER TO THE TYPICAL DUCT BANK SECTION FOR DETAILS REQUIRED IN THE CONSTRUCTION OF THE DUCT BANK ENVELOPE.
 3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION INCLUDING BUT NOT LIMITED TO DUCT BANK REINFORCEMENT REQUIRED UNDER PAVED AREAS INTENDED FOR VEHICULAR TRAFFIC AND AT MANHOLE/BUILDING INTERFACES.
 4. ALL CONDUCTORS INSTALLED IN DUCT SHALL BE SUITABLE FOR WET LOCATIONS.
 5. ALL SERVICE ENTRANCE AND GENERATOR OUTPUT CONDUCTORS INSTALLED IN DUCT SHALL BE TYPE USE.
 6. PROVIDE ALL EMPTY/SPARE CONDUIT WITH NYLON PULL STRING.
 7. PROVIDE PRIMARY CONDUCTOR IN ACCORDANCE WITH READING MUNICIPAL LIGHT DEPARTMENT (RMLD) STANDARDS. PERFORM HIGH VOLTAGE ACCEPTANCE TEST AND SUBMIT REPORT TO ENGINEER/RMLD UPON COMPLETION OF WORK.

DIRECT BURIED CONDUIT SCHEDULE

TAG	DESCRIPTION	CONDUIT	CONDUCTORS	REMARKS
E1	FUTURE LITTLE LEAGUE	4"		ALTERNATE 3 - NOTE 4
E2	FUTURE BASEBALL	4"		ALTERNATE 3 - NOTE 4
E3	FUTURE MULTIPURPOSE	4"		ALTERNATE 3 - NOTE 4
E4	SUPPORT BUILDING	2"	4#2+#6G	NOTE 5
E5	PARKING LOT LTG	2"	2#10+#10G	
E6	EXISTING BRANCH CIRCUIT	EXIST	2#6+#6G	
	EXISTING BRANCH CIRCUIT	4"	2#4+#4G	
	EXISTING BRANCH CIRCUIT	4"	6#4+#4G	
L1	SITE LIGHTING	2"	2#10+#10G	
P1	IRRIGATION PUMP HOUSE	2"	3#2/0+#6G	
P2	FUTURE EV CHARGERS	(2)-3"C		NOTE 4
P3	FUTURE EV CHARGERS	3"C		NOTE 4
T1	FUTURE TELECOM	4"		NOTE 4

NOTES:
 1. ALL CONDUIT SA+HALL BE PVC SCHEDULE 40 DIRECT BURIED UNLESS OTHERWISE NOTED.
 2. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION INCLUDING BUT NOT LIMITED TO CONCRETE ENCASEMENT R REQUIRED UNDER PAVED AREAS INTENDED FOR VEHICULAR TRAFFIC.
 3. ALL CONDUCTORS INSTALLED IN DUCT SHALL BE SUITABLE FOR WET LOCATIONS.
 4. PROVIDE ALL EMPTY/SPARE CONDUIT WITH NYLON PULL STRING.
 5. CONDUCTORS SHALL BE "MADE SAFE" IN HANDHOLE FOR EXTENSION TO FUTURE SUPPORT BUILDING. PROVIDE 3' SLACK.

CONSULTANTS

ARCHITECT -
OCO ARCHITECTURE :: DESIGN

ELECTRICAL ENGINEER -
NV5 ENGINEERS

WETLAND DELINEATION -
EPSILON ASSOCIATES, INC.

SURVEY -
REED LAND SURVEY, INC.

TOWN OF READING

Reading, MA

BIRCH MEADOW PARK | PHASE I RENOVATIONS

BID DOCUMENTS
January, 27 2023

REVISIONS:

NO. DATE DESCRIPTION

NO.	DATE	DESCRIPTION

SCALE: 1" = 20'-0"

PROJECT NO.: 0220154

FILE:

DRAWN: MYM

CHECKED: KEG

SEAL:

SHEET TITLE:

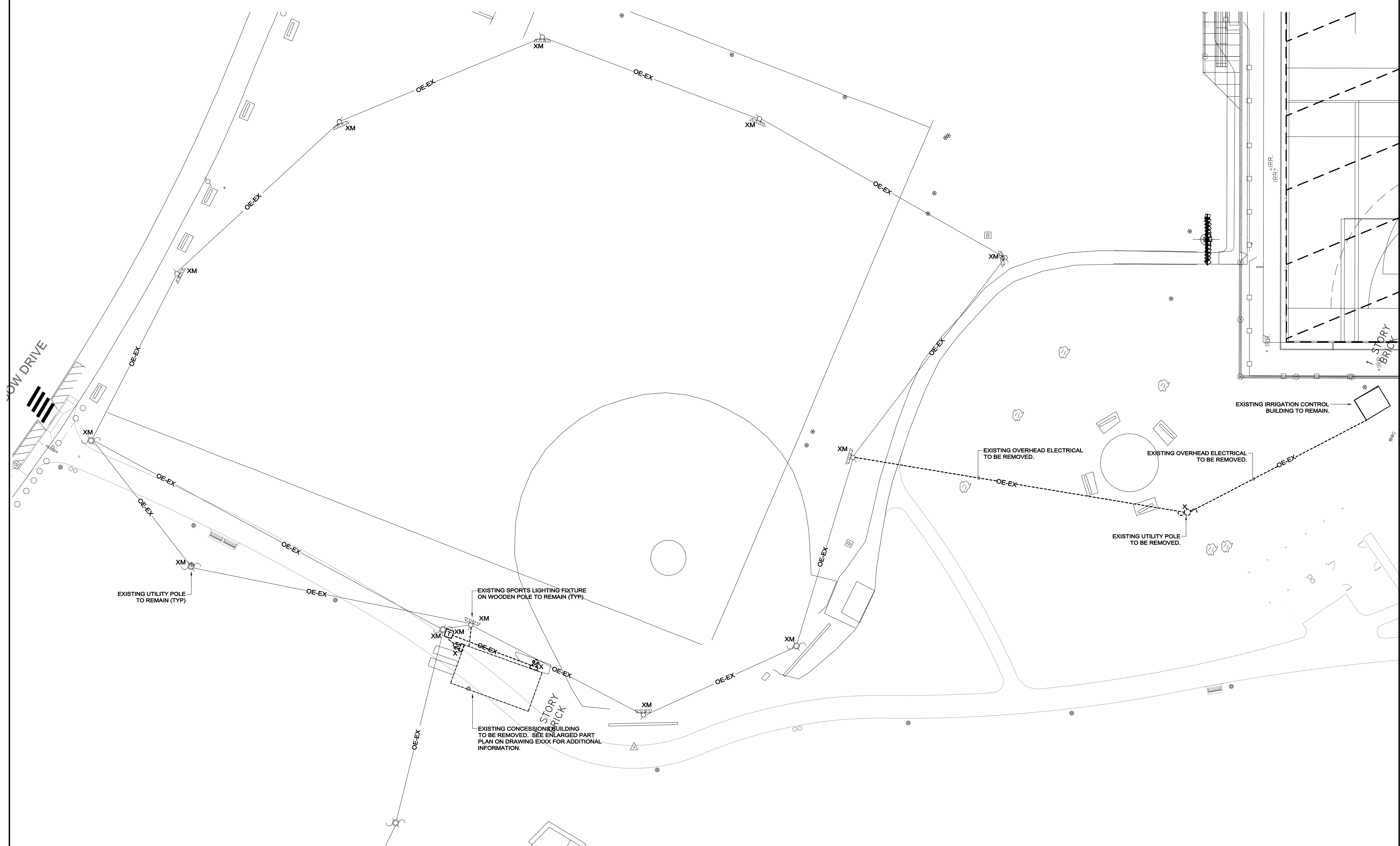
ELECTRICAL
SITE PLAN PART B
DEMOLITION

SHEET NO.:

ED1.1

NOTES:

- 1. REFER TO DRAWING E0.0 FOR LEGEND, SYMBOLS AND GENERAL NOTES.
- 2. REFER TO CIVIL LANDSCAPE DRAWINGS FOR ASSOCIATED NOTES, DETAILS AND EXACT LOCATIONS OF ALL EQUIPMENT.
- 3. MAINTAIN CONTINUITY OF BRANCH CIRCUITRY ASSOCIATED WITH ALL EXISTING SPORTS LIGHTING AND EQUIPMENT TO REMAIN.



LOW DRIVE